QUEENSLAND FLOODS COMMISSION OF INQUIRY

STATEMENT OF TIMOTHY PEISKER

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Date:

Exhibit Number:

I, TIMOTHY PEISKER, of c/- 80 Albert Street Brisbane in the State of Queensland, Executive Director, Infrastructure Planning and Development Branch, Sport and Recreation Services, Department of Communities, solemnly and sincerely affirm and declare:

Requirement from Queensland Floods Commission of Inquiry

1. I have seen a copy of the letter dated 29 August 2011 from the Commissioner, Queensland Floods Commission of Inquiry to me requiring a sworn statement which is Attachment **TP-01** and which details the topics my statement should cover.

Role

2. I am the Executive Director, Infrastructure Planning and Development Branch, Sport and Recreation Services, Department of Communities (DOC).

3. I have held the position of Executive Director, and prior to that the position of Director, Business Development Branch in Sport and Recreation Services in DOC, in Sport and Recreation Queensland (SRQ) in the Department of Local Government, Sport and Recreation (DLGSR), in the Department of Local Government, Planning, Sport and Recreation (DLGPSR) and in the Department of Innovation and Information Economy Sport and Recreation Queensland (DIIESRQ), since I joined DIIESRQ in 2003.

- 4. As Executive Director, I am responsible for working with government agencies, community organisations, councils, state sport and recreation organisations and peak industry bodies to encourage more Queenslanders to lead an active and healthy lifestyle. This involves the provision of advice, funding support and providing advice on and managing facilities which are targeted at increasing the physical activity level of communities.
- 5. Before joining DIIESRQ, I was Director, Special Projects, Office of Energy in Queensland Treasury (QT). Prior to that I was Deputy Director, Queensland Electricity Reform Unit. Prior to that I held senior positions in the Department of Mines and Energy, the Office of the Cabinet in the Department of the Premier and Cabinet (DPC) and the Department of Primary Industries.

Item 1. A detailed chronology of the involvement of the State of Queensland in the Mirvac development at Tennyson, including:

6. A summary of the chronology of the Queensland Government's (the State) involvement in the Mirvac development at Tennyson is Attachment **TP-02**.

1a. how the State of Queensland became aware of the potential to develop the Tennyson development site

- 7. The State has been aware of the potential to develop the Tennyson Power Station (TPS) site for some time.
- In May 1996, the Department of Natural Resources (DNR) commissioned Connell Wagner to undertake a land use study of the TPS site (Attachment TP-03). The study involved a historical analysis, site assessment, opportunities and constraints analysis, option identification and evaluation and community consultation.
- 9. The study examined a range of land use options for the site including corporate headquarters, warehouse, light industry, residential, open space and cultural, recreational and institutional activities. The study reported that community consultation indicated a strong preference for cultural, recreational and institutional activities.
- 10. The study concluded that: future use of the site is limited by poor road access, contamination from previous activities required further investigation, drainage was poor and significant fill would be required in the south-eastern area to bring it up to the required flood immunity level for development.
- 11. The study identified the preferred access to a redeveloped TPS site is from Fairfield Road via the adjoining Animal Research Institute (ARIS) site, although a secondary access to Tennyson Memorial Avenue or Softstone Street will also be required.
- 12. The TPS site was identified as an intent precinct in the Stephens District Local Plan released as part of the Brisbane City Plan 2000 (Attachment **TP-04**). The plan noted:
 - residential development that maximised the use of existing rail access and provided community parkland would be preferred;
 - due to the site's considerable physical constraints non-residential uses with minimal impact on residential areas may be supported; and
 - development on the site may not adversely affect water quality of the Brisbane River and must provide public access to the waterfront and a cycle way through the site.
- 13. In 2002, Tennis Queensland (TQ) identified the TPS site as a potential location for a new tennis headquarters in Brisbane. In September 2002, TQ advised the State of the potential to develop a tennis centre precinct on the TPS site (refer details below).

- 1b. the proposal to develop the Tennyson development site made by Mirvac to the State of Queensland before the tender process run by the State of Queensland was announced
- 14. In 1999, TQ sold the Milton Tennis Centre, Frew Park, Milton which had served as the home of tennis in Queensland since 1915. The centre hosted a range of Australian Championships/Opens and Davis Cup ties as well as entertainment events. The last major tennis event was held at the centre in 2004, after which its wooden grandstand seating was closed down. The centre court stadium experienced two fires and was demolished in 2002.
- 15. In 2001, TQ produced a Strategic Facilities Plan aimed at reinvigorating the sport of tennis in Queensland which identified the need for additional tennis courts to be constructed to replace those lost through urban development and the need for a new tennis headquarters.
- 16. On 11 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.
- 17. In response, DIIESRQ advised that SRQ would work with TQ to explore alternative options for the State Tennis Centre (STC), including the development of a multipurpose stadium to cover for a range of sports.
- 18. 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 TPS site.
- 19. TQ's investigations concluded that the TPS site was the most attractive site to locate a new STC in Brisbane.
- 20. On 2 September 2002, TQ wrote to Mirvac Queensland Pty Ltd (Mirvac) advising it granted Mirvac a mandate to operate exclusively with TQ to secure the TPS site and to proceed with all planning acquisition and final development for the Tennyson Precinct Project (Attachment **TP-05**).
- 21. In September 2002, TQ presented a proposal to the State for a Tennyson Tennis Centre (Attachment **TP-06**). 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 site.
- 22. The proposal advised that TQ, Mirvac and Tennis Australia (TA) 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 proshop, tennis hall of fame and TQ administration and offices.

- 23. The proposal 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 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 site utilisation.
- 24. In September 2002, Mirvac developed a concept plan for the Tennyson Tennis Centre comprising an international standard STC and mixed use residential and retail development on the TPS site (Attachment **TP-07**).
- 25. TQ's proposal recommended that the State offer TQ and Mirvac nine months to explore the feasibility of establishing a STC facility on the TPS site and should this prove feasible, Enertrade (which owned the TPS site land on behalf of the State) would sell the site to TQ/Mirvac on agreed terms.

Item 1c. the whole of the tender process run by the State of Queensland

- 26. The State did not support TQ's recommendation to make the TPS site available to TQ and Mirvac. This was because, should the State make land available to the private sector for a development of this nature, it would seek to maximise value for money, minimise risks to the State and secure the best development outcome through a market based competitive bid process. This position was communicated to TQ and Mirvac.
- 27. On 25 February 2003, TQ wrote to the State identifying the TPS site as its preferred location for a STC. TQ considered this site best met its requirements as 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 impact.
- 28. 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 but had a number of site constraints including the decommissioned TPS, electricity easements, transport access issues and low lying areas which were subject to flooding.
- 29. The State also identified the development of a STC and associated developments on the TPS site would require a material change of use and development approval permit from Brisbane City Council (BCC).
- 30. In April 2003, the State established a project management framework to progress consideration of the Tennyson Riverside Development (TRD) involving coordination of the TRD project through a two stage competitive bid process – Stage 1 Expressions of Interest (EOIs) and Stage 2 Detailed Development Proposals (DDPs).

- 31. On 17 September 2003, SRQ met with TQ to discuss the minimum specifications for development of a STC. SRQ advised that 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 hard court surface, two Davis Cup standard and up to six of the match and training courts to have an alternate surface (Attachment **TP-08**).
- 32. On 26 August 2003, the State appointed Minter Ellison as Legal Advisors for the TRD project. A Legal Advisor was sought to provide advice on the development of the TRD documentation and process, to conduct a vendor's due diligence and assist with a risk assessment for the process.
- 33. On 26 August 2003, the State appointed Argyle Capital Pty Ltd as Probity Auditor for the TRD. The Probity Auditor was engaged to ensure the competitive bid process was conducted in an appropriate and transparent manner, including development of a probity plan and guidelines, provision of regular probity reports and provision of a final probity report on the competitive bid process.
- 34. On 26 September 2003, the Cabinet Budget Review Committee (CBRC) considered a submission on the TRD and approved DIIESRQ undertaking a two-stage competitive bid process to identify a preferred developer for the TRD on the TPS site. CBRC noted a number of issues would need to be resolved during the first stage of the competitive bid process including consultation with BCC, due diligence on the site and consultation with other parties impacted by the proposal. At the same time, CBRC approved the release of the Stage 1 EOI document.
- 35. The EOI document was released in October 2003 (copy included at Attachment **TP-09**).
- 36. Interested parties were invited to submit a proposal for the design, construction and financing of the TRD and the operation of the associated development, which could include infrastructure such as residential accommodation, commercial, recreational and sporting, food and beverage, transport or supporting retail facilities. The document stated that the successful proponent will need to obtain all required planning approvals for the project.
- 37. On 10 November 2003, DIIESRQ facilitated a site inspection of the TPS for parties interested in lodging EOIs. This included a tour of the TPS site and the decommissioned power station (Attachment **TP-10**).
- 38. On 29 October 2003, the State established governance arrangements for the TRD including a project timetable, probity plan and Chief Executive Officer Steering Committee (Steering Committee) to oversight the project and provide the necessary approvals. The Steering Committee comprised representatives of DIIESRQ (Chair), QT and DPC.

- 39. Seven EOIs were received by the closing date of 14 November 2003, from:
 - Walker Corporation Pty Ltd;
 - Citta Property Group, Babcock & Brown Pty Ltd and Abigroup Limited;
 - Stockland Development Pty Ltd (Stockland), Barclay Mowlem, Next Generation Clubs Australia Pty Ltd and Pat Rafter (Project Champion);
 - Lend Lease Development Pty Ltd;
 - Ariadne Australia Ltd, Watpac Limited and Abacus Property Group;
 - Devine Limited (Devine), ABN AMRO and Multiplex; and
 - Mirvac.
- 40. On 25 November 2003, the TRD Project Office Evaluation Committee (Evaluation Committee), which I chaired, completed its evaluation of the EOIs (Evaluation Report included at Attachment **TP-11**).
- 41. The Evaluation Committee recommended three proponents, Devine, Mirvac and Stockland be shortlisted and invited to prepared DDPs.
- 42. On 16 December 2003, CBRC approved three proponents being shortlisted for Stage 2 of the competitive bid process and approved vehicular, pedestrian and bike access for the TRD site through the adjoining ARI site.
- 43. On 8 January 2004, the State announced Devine, Mirvac and Stockland had been shortlisted and invited to develop DDPs for the TRD.
- 44. In May 2004, CBRC approved commencement of Stage 2 of the competitive bid process for the TRD. This included approval to release the request for DDPs, the Development Agreement and the State Tennis Centre Project Brief that detailed the State's requirements for the STC to the three shortlisted proponents.
- 45. On 9 June 2004, DLGPSR released the Request for DDPs. This included the Request for DDP document (Attachment **TP-12**), the State Tennis Centre Project Brief (Attachment **TP-13**) and the Development Agreement (Attachment **TP-14**).
- 46. The Request for DDPs document provided an overview of the project, including the Government's project objectives, information to be provided by proponents, the process and timeframes for selection of a preferred developer. The document advised that the TRD would be subject to environmental, planning, building and regulatory requirements of the Commonwealth, State and BCC and that the preferred developer would be required to obtain all necessary approvals for the project.
- 47. The State Tennis Centre 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 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 year flood event or other such event as may be required by relevant acts and codes.

- 48. The Development Agreement outlined the contractual framework under which the project was to be undertaken and specified the rights and obligations of the State and the developer. In addition, the Development Agreement provided that:
 - the Government had approved vehicular, pedestrian and bicycle access to the TRD could occur through the adjoining ARIS site; and
 - the developer would be required to provide public access to the Brisbane River frontage.
- 49. Shortlisted proponents were also required to arrange a pre-lodgement assessment meeting with BCC on their development concept with preliminary advice provided by BCC to be submitted as part of the DDP.
- 50. On 23 August 2004, the State received DDPs from the three shortlisted proponents.
- 51. The Stage 2 Evaluation of DDPs was completed in December 2004 (evaluation report included at Attachment **TP-15**). The Evaluation Committee found two of the proposals were non-conforming and could not be assessed. Both proponents proposed associated development on the TPS site and location of the STC on alternate sites Devine on the Goprint site at Woolloongabba and Stockland on the ARIS site.
- 52. A preliminary review of Mirvac's DDP by the Evaluation Committee found that it was conforming on the basis it offered a STC and associated development predominately on the TPS site and could be assessed against the Stage 2 documents. Detailed evaluation by the Evaluation Committee concluded that Mirvac could not be appointed preferred proponent based on its DDP, however its DDP was capable of being adapted to be an effective proposal if a number of threshold issues were addressed (Attachment TP–15).
- 53. The Evaluation Committee recommended a negotiating framework to work collaboratively with Mirvac to modify its proposal to meet the State's requirements in order to identify if it could be appointed as preferred proponent and subsequently preferred developer for the TRD.

Item 1d. the assessment and decision to award the tender to Mirvac, including any cabinet considerations

54. On 21 December 2004, DIIESRQ wrote to Mirvac (Attachment **TP-16**) to outline the outcomes of the evaluation process and a proposed negotiation process to determine whether Mirvac could be appointed preferred proponent and subsequently preferred developer for the TRD. The letter advised that Mirvac could not be appointed preferred proponent for the TRD based on its DDP as a number of Stage 2 requirements were not met. The letter sought Mirvac's commitment to meet a number of threshold issues. These included a commitment to redesign its site plan to ensure the six training courts were constructed above the 1:100 year flood level and appropriate flood mitigation measures were implemented in the design of the centre court.

- 55. On 13 January 2005, Mirvac wrote to SRQ (Attachment **TP-17**) to advise it was willing to negotiate the threshold issues identified by the State through its DDP evaluation. These included site layout and flooding risk, the design and seating capacity requirements for the STC, tennis court warranties, transport and access arrangements and project timing and approvals.
- 56. On 29 April 2005, Mirvac submitted its revised DDP. In doing so, Mirvac advised it was not prepared to manage all cost risks associated with the STC and transport and access works and sought a mechanism to share these risks with the State.
- 57. On 3 May 2005, the Evaluation Committee completed a preliminary evaluation of Mirvac's revised DDP. In this evaluation Mirvac scored strongly on the STC, transport and access and project management elements but lower on impacts on the State.
- 58. Through these negotiations, Mirvac verbally advised the State that its sensitivity analysis showed that it required a financial contribution from the State of around \$10 million to increase the commercial viability of the project. Independent analysis was undertaken by the Queensland Treasury Corporation in relation to this request.
- 59. On 13 May 2005, the State wrote to Mirvac advising that it was prepared to consider contributing financial support to the TRD of up to \$10 million capped, with the financial assistance to be paid at the time of completion of the STC. SRQ also advised that if the financial position of the TRD is more favourable than the Mirvac forecast, the State would expect its contribution be reduced accordingly.
- 60. On 20 May 2005, Mirvac wrote to the State advising that its Board of Directors had endorsed a financial offer for the TRD which included an estimated cost for the STC of \$60 million, a profit share arrangement and 385 residential units representing an increase of 67 units from Mirvac's original DDP.
- 61. On 3 June 2005, the Steering Committee endorsed the Evaluation Committee's report on the assessment of Mirvac's revised DDP.
- 62. On 16 June 2005, DLGPSR wrote to Mirvac to advise it had been appointed preferred developer for the TRD. This was subject to a number of conditions with regard to financial contributions, meeting the State Tennis Centre Project. Brief requirements and ensuring that the TRD Development Agreement were finalised for execution by 29 July 2005 (Attachment **TP-18**).
- 63. On 24 June 2005, Mirvac wrote to DLGPSR to acknowledge the letter of 16 June 2005 and the conditions of appointment as preferred developer.
- 64. On 27 June 2005, the Government announced Mirvac as the preferred developer for the TRD. The aim was for a landmark development for tennis in Queensland complemented by associated development including 385

high-quality residential apartments and a gymnasium and the opening up of the riverfront to the community.

- 65. On 9 September 2005, CBRC noted that Mirvac had been appointed as preferred developer for the TRD on 16 June 2005.
- 66. On 29 September 2005, the State and Mirvac executed a Development Agreement and an Early Works Agreement to deliver the TRD by 1 December 2008.

Item 1e. any involvement of the State of Queensland in the development application processes to the Brisbane City Council for the preliminary approval overriding the planning scheme and development permit

- 67. Under the Development Agreement, Mirvac was required to obtain development approval for the TRD from BCC. This was to include a material change of use application to permit the development to proceed.
- 68. As the TPS site owner, the State through DIIESRQ and subsequently DLGPSR, consented to Mirvac lodging its development application and variations to the development application for the TRD with BCC.
- 69. On 6 September 2005, SRQ contacted the Department of Primary Industries and Fisheries (DPIF) to advise of the status of the project, noting that the State had agreed to establish a group with membership drawn from Government agencies to assist in facilitation of the development approval process for the TRD. The contact also sought advice on the options for Mirvac's application for removal of marine plants to be lodged and assessed by DPIF in advance of lodgement of its development application for the project (Attachment **TP-19**).
- 70. On 16 November 2005, Mirvac lodged its application for development approval for the TRD with BCC.
- 71. In November 2005, as part of its community consultation strategy, Mirvac and its public relations consultant, Promedia, hosted focus group meetings with local residents and stakeholders about the TRD. This provided local residents and businesses the opportunity to receive information on and ask questions about the TRD and the planning approval process.
- 72. Under the *Integrated Planning Act 1997* (the Act), DLGPSR was responsible for referral coordination for Mirvac's TRD development application. DLGPSR consolidated all requests for information on the application that were provided by the BCC and State referral and concurrence agencies, and forwarded the information request to Mirvac on 1 February 2006.
- 73. On 7 April 2006, Mirvac responded to the information request about its development application.

- 74. On 5 May 2006, Mirvac advised the State that BCC had informally advised it was satisfied with the information provided by Mirvac in response to its development application.
- 75. In June 2006, SRQ, in consultation with the Office of the Coordinator General, Sustainable Planning, DLGPSR and Mirvac investigated options under the Act to secure development approval for the TRD by 1 November 2006 should this be required to deliver the STC by 1 December 2008. This was because Mirvac identified 1 November 2006 as the critical development approval date to ensure delivery of the STC by 1 December 2008. The Deed of Variation associated with the STC design changes (refer below for information on the reasons for and nature of these changes) provided for the State to assist Mirvac to obtain development approval if it became apparent it would not be secured from BCC by 1 November 2006.
- 76. These options were not progressed and the development application proceeded through the standard BCC development approval process.
- 77. The application for development approval lodged by Mirvac with BCC on 16 November 2005 was superseded as a result of the design changes required for the centre court stadium of the STC approved by CBRC on 9 June 2006. Mirvac submitted an amended development application to the BCC on 31 July 2006.
- 78. On 1 August 2006, the Office of the Coordinator General and Sustainable Planning, DLGSR arranged for Mirvac to brief State referral and concurrence agencies on the changed development application and sought their assistance to expedite the information responses to timeframes that would assist in achievement of development approval by 1 November 2006.
- 79. On 9 October 2006, BCC issued a negotiated decision notice for development application for the TRD. Mirvac advised that no submitters' appeals were lodged and development approval had taken effect on 15 November 2006.
- 80. On 28 February 2007, DLGPSR provided owner's consent to an application to BCC for a minor amendment to Mirvac's development approval to accommodate the revised roof height of the STC (Attachment **TP-20**).

Item 1f. all substantive meetings, dealings and agreements with Mirvac or any officer of it regarding the Tennyson Reach development, including any relaxation to any development control

- 81. The State's initial contact with Mirvac on the Tennyson development was in relation to the proposal from TQ and Mirvac for the development of the Tennyson Tennis Centre on the TPS site. As indicated above, this proposal was not supported by the State. These contacts occurred around 2002.
- 82. The State, particularly through DIIESRQ and DLGPSR, conducted a number of processes including detailed negotiations with Mirvac throughout the TRD competitive bid process. These included in relation to receipt and assessment of

Mirvac's EOI, receipt and assessment of Mirvac's DDP, the establishment and negotiation of a framework to address threshold issues with Mirvac's DDP, receipt and assessment of Mirvac's revised DPP and the assessment and appointment of Mirvac as preferred proponent, preferred developer and developer for the TRD. These processes occurred from late 2003 to late 2005.

- 83. In July 2005, under the Development Agreement, the State appointed a representative of the Department of Public Works (DPW), Project Services as the State's Representative for the TRD.
- 84. The State's Representative served as the State's interface with Mirvac with respect to all aspects for the performance of the works (ie the STC, the associated development and the transport and access works required for the TRD).
- 85. Also under the Development Agreement, the State established a Project Control Group for the TRD to provide a forum for interaction between the State, Mirvac and other parties invited to attend and to provide a consistent overview of the project. The Group maintained a log of issues relevant to the successful delivery of the project.
- 86. On 4 December 2006, DPW, Project Services assumed responsibility for administration of the TRD agreements from DLGPSR. DLGPSR retained responsibility for establishing the ownership and operating arrangements for the STC, making payments to DPW from the TRD funding based on achievement of key milestones and participating on the TRD Project Control Group.
- 87. On 29 June 2007, CBRC approved the transfer of responsibility for the STC to the Major Sports Facility Authority (MSFA), with novation of the TRD Development Agreements and relevant project funding for the STC from DLGPSR to MSFA. MSFA became known as Stadiums Queensland in 2008.
- 88. On 26 April 2006, the State endorsed Mirvac's recommendation to appoint Roselund Contractors Pty Ltd to undertake early works on the TPS site. The contract was executed on 4 May 2006 and works commenced on site on the same day. Early works comprised demolition of the TPS and remediation of the TPS site.
- 89. These works, which were not impact assessable under the Act, needed to commence ahead of the TRD receiving development approval to ensure the STC would be constructed by 1 December 2008. The early works agreement between the State and Mirvac stated that irrespective of whether or not Mirvac satisfied the conditions precedent to the development agreement for the TRD to proceed, the State required the decommissioned power station to be demolished and the site remediated.
- 90. Mirvac's interest was to ensure the early works were conducted in a timely and safe manner and that materials from the demolition process to be used in the TRD (eg crushed bricks from the decommissioned power station) were stored

appropriately and where utilised compacted to specifications required for the TRD.

91. On 9 June 2006, CBRC approved implementation of design changes to the STC aimed at repositioning the STC to attract and host international hard court tennis championships and a compensation package for Mirvac for accelerated works to secure delivery of the STC by 1 December 2008. The acceleration package for Mirvac was required due to the time taken by TQ, TA and the State in considering the design changes and the additional works required to install a fixed roof over the centre court stadium.

- 92. On 9 June 2006, DLGPSR wrote to Mirvac confirming the State supported the incorporation of design changes to the STC in order to secure an international sanctioned tournament to be hosted at the STC from January 2009 and that the State was prepared to consider reasonable compensation for Mirvac, subject to the execution of a Deed of Variation and the STC and transport and access infrastructure being available by 1 December 2008.
- 93. On 15 August 2006, the Deed of Variation with Mirvac to implement the design changes to the STC was executed.

Item 1g. all substantive meetings, dealings and agreements with the Brisbane City Council, or any Councillor, or the Lord Mayor, or any employee or representative of the Council regarding the Tennyson Reach development, including any relaxation to any development control

- 94. SRQ met with BCC on a number of occasions during the planning and early delivery stages of the TRD project. The aim was to brief BCC on the proposed project, seek advice from BCC on information to include in the TRD competitive bid documents, seek BCC's support for pre-assessment meetings to be held with shortlisted TRD proponents and to ascertain the likely timeframes for BCC's assessment of a development application for the TRD.
- 95. On 18 June 2003, officers from SRQ met with representative from BCC to discuss potential planning and development controls for the TPS site (Attachment **TP-21**). In that meeting flooding issues were discussed, however council advised it could not comment specifically until the nature of the proposed development was known.
- 96. On 23 February 2004, the Director-General approved for officers from DIIESRQ to consult with BCC about the TRD (Attachment **TP-22**). The aim was for SRQ to brief BCC on the competitive bid process and to obtain information about the development approval process and any matters BCC considered important to the site and the project.

- 97. Meetings with BCC about the project were held on a number of occasions throughout the competitive bid process, including on:
 - 22 March 2004
 - 2 April 2004
 - 4 June 2004
 - 6 August 2004
 - 17 November 2004
 - 4 November 2005.

These meetings discussed planning and approval issues and requirements for the TRD project.

- 98. Mirvac's September 2002 concept plan for the STC (Attachment TP-07) noted that discussions had been held with the Lord Mayor of Brisbane who had pledged support for the strategy and specific proposal for the Tennyson site.
- 99. On 18 June 2003, BCC provided preliminary advice on the TPS site including that it was subject to flooding.
- 100. On 2 July 2003 Mr Barry Ball, Manager Waterways, BCC provided a memo to Manager, City Planning, BCC about information on flooding to the TPS site (Attachment **TP-23**). The memo noted that 50% of the site would be inundated in the event of a Q100 level flood. It also noted that "There would be no restrictions for reasons of impact on river flooding due to filling the above site to the required design level. However, any development will need to address the relevant City Plan 2000 Codes such as Filling and Excavation Code, Waterway Code, Stormwater Management Code and River Corridor Planning Scheme Policy".

Item 1h. all substantive decisions made by the State of Queensland, Cabinet, any Minister or any Director-General regarding the Tennyson Reach development with respect to flood risk

- 101. The State's objectives and requirements for the TRD were set out in the Stage 2 Request for DDPs document (Attachment TP-12) released to shortlisted bidders. The State's objectives included seeking innovative private sector proposals to develop the site in a manner which minimises the risks to the State.
- 102. The State Tennis Centre Project Brief released to shortlisted proponents as part of the Stage 2 Competitive Bid Process stated, in relation to earthworks, that all functional facilities shall be designed within the STC 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 or codes.

- 103. DIIESRQ's letter of 21 December 2004 to Mirvac on the outcome of the evaluation of its DDP (Attachment TP-16), stated that the State's position was for Mirvac to commit to redesign its site plan to ensure the STC show, match and training courts are constructed above the 1:100 flood level and that appropriate flood mitigation measures are implemented in the design of the STC centre court.
- 104. My recollection is that during the revised DDP negotiation process, Mirvac advised that locating the training courts at the 1:100 year flood level for the TPS site would require the courts to be constructed above a car park which would expose the clay courts in particular to wind impacts, increase construction costs and impact the visual amenity of this element of the STC.
- 105. Following further consultation with TQ, the State agreed for the STC training courts to be located above the 1:20 year level subject to Mirvac contributing up front an amount representing the cost of the additional risk to the State of the courts being located at this level. Based on specialist advice, this contribution was determined to be \$166,000.

Item 2. Any expert or other investigations into the effect of flood on the Tennyson Reach development

- 106. On 25 March 2004, Currie and Brown provided a report commissioned by DIIESRQ on the State Tennis Centre Project (Attachment **TP-24**). The report provided an independent review of the STC cost estimates and design and functionality issues. The report noted that Currie and Brown were advised that DPW, Project Services were of the view it would be necessary to construct the Plaza level of the STC above the existing ground level due to potential flooding problems. The report noted the extent of fill that would be required was unknown at that time, however this would impact on the final cost.
- 107. On 16 February 2005, SRQ met with TQ and TA to discuss a range of issues with regard to Mirvac's DDP (Attachment **TP-25**). Issues included mitigation of flood risk to centre court and consideration to allow development of the training courts at 1:20 flood levels as outlined in Mirvac's DDP. TQ and TA advised that locating the training courts at 1:20 flood levels would be suitable subject to appropriate design and protection arrangements.
- 108. At the same meeting, the issue of flooding to the centre court was discussed. The key notes and actions from the meeting show that TQ and TA advised that the centre court would need to comply with 1:100 flood immunity and that subject to the planned mitigation arrangements being effective, they should achieve this from an engineering perspective. The meeting proposed the centre court should incorporate appropriate bunding to minimise the impact of possible flooding to the centre court.
- 109. As indicated above, the State agreed to Mirvac's proposal to locate the training courts at the 1:20 flood level subject to Mirvac making a contribution of \$166,000 towards a sinking fund in light of the increased risk to the State of locating these courts at this level.

- 110. Mirvac commissioned GHD Pty Ltd (GHD) to provide advice and analysis on Brisbane River flooding and stormwater quality for the development of the TPS site. Volume 6 of Mirvac's Development Application covered Flooding and Stormwater Quality Management. This included an analysis by GHD about the proposed Brisbane River flood impacts and Brisbane River flow conveyance (Attachment **TP-26**).
- 111. GHD's report to Mirvac stated that BCC have estimated the 1974 peak flood level (at the site) was 10.8m Australian Height Datum and also estimated that the Wivenhoe Dam had reduced the 100 year Average Recurrence Interval (ARI) river flood level at the site. The report stated that BCC provided a Defined Flood Level (DFL) of 7.9m for the site for planning purposes.
- 112. GHD's report stated that in order to meet BCC's Urban Management Division Subdivision and Development Guidelines (Part B Design Requirements) in respect of flood immunity, various habitable and non-habitable uses are required to be above flood levels. These were 100 year ARI plus 0.5m for habitable uses, 100 year ARI plus 0.3m for non-habitable uses and 20 year ARI for car parking.
- 113. Mirvac commissioned Lambert & Rehbein to provide advice and analysis on the proposed engineering servicing of the development. Volume 5 of Mirvac's Development Application covered Engineering Services. This included analysis by Lambert & Rehbein of road works for the development (Attachment **TP-27**).
- 114. Lambert & Rehbein's report stated that primary access to the development will be from a new signalised intersection to be constructed along Fairfield Road and that a new road would be constructed from the intersection, through the ARIS site to the site. The report stated that this new road would be provided with immunity from the Brisbane River Q50 flood level of RL 6.6.
- 115. Lambert & Rehbein's report stated secondary access to the site located at the intersection of Softstone Street & King Arthur Terrace will be a 3-leg roundabout and is located above the nominated Brisbane River Q100 flood level of RL 7.9 for the site and will provide flood free access for the site as required by Brisbane City Council Development Guidelines.
- 116. Lambert & Rehbein's report stated that the existing intersection of Ortive Street and Fairfield Road is to be closed to facilitate the new intersection for the primary access road and that it is proposed to provide access to Ortive Street from the new roundabout on the primary access road. The report stated that the sag point of this access will be located at RL 7.7 which is 200mm below the nominated Brisbane River Q100 flood level of RL 7.9 for the site and that this depth of water is considered acceptable and will still provide for flood free access to the existing residences in Ortive Street as required by Brisbane City Council Development Guidelines.

Item 3. Any expert or other investigations into the effect of the Tennyson Reach development on flood

117. GHD's report investigated the impact of the proposed TRD works on the site floodplain storage and concluded that it showed a loss of approximately 36,000 cu m for the total project site and that this storage volume represents a minimal percentage of total available floodplain storage in this reach of the Brisbane River. The report concluded that it is expected that the proposed development will have no measurable adverse impact on flood afflux or peak flood flow rate due to loss of floodplain storage.

Item 4. A brief account of the relationship between the State of Queensland through the Departments administering and assessing the development process at the Tennyson Development Site, including Tennis Queensland, and any ongoing relationship between those parties

- 118. The State worked closely with and consulted a number of other parties during the TRD project.
- 119. The State worked closely with TQ and TA in investigating the scope, function and layout of the STC to be constructed as part of the TRD and the subsequent ownership and management arrangements for the venue. These investigations identified the need for the venue to operate in community, training/development and major event mode.
- 120. In January 2005, SRQ wrote to TQ to advise of the two-stage competitive bid process for the TRD, confirm that TQ was bound by the SRQ confidentiality agreement with regard to the project and noted that SRQ was likely to call on TQ to provide technical advice on a number of issues associated with the STC (Attachment **TP-28**).
- 121. On 3 October 2003, the State, through SRQ, and TQ entered an agreement to work cooperatively to facilitate the development of a STC (Attachment **TP-29**). The agreement noted the proposal for the State to initiate a competitive bid process for the TRD and that TQ had agreed to establish and authorise a sub-committee to provide specialist advice to the department and to liaise directly with the department on the bid process.
- 122. On 21 October 2004, SRQ wrote to TQ seeking technical advice on the design and functionality of elements of the STC (Attachment **TP-30**).
- 123. On 7 November 2004, TQ wrote to SRQ to provide advice on the lifecycle cost for tennis courts (Attachment **TP-31**).
- 124. The State, predominately through SRQ, and then Mirvac once appointed developer for the TRD, consulted with the local community on the proposed project and the impacts for local residents. SRQ met with the Tennyson Residents Association on a number of occasions to provide project updates and receive feedback on the impacts of the project on the local community. My recollections are that key issues for the local community were transport and

access arrangements, the nature and scope of the residential development and the impact on residents during construction.

- 125. In April 2006, TQ advised the State that its event attraction strategy for the STC had shifted focus from hosting Davis Cup ties in winter on grass to hosting a major hard court tournament in summer as a key lead in to the Australian Open and that the shift would require design changes to the STC including the construction of a roof to the centre court facility.
- 126. On 4 April 2006, TQ wrote to SRQ to recommend that the proposed design for the STC be reviewed so the stadium could host an annual summer lead in event to the Australian Open (Attachment **TP-32**). As indicated above, the State supported design changes to the STC to assist in attracting major tennis events back to Queensland.
- 127. On 7 July 2006, TA announced a new combined Australian Men's and Women's Hard court Championship event would be held at the STC in Brisbane from January 2009. The inaugural Brisbane International was held in January 2009.
- 128. The State consulted with Bicycle Queensland about its views on the provision of bicycle access through the TPS and ARIS sites as part of the TPS project. The results were taken into account in developing the transport and access requirements for the TPS.
- 129. The State received requests for particular facilities to be incorporated into the TRD design and requests to participate in the construction and delivery of the TRD. These requests were onforward to Mirvac once it was appointed developer for the TRD.

Item 5. A detailed account of the involvement of the State of Queensland, if any, in the decision by Mirvac after the January 2011 floods not to proceed with further residential buildings on the Tennyson development site, including:

- 5a. chronology of the involvement of the State of Queensland after 13 January 2011
- 5b. any advice or information provided by the State of Queensland to Mirvac or the Brisbane City Council with respect to the decision
- 130. To the best of my knowledge DOC had no involvement in the decision by Mirvac not to proceed with the further residential development. I became aware of the proposal via an article in the media (Attachment **TP-33**).
- 131. Therefore there is no other information to provide in the form of a chronology and to the best of my knowledge DOC did not provide any advice or information to Mirvac or to the BCC with respect to the decision.

Item 6. A detailed account of the involvement of the State of Queensland, if any, in the agreement between the Brisbane City Council and Mirvac for the Brisbane City Council to purchase part of the Tennyson development site to convert into parkland, including:

6a. a chronology of the involvement of the State of Queensland after 13 January 2011

6b.

any advice or information provided by the State of Queensland to Mirvac or the Brisbane City Council with respect to the decision

- 132. To the best of my knowledge DOC played no part in the agreement between Mirvac and BCC in relation to the purchase of part of the TRD site to convert into parkland.
- 133. Therefore there is no other information to provide in the form of a chronology and to the best of my knowledge DOC did not provide any advice or information to Mirvac or to BCC with respect to the decision.

I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the *Oaths Act 1867*.

Signe

Timothy Peisker

Taken and declared before me, at Brisbane this 7th day of September 2011

Solicitor /-Barrister / Justice of the Peace / Commissioner for Declarations

Queensland Floods Commission of Inquiry

Our ref: Doc 1689892

29 August 2011

Deputy Crown Solicitor State Law Building 50 Ann Street, BRISBANE QLD 4000

Dear

Please find enclosed a requirement to provide a statement, directed to Mr Tim Peisker, Executive Director, Infrastructure, Planning and Development, Sport and Recreation of the Department of Communities.

The material is returnable to the Commission no later than by 4 pm, Tuesday, 6 September 2011.

If you require further information or assistance, please contact 3405 9792 or on telephone 3405 9767.

on telephone

We thank you for your assistance.

Yours sincerely,



Executive Director

Encl.

Queensland Floods Commission of Inquiry

Our ref: Doc 1682735

29 August 2011

Mr Tim Peisker Executive Director Infrastructure, Planning and Development, Sport and Recreation Department of Communities GPO Box 1425 BRISBANE QLD 4001

REQUIREMENT TO PROVIDE STATEMENT TO COMMISSION OF INQUIRY

I, Justice Catherine E Holmes, Commissioner of Inquiry, pursuant to section 5(1)(d) of the *Commissions of Inquiry Act 1950* (Qld), require Mr Tim Peisker to provide a written statement, under oath or affirmation, to the Queensland Floods Commission of Inquiry, in which the said Mr Peisker:

- provides all information in his possession and identifies the source or sources of that information;
- makes commentary and provides opinions he is qualified to give as to the appropriateness of particular actions or decisions and the basis of that commentary or opinion;

in respect of the following:

- a detailed chronology of the involvement of the State of Queensland in the Mirvac development at Tennyson, including:
 - how the State of Queensland became aware of the potential to develop the Tennyson development site
 - the proposal to develop the Tennyson development site made by Mirvac to the State of Queensland before the tender process run by the State of Queensland was announced
 - c. the whole of the tender process run by the State of Queensland
 - d. the assessment and decision to award the tender to Mirvac, including any cabinet considerations

Queensland Floods Commission of Inquiry

- e. any involvement of the State of Queensland in the development application processes to the Brisbane City Council for the preliminary approval overriding the planning scheme and development permit
- f. all substantive meetings, dealings and agreements with Mirvac or any officer of it regarding the Tennyson Reach development, including any relaxation to any development control
- g. all substantive meetings, dealings and agreements with the Brisbane City Council, or any Councillor, or the Lord Mayor, or any employee or representative of the Council regarding the Tennyson Reach development, including any relaxation to any development control
- all substantive decisions made by the State of Queensland, Cabinet, any Minister or any Director-General or authorised delegate, regarding the Tennyson Reach development with respect to flood risk
- any expert or other investigations into the effect of flood on the Tennyson Reach development
- any expert or other investigations into the effect of the Tennyson Reach development on flood
- a brief account of the relationship between the State of Queensland through the Departments administering and assessing the development process at the Tennyson Development Site, including Tennis Queensland, and any ongoing relationship between those parties
- a detailed account of the involvement of the State of Queensland, if any, in the decision by Mirvac after the January 2011 floods not to proceed with further residential buildings on the Tennyson development site, including:
 - a chronology of the involvement of the State of Queensland after 13 January 2011
 - any advice or information provided by the State of Queensland to Mirvac or the Brisbane City Council with respect to the decision
- a detailed account of the involvement of the State of Queensland, if any, in the agreement between the Brisbane City Council and Mirvac for the Brisbane City Council to purchase part of the Tennyson development site to convert into parkland, including:

- a. a chronology of the involvement of the State of Queensland after 13 January 2011
- any advice or information provided by the State of Queensland to Mirvac or the Brisbane City Council with respect to the decision

The 'Tennyson development site' means the sites of the former Tennyson power station and animal research centre.

The 'Tennyson Reach development' means the Mirvac development at Tennyson including the Tennyson Reach residential development, the State Tennis Centre, parkland and all other land used or available to Mirvac Group.

Mr Peisker may also address other topics relevant to the Terms of Reference of the Commission in the statement, if he wishes.

The statement is to be provided to the Queensland Floods Commission of Inquiry by 6 September 2011.

The statement can be provided by post, email or by arranging delivery to the Commission by emailing

Commissioner Justice C E Holmes

CHRONOLOGY OF THE STATE OF QUEENSLAND'S INVOLVEMENT* IN THE TENNYSON RIVERSIDE DEVELOPMENT (As at 5 September 2011)

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Year	Key Events	Key Dates	State Agencies Involved
2001	TQ develops Strategic Facilities Plan for the development of tennis in Queensland.	January 2001	DHESRQ, DPW
	TQ investigates suitable sites for new tennis headquarters.	Through 2001	
2002	TQ submits proposal to State for new state tennis headquarters.	June 2002	DIIESRQ, DPW
	TQ identifies TPS site as preferred site for new tennis headquarters.	August 2002	
	TQ provides Mirvac mandate to secure TPS site and jointly develop new tennis headquarters with TQ.	August 2002	
	Mirvac develops proposal for Tennis Centre Precinct comprising STC and residential development.	September 2002	
2003	State undertakes due diligence on TPS development proposal.	Early 2003	DIIESRQ, DPW,
	State does not support making TPS site available to TQ and Mirvac to develop Tennis Centre Precinct.	Early 2003	DPI, DT, DPC,
	TQ writes to State advising TPS site is preferred location for a new STC.	February 2003	DNRM, QT, AQ, OE,
	State establishes project management framework for TRD.	April 2003	Enertrade, Powerlink
	State develops land facilitation strategy for TRD.	Early 2003	Queensland, Energex,
	State meets with BCC to discuss planning and development controls for the TPS site.	18 June 2003	QR
	BCC provides preliminary advice on TPS site issues.	July 2003	
	State engages Argyle Capital Pty Ltd as probity auditor for the TRD.	26 August 2003	
	State engages Minter Ellison as legal advisors for the TRD.	26 August 2003	
	State consults with TQ on STC model.	September 2003	
	State approves two-stage competitive bid process for TRD (CBRC decision no. 800).	26 September 2003	
	State announces TRD comprising STC and associated development.	3 October 2003	
	State undertakes letterbox drop in Tennyson area advising of TRD.	3 October 2003	
	State releases Stage 1 of the TRD competitive bid process – invitation for EOIs.	October 2003	
	State consults with TQ and TA on STC specifications and requirements.	October 2003	
	State establishes governance arrangements for TRD (timetable, probity plan, steering committee).	29 October 2003	
	7 TRD EOIs submitted to State.	14 November 2003	
	DIIESRQ engages DPW (Project Services) to provide technical advice on TRD issues.	17 November 2003	
	State provided with due diligence report on TPS site by Minter Ellison.	25 November 2003	
	State approves of vehicular, pedestrian and bike access for the TRD site through the ARI site.	16 December 2003	
	State endorses outcomes of Stage 1 of the competitive bid process - EOIs (CBRC decision no. 937).	16 December 2003	
	State consults further with TQ and TA on STC design and functionality requirements.	17 December 2003	

2004	Other surgers and the state of	9 1 2004	DI CDED DDW DDI
2004	State announces three bidders shortlisted to develop 1 KD.	δ January 2004	DLUPSK, DPW, DPI,
	State releases DDP documents to three shortlisted proponents.	9 June 2004	DI, DPC, DNKM,
	State consults with TQ and TA on STC specification requirements.	Through 2004	QI, AQ, OE,
	DLGPSR consults with QR on Yeerongpilly Railway Station and Overpass issues.	Through 2004	Enertrade, Powerlink
	BCC advises shortlisted proponents on TRD pre-assessment issues and approval requirements.	August 2004	Queensiand, Energex,
	Shortlisted proponents submit DDPs to State.	23 August 2004	QK
	State evaluates DDPs.	Late 2004	
	State identifies two DDPs are non-compliant and Mirvac's DDP requires a number of threshold issues	Late 2004	
	to be addressed to satisfactorily meet the project requirements.		
2005	State advises Mirvac of threshold issues to be addressed with its DDP.	January 2005	DLGPSR, DPW,
	State negotiates threshold issues with Mirvac on its DDP.	January to May 2005	DPC, QT, DPIF, DT,
	State engages Maunsell to provide specialist engineering advice on TRD and STC issues.	February 2005	Enertrade, Powerlink
	State consults with BCC on TRD issues.	21 February 2005	Queensland, Energex,
	DPW (Project Services) submits technical assessment of Mirvac's revised DDP.	6 May 2005	QR, QTC, DT
	State evaluates Mirvac's revised DDP.	June 2005	
	State determines Mirvac's revised DDP satisfies the TRD project requirements and announces Mirvac	27 June 2005	
	as preferred developer for the TRD.		
	TRD 1300 information line opened.	27 June 2005	
	State and Mirvac brief Tennyson Residents Association on TRD.	30 June 2005	
	DPW (Project Services) appointed State's Representative for early works (demolition of TPS and	July 2005	
	remediation of TPS site).	·	
	TRD model on display at the Royal National Agricultural Show, Brisbane Exhibition Grounds.	11 to 20 August 2005	
	Mirvac hosts open evening with Tennyson residents on TRD.	25 August 2005	
	State finalises Stage 2 of the TRD competitive bid process (CBRC decision no. 1485).	9 September 2005	
	State and Mirvac execute TRD contractual agreements.	29 September 2005	
	State's Representative for TRD appointed to administer contractual agreements (Project Services,	September 2005	
	DPW).	-	
	TRD project model on display at Fairfield Library.	26 August to 7 September 2005	
	Mirvac lodges TRD development approval application with BCC (no. 93382).	16 November 2005	
	Mirvac's TRD application placed on BCC website.	November 2005	
2006	Mirvac calls for EOIs for early works on TPS site (demolition of TPS and remediation of TPS site).	January 2006	DLGPSR, DPW,
	DLGPSR issues information request on Mirvac's TRD development application.	1 February 2006	DPC, QT, EPA
	State's Representative issues letter of intent to Mirvac for early works on TPS site.	March 2006	
	QHC decision not to place TPS on Queensland Heritage Register.	26 May 2006	

	TQ advises State of opportunity to reposition STC to host major lead in event to Australian Open, involving design changes to STC.	25 May 2006	
	State approves repositioning opportunity and design changes to STC (CBRC decision no. 1786).	9 June 2006	
	Mirvac lodges amended TRD development approval application for STC design changes.	31 July 2006	
	State and Mirvac execute deed of variation to development agreement on STC design changes.	15 August 2006	·
	BCC issues negotiated decision notice for TRD development approval.	9 October 2006	
	BCC development permit for TRD takes effect.	15 November 2006	
	Early works (demolition of TPS and remediation of TPS site) completed by Mirvac.	1 December 2006	
	Responsibility for administration of TRD contractual agreements transferred from DLGSR to DPW.	4 December 2006	
	State advises Mirvac that conditions precedent to TRD contractual agreements met.	11 December 2006	
	Mirvac appointed as principal contractor for the TRD.	18 December 2006	
2007	Mirvac commences construction of the STC.	8 January 2007	DLGPSRQ, DPW,
	STC construction meetings including CEO Committee Meetings.	June 2007 to May 2009	DNRW
	Responsibility for STC transferred from DLGSR to SQ.	June 2007	
	State consents to Site Management Plan for the TRD.	13 and 30 October 2007	
	State's Representative lodges plan of subdivision with DNRW for TRD site.	16 July 2007	
	STC site briefing meeting with SQ.	23 July 2007	
	State consents to Mirvac's lodgement of operational works application for marine plant disturbance.	3 August 2007	
	Mirvac issued with licence deed to undertake Stage 2 of associated development works.	17 August 2007	
	State approves Majors Sports Facilities Amendment Bill 2008 (Cabinet decision no. 7911).	10 December 2007	
2008	Mirvac requests changes to development application for STC and associated development.	April and July 2008	DLGSR, DPW
	Mirvac submits development application approval for Stage 3 of TRD.	26 August 2008	
	State approves transfer of STC to SQ and transfer of associated administrative arrangements for the TRD to DPW (CBRC decision no. 2602)	13 November 2008	
	STC achieves practical completion and STC is handed over by Minuac to DI CDSP	1 December 2008	
	DI GSR hands over STC to SO	2 December 2008	
2009	Inaugural Brisbane International held at STC	January 2009	DPW
2007	Mirvac undertakes construction of additional works	January to November 2009	
2010	Second Brisbane International held at STC	January 2010	DPW
2011	STC flood gates activated in response to rising flood waters	Early January 20011	DPW
	STC level 1 facilities damaged by flood waters	Early January 2011	
	SO engages Project Services as project manager/principal's representative for the redesign of STC	January 2011 to current	1
	level 1 facilities and refurbish flood damaged STC.		

* This chronology has been developed based on the best of my knowledge and the information in my possession.

Legend:

AQ = Arts Queensland ARI = Animal Research Institute BCC = Brisbane City Council CBRC = Cabinet Budget Review Committee DDPs = Detailed Development Proposals DERM = Department of Environment and Resource Management DIIESRQ = Department of Innovation, Information Economy and Sport and Recreation Queensland DLGPSR = Department of Local Government, Planning, Sport and Recreation DLGSR = Department of Local Government and Sport and Recreation DMR = Department of Main Roads DNR = Department of Natural Resources DNRM = Department of Natural Resources and Mines DNRW = Department of Natural Resources and Water DOC = Department of Communities DPC = Department of the Premier and Cabinet DPIF = Department of Primary Industries and Fisheries DPW = Department of Public Works DT = Department of Transport EOIs = Expressions of Interest EPA = Environmental Protection Agency Mirvac = Mirvac Queensland Pty Ltd MSFA = Major Sports Facilities Authority OE = Office of EnergyQHC = Queensland Heritage Council QR = Queensland Rail QT= Queensland Treasury Department SQ = Stadiums Queensland SRQ = Sport and Recreation Queensland STC = State Tennis Centre TPS = Tennyson Power Station TQ = Tennis Queensland TRD = Tennyson Riverside Development

Tennyson Power House Site



LAND USE STUDY Final Report

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LAND USE STUDY

FINAL REPORT

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> Project No: 498700CN 7 March 1997

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Connell Wagner DOCUMENT CONTROL								
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01	27.9.96	WP1						
02	11.11.96	WP1						
03	15.1.97	Final Draft						
04	24.1.97	Final Draft						
05	7.3.97	Final Report						

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TENNYSON POWER HOUSE SITE PLANNING AND LAND USE STUDY

FINAL REPORT

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A separate document entitled Public Display and CAG Responses summarises findings from the public display period together with the submission from the Community Advisory Group.

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ACKNOWLEDGEMENT

Connell Wagner wishes to thank the Department of Primary Industry's Animal Research Institute at Yeerongpilly, for providing meeting room facilities for the Community Design Workshops and the Community Advisory Group meetings which were conducted throughout the duration of the study.

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EXECUTIVE SUMMARY

Tennyson Power House Site

The Tennyson Power House (TPH) site is located on the Brisbane River approximately 6.5 kilometres from the Brisbane Central Business District. The site is situated between the suburbs of. Tennyson and Yeerongpilly and occupies a total area of 11.7 hectares.

Adjoining the TPH site is the Department of Primary Industries' Animal Research Institute (ARI) which occupies some 17.04 hectares. The ARI plays an important role in terms of researching the health, production and progress of the livestock industries in Queensland.

In 1986, the corporate plan of the Queensland Electricity Commission (QEC) recommended the closure of Tennyson Power Station. In 1989, all plant and equipment within the power house was put to auction on site and sold for removal. This included the turbines, coal handling plant, fabric filters, demineralisation plant, ash handling plant, cooling systems, pumps and motors.

A contract for the removal of asbestos and plant and partial demolition of the power house was awarded to a demolition contractor in 1991. In 1993, the riverbank moorings were removed and since this time, the TPH has remained dormant.

Planning and Land Use Study

In May 1996, the Department of Natural Resources commissioned Connell Wagner to conduct a Planning and Land Use Study of the Tennyson Power House site.

The Land Use Planning Study involved:

- a historical analysis: presented from both Aboriginal and European perspectives.
- site assessment: an assessment of the site as it exists in its current situation (including structural analysis, access and transportation, flooding, drainage, ecological and planning considerations).
- opportunities and constraints analysis: documentation of existing site opportunities and constraints.
- option identification/evaluation: the identification of possible development options and their evaluation against planning and financial criteria.
- a community consultation programme.

Opportunities and Constraints

The main findings of the constraints and opportunities analysis were:

- the TPH building and three ARI buildings were identified as having heritage significance.
- no archaeological constraints were identified.
- upgrading of urban services is required, particularly sewerage.
- -----poor drainage exists on the site, which requires upgrading; part of the site is susceptible to flooding, therefore fill to the Q100 level is required.

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 LAND USE STUDY For Tennyson Power House Site

- a number of activities have taken place on the TPH and ARI sites from which some degree _ of site contamination is evident.
- there are no known flora or fauna issues that would impact on future development of the site.
- - the site has poor road access and upgrading will be required.
- the structural integrity of the TPH building is very good for potential building reuse although the size and shape of the building is not suited to residential re-use.
- opportunities exist for open space along the river, public transport access is good and potential exists for a cycle and pedestrian linkage along the river edge.

Consultation and Community Involvement

A consultation process began at the outset of the study to incorporate the needs and aspirations of stakeholders and has involved consultation with:

- Brisbane City Council;
- the local community; and
- other stakeholders.

Components of the consultation process included media releases, public notices, newsletter drops, community design workshops, public displays and regular meetings with a Community Advisory Group.

In summary, the concerns of residents and stakeholders have included:

- impacts on the existing traffic environment.
- access to the river;
- public access to the site;
- pedestrian/cycle links along river edge; and
- provision of open space.

A public display took place for four weeks in January/February 1997. The findings indicated a clear preference for Option 2 : Cultural/Recreational/Institutional use.

Option Identification

A number of development options were identified which included both retaining and demolishing the existing buildings:

Retention Options:

Option 1	:	Corporate Headquarters		
Option 2	:	Cultural, recrea	tional, institutional	
Option 3	:	Option 3A	Warehouse	
		Option 3B	Light Industry	

Demolition Options:

Option 4 : Residential Option 5 : Open Space

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Option Evaluation

Options were evaluated against a range of criteria including criteria drawn from the Government Land Management System (GLMS) under the following headings:

- planning objectives;
- community land requirements;
- contribution to State development;
- financial return; and

architectural/heritage considerations (non GLMS criteria).

Conclusions and Recommendations

The conclusions of the study are as follows:

- The future use of the TPH site is limited by poor road access, the constraints imposed by the bulk and scale of the TPH building and the uncertainty surrounding the future use of the ARI site.
- Access to the TPH site requires upgrading, with the preferred form of access being a connection to Fairfield Road via the ARI site. Alternative access points at Softstone Street and Tennyson Memorial Avenue to the TPH site have been examined. A possible roundabout at Softstone Street has raised local community concerns and a possible Tennyson Memorial Avenue underpass is feasible but at a high cost.
- The land use opportunities for the combined TPH and ARI sites are significant and could be best achieved by considering the combined land area as one surplus government land holding. It is likely that financial return can be maximised by combining both sites.
- The power house building has been identified as having heritage significance and a recommendation has been made as part of the study that the building be listed under the *Queensland Heritage Act 1992*.
- Contamination from previous activities on the site requires further investigation; however it is unlikely that this will prove to be a fundamental constraint to future use (including residential use) of the site, although significant site clean up work will be required.
- Upgrading of urban services, in particular sewerage, will be required to provide adequate infrastructure to a future redevelopment. Drainage of the site is poor. Significant volume of fill will be required in the south-eastern area of the site above flood levels, if the site were to be made flood-free.
- The site continues to provide a role in electricity transmission and distribution and there are no plans or need to replace existing facilities for 10 years. Studies undertaken by Powerlink and SEQEB have confirmed the suitability of the site for a major substation in the future. Accordingly, an area of some 0.9 hectares will be required within the site boundary for a substation as part of any future redevelopment together with easements for underground cables and substation road access.
 - There are no known flora/fauna or Aboriginal cultural issues that would impact on any future development of the site.

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- There is a wide variety of opinion on the future use of the site including the issue of retention versus demolition of the power house building. The uses which have strongest community support are cultural uses (i.e. museum/arts/community purposes) and residential uses.
- Residential re-use of the power house building is not practicable due to the size and shape of the building.
- A residential use of the site involving demolition of the building would require a buffer zone to the ARI site, if the ARI remains in the long term.
- The sheer size and bulk of the TPH building limits the re-use potential of the building.
- The findings of the public display period together with the submission from the Community Advisory Group indicate a clear preference for Option 2 : Cultural/Recreational/Institutional use.

In responding to these conclusions, the following recommendations are made:

- Opportunities for future use of the Tennyson power house site are limited when the site is considered in isolation. In order to maximise opportunities for the site, the larger government land holding, including the ARI site, should be considered.
- The preferred access to a redeveloped power house site is from Fairfield Road via the ARI site; however a secondary access to Tennyson Memorial Avenue or Softstone Street will also be required.
- If the ARI site is not available, further investigation of traffic and access will be required to identify access arrangements satisfactory to the State government, Brisbane City Council and local residents.
- Further investigations are needed to confirm the extent of contamination on the power house site and the means and costs of site clean-up.
- Further consideration needs to be given by the community and local and State government (including the Department of Environment) to the need for a heritage listing of the building. Retention of the building places a significant constraint on the future use of the land, (particularly when considered in isolation from the ARI site) and the re-use options for the building are very limited in this, mainly residential, locality.
- If the electricity transmission and distribution facilities within the building are not to be replaced/relocated for 10 years, an interim use for the TPH building and site will need to be found until such time as the full potential of the site can be realised. Any such interim use would need to be compatible with local land use.

The study has identified a number of feasible land use options for the TPH site. In order to pursue the opportunities provided by particular options, the following key issues raised by the study will need to be resolved by government:

- the future of the ARI site;
- the timing of the replacement/relocation of transmission and distribution equipment on the TPH site and within the TPH building; and
- the recommended heritage listing for the TPH building and the need to retain the building in any future use of the site.

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INTRODUCTION

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1.0 INTRODUCTION

Connell Wagner was commissioned by the Department of Natural Resources to undertake a Planning and Land Use Study of the Tennyson Power House site and adjoining Department of Primary Industry's Animal Research Institute site.

Connell Wagner was responsible for the management of the commission and for key technical and consultative activities. Connell Wagner has also been supported by the following specialist consultants, which ensured a high level of expertise in all disciplines throughout the duration of the study:

- Cox Rayner Architects Architectural Assessment, Urban Design
- Jane Lennon and Associates European Heritage
- Ann Wallin and Associates Aboriginal Heritage
- Caroline Stalker, Architect Community Design Workshop Facilitator
- WBM Oceanics Australia Flora and Fauna Issues
- Ewbank Preece Australia Power Transmission and Distribution Advice
- Douglas and Partners Contaminated Land Issues (ARI site)
- Rider Hunt and Partners Quantity Surveying and Financial Analysis.

The purpose of the study has been to identify and examine potential new uses for the Power House site. The adjoining ARI is operated by the Department of Primary Industries (DPI) and is used for diagnostic and regulatory services and for livestock research. Although "essential" for current needs, future Departmental requirements may necessitate a relocation of current activities. There are no current pressures to relocate; however DPI has agreed to participate in the project in order to establish the long term future for the area, should relocation be necessary at some future stage.

The aim of the study has been to:

Identify a number of realistic strategies which satisfy the opportunities and constraints, State and Local Government planning strategies, as well as the community's expectations of the study area.

The study objectives listed in the brief include:

1. To identify opportunities for the development of the study area focusing on short/medium term (5 - 10 years) planning horizon in respect of the Power. House site; medium/long term (+10 years) planning horizon in respect of the ARI site and future Government land needs in the general locality.

The study aims to provide to the government, realistic and costed development options for the TPS site based on a thorough understanding of the site constraints taking into account the future planning for the surrounding area and the expectations of interest groups and the public.

Final options are presented to enable recommendations to be put to government by the Steering Committee for the site.

2. To identify the relevant planning opportunities and constraints to development on the study area.

In order to develop planning options the opportunities and constraints of the site need to be understood and appreciated. This has been achieved by:

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- consultation with AUSTA Electric, SEQEB and Powerlink to understand the future requirements for existing switching gear and substation as well as the timing of relocation of switching gear;
- identifying the constraints and opportunities offered by the TPH building and associated structures; and

gaining an understanding of all other site constraints including flora/fauna, site contamination, heritage, infrastructure, access and hydrology.

To present a financial analysis of each potential use identified, including an assessment of existing infrastructure on those uses.

The options identified have been costed. As well as the infrastructure needs of each option, the implications of retaining the sub-station and associated infrastructure have been to be included in the evaluation.

4. To identify the local and broader communities aspirations for the study area.

It has been important to incorporate into the planning process input from the public on the community/cultural needs of the area, to determine if these needs could be met on site, as well as the public attitudes to the site's development and any expectations of future use. Importantly, the public views need to be balanced against the financial realities of the site's development.

5. To evaluate the regional significance of the study area.

The site is one of a small number of strategically located surplus government sites which offers a rare opportunity for waterfront redevelopment in a high value area of Brisbane City. The opportunity to create a landmark development which incorporates regional facilities (cultural, recreational) is investigated as part of the study process.

6. To determine the heritage value of the structures and improvements within the study area.

The heritage value and significance of the power house has been assessed with opportunities for incorporation into the site's redevelopment identified.

1.1 REPORT STRUCTURE

The report for the TPH Planning and Land Use Study is presented in the following sections, namely:

Section 2 - The Site

This section provides details of the site including location, property description, land tenure and land use.

Section 3 - Site History

In this section a site history is presented from both Aboriginal and European perspectives.

Section 4 - The Site Today

This section provides an assessment of the site as it exists in its current situation. This is discussed in terms of :

- structural analysis;
- access and transportation;
- flooding and drainage;
- ecology; and
- statutory and non-statutory planning frameworks.

Section 5 - Consultation

In Section 5, a summary of the consultation process to date with the local community, local representatives, relevant authorities and other stakeholders is provided.

Section 6 - Identification of Opportunities and Constraints

This section summarises the opportunities and constraints for the site. These are discussed in terms of:

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- services infrastructure.
- -access and transport
- hydrology/hydraulics
- ecology
- planning
- cultural heritage

Section 7 - Development Options

Section 7 presents a series of five development options for the TPH site.

Section 8 - Option Evaluation

Section 8 illustrates the evaluation process of the final land use options.

Section 9 - Conclusions and Recommendations

This section concludes the planning and land use study and suggests recommendations.

Section 10 - References

Section 10 lists the references which have been used to assist in achieving the results of the study.

The findings of the Public Display and Community Advisory Group submissions are included in a separate document: *Public Displays and CAG Responses*.

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2.0 THE SITE

2.1 LOCATION AND GENERAL DESCRIPTION

The Tennyson Power House (TPH) is located on the southern bank of the Brisbane River, approximately 6.5 km south of the Brisbane Central Business District (CBD) and approximately 38 km from Moreton Bay. The site lies between the suburbs of Tennyson and Yeronga and occupies a total area of 11.7 hectares (Figure 1).

The TPH site is adjoined to the east by the Animal Research Institute (ARI) which occupies some 17.04 hectares. Combined, the area of both sites is over 28 hectares.

The study area focuses predominantly on the TPH site. The broader study area includes a catchment area of approximately 500m to 1.5 km around the power house site. This is bounded by the Brisbane River to the north, Yeronga Park to the north-east, Moolabin Creek to the east, Brisbane Golf Course to the south, and Moolabin Goods yard to the west. The purpose of identifying a broader study area is to obtain adequate surrounding land use information through both land use and zoning information and provide a catchment area which is suitable in size for local community identification. The broader study area is illustrated in Figures 3 and 4.

2.2 PROPERTY DESCRIPTION

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2.2.1 Tennyson Power House Site

The TPH site (Figure 2) is comprised of a number of properties described as:

- (i) Lot 1 on RP 100860, Parish of Yeerongpilly, County of Stanley, Government Land Management Register (GLMR) 13865 and containing an area of 2.6198 hectares.
- (ii) Lot 2 on RP 100860, Parish of Yeerongpilly, County of Stanley, GLMR 24524 having and containing an area of 986.4 square metres.
- (iii) Lot 1 on RP 37962, Parish of Yeerongpilly, County of Stanley, GLMR 24523 having and containing an area of 1191 square metres.
- (iv) Lot 663 on Plan SL 2532, Parish of Yeerongpilly, County of Stanley, GLMR 24522 and containing a total area of 8.53 hectares.
- (v) The remainder of land is made up of a road reserve.

2.2.2 Animal Research Institute

The Animal Research Institute is described as Lot 556 on Plan SL11997, Lot 5 on RP 206443, Lot 1 RP206443 and Lot 1295 on SL12125 (Figure 2).

2.3 LAND TENURE

2.3.1 Tennyson Power House Site

Lots 1 and 2 on RP 100860 and Lot 1 on RP 37962 are Freehold title held by AUSTA Electric. Lot 663 on Plan SL 2532, held by AUSTA Electric, is in Deed of Grant in Trust (DOGIT) "for Electrical Works Purposes and for no other purpose whatsoever".





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The remainder of land (refer to section 2.2.1(v)) is State Land (road reserve) which is temporarily closed. There is a Road Licence currently issued in favour of AUSTA Electric and, as such, no public access is presently available.

2.3.2 Animal Research Institute

Lot 556 on SL11997 is held as a Reserve (pursuant to the Land Act) under the trusteeship of the Department of Primary Industries. Lot 15 on RP206443 are listed as State Land and Lot 1295 on SL12125 is listed as Lease Land.

Figure 3 shows the land tenure for both the power house and ARI sites.

The Department of Natural Resources completed a tenure history search of the subject area in order to determine the status of native title. The search revealed that native title does not have any implications for the land use planning study.

2.4 LAND USE

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A land use survey has been conducted to identify land uses within the study area. The findings of the land use survey are provided below.

2.4.1 Residential Development

A large cluster of low density residential development is situated immediately to the west of the TPH site. A number of these properties possess river frontages and from a real estate perspective, are highly desirable. This is generally reflected in the high quality housing which currently fronts the river in this area.

Remaining residential areas are situated north and east of the ARI site. These residential areas range from detached housing, to medium density unit development.

2.4.2 Industrial/Commercial Development

Industrial and commercial areas comprise a high proportion of land uses within the broader study area. Much of the industrial development in the far west of the study area is taken up by the Moolabin Goods Yards, with, other industrial development being focused around at the junction of Fairfield Road and Tennyson Memorial Avenue. The majority of commercial development fronts Fairfield Road, to the east of the site.

2.4.3 Recreation/Open Space

Recreation and open space land uses located within the study area include golf courses, parks and other forms of open space uses such as guide or scout huts.

The dominant recreation/open space element within the study area is the Brisbane Golf Course, south of both study sites. The remainder of open space consists of Yeronga Park, located at the far north-east of the study area boundary and two smaller parks, one located west of Tennyson train station and the other located north of the ARI site. A small open space area also exists at the end of Softstone Street, however this site is not designated parkland.



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2.4.4 Special Uses

The bulk of the remainder of land uses within the broader study area are comprised of special use developments including:

- Yeronga State School (adjoining Yeronga Park);
- Yeronga Deaf School (south of the State School);
- Yeronga Special School (adjoining Moolabin Goods Yards);
- Tennyson Power Station Site; and
- Animal Research Institute

2.4.5 Vacant Sites

A number of vacant sites are dispersed throughout the broader study area. Refer to Figure 4.



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3.0 SITE HISTORY

When planning for the future, it is important to have an appreciation of the past and of the various factors which have influenced the sites' development over time. As part of the TPH Planning and Land Use Study, both European and Aboriginal (archaeological) heritage studies have been undertaken to assist in gaining such an appreciation.

3.1 ABORIGINAL HERITAGE

To undertake an Aboriginal heritage study an understanding of the impact of land use is important in so far of its possible affects on any indigenous material culture and places of significant that were previously present.

There are relatively few records of observations of Aboriginal life ways in the area. This reflects the difficulties facing researchers of early contact history. Different group names are often given and few observations of cultural and social systems are made. From these sketchy details however, the historian can trace the changes in Aboriginal populations, with early reports indicating large numbers at group gatherings, to the few left by the early twentieth century. What is not mentioned by these early observations are the changes wrought on local Aboriginal populations by encroaching non-indigenous settlement.

Initial European presence in the general area was actively resisted by Aboriginal groups until the late 1840s, when Simpson (31 May 1847, cited Langevad 1979:25) wrote:

At present the Aborigines are on a very friendly footing with the Settlers of the District - there were sundry collisions brought on I believe by the Squatters in the first instance - the loss of life by the Whites may have been from 20 to 25 in killed and wounded, but if report is to be believed that of the Aborigines must have been much more considerable.

In 1848, Simpson (16 September 1848, cited Langevad 1979:25) proposed the formation of several missions in the west Moreton Region, to be situated on the Bremer near Ipswich, "where the Aborigines of the Brisbane and Logan Rivers congregate in great numbers from the great facility of obtaining food during the boiling down Season"; and at Franklin Vale Creek, "near the Old Man's Hole (water) better named the Village of Rosewood". However, in 1851, Simpson (cited Langevad, 1979:39) reported that these missions "have been hitherto altogether unfrequented by the Aborigines".

By the 1840s, Aboriginal populations were probably already depleted due to the ravages of disease such as influenza, cholera, venereal disease, small pox and leprosy, and because of the influence of alcohol and opium. People were being disassociated from their traditional land by non-indigenous settlement and farming practices. As the forests of the Oxley Creek catchment disappeared in preference for pastures, stock and agriculture, so did Aboriginal food resources.

In the 1860s and 1870s the Tennyson area was extensively farmed for sugar cane. Remnants of an early sugar mill can still be seen in the nearby Brisbane Golf Club. Dairying then became a focus on the rich alluvial flats of the Oxley Creek Catchment. Soon, the higher ridgeline of Tennyson was to became a residential area (early 1900s).

In the early 1950s the TPH was built requiring substantial earth moving works which involved cutting and filling the flat pad on which the building now stands. This also entailed the construction of an earth viaduct on which the nearby railway line runs,

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In the 1960s and 1970s further changes reportedly occurred when the ARI filled low areas in the paddocks between the built facility and the power house. The original small creek and low swampy area disappeared, replaced by pasture-producing paddocks. At the same time, earth moving works occurred on the ridgeline on which the Institute was built, reshaping the hill and changing permanently the local contours.

As little is left of the original ground surface in the study area, (which is restricted to parts of the paddocks between the two built facilities) there is a very low expectation that the indigenous archaeological record will have survived.

Under the auspices of the Aborigines Protection Society, both Deebing Creek and Purge Creek Reserves were gazetted in 1892. At that stage, only Deebing Creek Reserve was established, and by 1896 housed 50-odd adults and their children (Thorpe 1978:89). In January 1898, the Protection of Aborigines and Restriction of the Sale of Opium Act 1897 became law, providing the legal machinery that allowed forced removals of Aboriginals throughout Queensland. It is most likely that the remaining Aboriginal people in the Oxley Creek area would have been removed to the Reserve at this time. Deebing Creek provided to be unsustainable, due largely to poor agricultural soils and intermittent water supplies. As such, the reserve was moved to Purga Creek in 1916.

At present, the Department of Environment holds no records of archaeological sites and places in or near the study area. Reconstruction of Aboriginal life ways is only possible from the patchy ethno-historical record.

What emerges is the importance of the swamps around Oxley Creek and Rocky Water Holes at Rocklea, just to the south of the study area. The food resources of the local area were sufficient to sustain not only occupation sites, but also bora ceremonies which often involved large numbers of people. Local high points such as the hill on which the Rocklea Research Station (Wallin 1996a) is situated and the Tennyson ridge line were probably important places for living sites that were close to resources but above the flood line.

This picture is consistent with the ethno-historical records for much of Brisbane. Analysis indicates that observations of Aboriginal activity in early Brisbane Town were persistently associated with swamps and waterholes. For example, many campsites were noted near Burnett's Swamp, now Norman Creek in the vicinity of Cornwall and Juliette Streets (Steele 1984:131). William Clark (1849, cited Steel 1984:132) wrote of the importance of the One-Mile Swamp at Woolloongabba, and *corella*, a large waterhole near the South Brisbane Cricket Ground. Clark described the nearby bora ring as the "largest and most used". The swamps and springs of Murarrie possibly supported camp sites and a bora ring (Wallin 1996b). Petrie (1983) records that an important camp site was called *Barrambin* or "York's Hollow" which was situated in the gully that passes through Victoria Park and the Royal National Association Showgrounds, now in the present-day suburb of Herston. A significant corroboree place and burial ground was situated at the mouth of Breakfast Creek near swamps that once existed at Newstead. Another important camp site was at *Baneraba*, water holes now under the Regatta Hotel at Toowong.

In conclusion, no specific archaeological record has been recorded for the study area. However, the relationship of the Tennyson ridge line with local swamps and water holes of known significance would strongly suggest that the area would have been an important part of the living focus of local Aboriginal groups. Since non-indigenous settlement, the impact of various land use activities have been so severe that the chances of the archaeological record surviving are predictively very low to nil.

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However, in the event that construction occurs on the site, the Regional Manager (Cultural Heritage Program) of the Department of Environment should be contacted immediately on (07) 3225 8426 should any archaeological material be located or exposed.

3.2 EUROPEAN HERITAGE

The area around the Brisbane River at Tennyson was first sighted by Europeans in 1823. Four ticket of leave convicts, Pamphlet, Parsons, Finnegan, and Thompson, left Sydney with the intention of sailing south to the Illawarra region to collect timber in March 1823. However, due to extremely bad weather they were blown off course, eventually ending up on Moreton Island in April with their boat wrecked. Uncertain of their location, (believing they were somewhere south of Sydney), they were taken in by the local Aboriginal people, at Stradbroke Island and then relocated to the mainland. At this point Thompson leaves the story—it is not recorded what happened to him.

Looking for food and water, the remaining three made their way upstream from Lytton on the southern side of the river on foot, having to walk around the small creeks they came across on the way. At a point some miles upstream, they came to a small creek where they were found a couple of canoes belonging to the local Aboriginal population. Pamphlet swam across the creek and procured one of these canoes, and with his colleagues paddled across the river to the northern side to the present Long Pocket area. But the trees were too dense here to penetrate, and they went back to the southern side of the river and retraced their footsteps downstream. Heavy forest also covered the southern bank of the river.

Some months later the naval officer John Oxley was asked by Governor Brisbane, the Governor of New South Wales, to assess various places north of Sydney for the establishment of another penal colony. Moreton Bay was one of these sites, and upon entering the bay, Oxley was surprised to find the British men Pamphlet and Finnegan living with the Aboriginal population at Pumicestone Passage, near Bribie Island. Finnegan joined Oxley's party on ship, and proceeded to guide Oxley in charting the Brisbane River as far as Goodna. They went ashore at numerous places as they made their way up the river, at Hamilton, in the central city, at Kangaroo Point, and at a spot downstream from the future site of the Tennyson power station near where Parsons and the others had found the canoes. Finnegan was with Oxley, and no doubt told him the story about these canoes at this creek. Oxley and his companions subsequently named this Canoe Creek. Later it became Oxley Creek.

In his travelling journal Oxley described the land around the Brisbane River. The timbers in the vicinity of the river were of a good quality. He wrote that the land around the river at Canoe Creek and Tennyson was a rich brush on both sides, with good soil, and many trees on the southern side of the river. At first Oxley believed these trees were cypress pines, they were later found to be hoop pine. Regardless, Oxley remarked upon their great height (up to 140 feet) and noted they would make excellent ships' masts.

As a result of Oxley's report, the Moreton Bay penal establishment was established in 1824. It closed in 1842, and the region was opened for settlement by free Europeans. Land around Tennyson remained Crown land until the early 1860s, as other areas had been surveyed first. By this time Queensland had been separated from New South Wales.

The land around Tennyson was cleared in the 1850s. Large quantities of the pine trees along the riverbank were felled and floated down river. The demand for timber in Brisbane grew with the development of steam powered saw mills.

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In 1861 the government surveyor Pratten measured up areas of land for purchase. He noted the surviving vegetation of Tennyson area, pegging and marking trees to help conduct his survey. Along Oxley Creek on the southern bank were scrub and bloodwoods. There were pine trees at the end of (what is now) Softstone Street, as well as ironbarks, mahogany trees and more scrub. At this time the only tracks were what have become Tennyson Memorial Avenue, Softstone, Curzon and Lofter Streets.

The land pattern surveyed was sold as 'country lands'. Portions ranged in size from 20 and 30 acres to more than 100 acres. These were bought in 1861 and 1862 and were used primarily for farming.

These early buyers cleared their holdings and began growing crops. Among these buyers were James Strong, the Grinies brothers, and James Mooney, who bought the sites of the power house and the Animal Research Institute. The crops grown at this early time included cotton, especially in the early 1860s when, during the American Civil War, supplies of cotton were reduced and local farmers had sensed a demand. Plantations also appeared along the banks of the Brisbane River from Yeerongpilly and Tennyson through to Moorooka.

These farmers turned to other food crops and were to struggle with the low-lying nature of the land in the area. A major flood in 1863 destroyed corn crops. Other floods occurred in 1864, 1870 and 1893. The Grimes brothers had turned their hands towards banana plantations, which were not profitable. They were also growing oats, lucerne, maize, sorghum, arrowroot, potatoes and other crops on their farms in the 1860s. An arrowroot mill, operated by horse power, was constructed by the Grimes's on their land near Moolabin Creek. This land is currently part of the Brisbane Golf Course. Crops were taken to Brisbane by boat, and river traffic from Ipswich provided a cheap form of transport during this period. It was also important before the rail line connecting Brisbane to Ipswich was opened in the mid 1870s.

There were large allotments of sugar, and arrowroot growing, with small mills along the river. In the late 1860s the sugar producer Louis Hope encouraged people to grow sugar cane in the Tennyson area, giving them sugar cane plants. A sugar mill was established on Oxley-Creek in 1869, which was worked by horsepower. Alternatively, some farmers grew cane and conveyed it to the Hope's mill at Ormiston. Newspaper reports in 1868 referred to 150 acres of sugar being under cultivation in the area. Later a 'floating' sugar mill was constructed on a ship, 'The Walrus', which was stationed on the creek.

3.2.1 The Suburb of Tennyson

Tennyson maintained a rural character for many years. Although sugar was abandoned in the 1880s, crops like arrowroot were grown until World War II. Residential development was slow to occur in the area, apart from one or two grand houses.

The area was relatively isolated from reliable transport networks. It was low-lying land, and prone to flooding and much of the land was still held as large agricultural holdings. Tennyson was indeed included in the country sections of Brisbane's city street and suburban directories in the 1880s and 1890s. Residents of Tennyson tended to be farmers in the late nineteenth century and into the twentieth, along with one or two professional people.¹ (For endnote details, refer to Appendix A).

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One of the grand houses of Tennyson area in the late nineteenth century was *Hayslope*, built in 1887 as the home for Thomas Martin, an auctioneer. *Hayslope* was a two storey timber and concrete house, and was situated on a large allotnent on the higher ground near the Tennyson railway station, on the future site of the power house. The house was quite grand, it had about eight bedrooms, drawing room, billiard room and library, maid's quarters and other ancillary rooms, stables and a coach house. The architect for the house was A B Wilson, a well known architect of Brisbane of the period. (Refer to Figure 1 in Appendix A).

The house was named *Hayslope* because hay had been gathered from the slopes of the site. It was then chaffed in a converted sugar mill that was on the property when Martin bought it. Martin died at *Hayslope* in 1894, the house was then let, and later bought and sold a few times. In about 1916-17 it was bought by the retired Brisbane architect Frank Longland. It was described in the pages of the *Queenslander* of 1932 in the following manner:

the lovely home...rears its queenly height from the midst of the open spaces at Tennyson, near the ever beautiful river. It is also in view of most parts of Yeerongpilly. The river, by which still grow clumps of beautiful gums and other trees, lies a hundred yards or so below the house on its northern side, with Long Pocket and its old farm homes and pastures opposite - spacious grounds of about 8 acres, Hayslope is a very desirable home.²

In the 1880s a rail line was constructed to link the Ipswich line to the South Brisbane wharves. The line ran from the Ipswich to Brisbane line, diverting east at Corinda, passing through Tennyson, to Yeerongpilly and then on towards South Brisbane. The line opened in 1884 and in the next year a station was constructed at Tennyson. Originally the station was called Softstone, an early name for the area, but was later changed to Tennyson.

The railway station at Tennyson has had a chequered existence. Not long after opening it closed due to lack of patronage. It opened again during the 1893 flood after the Indooroopilly Bridge had washed away and the south side line provided the only rail access into the city. The Brisbane Golf Club was established in the early twentieth century. The club was able to pressure the railway department to run trains to Tennyson on the weekends for its members. The platform at the station was subsequently reconstructed in 1912. However, by the early 1930s, the station was reduced in status again, to merely a stopping place between South Brisbane and Corinda.³

Before the creation of Greater Brisbane in 1925, Tennyson was part of the Stephens Shire, based in Annerley. The Yeerongpilly Divisional Board was created in 1879 with the Divisional Boards Act. This board was a rather large area, taking in land west to Goodna and then south to the Logan River. As time wore on and the area became more populous, administration of the divisional board became difficult. Smaller representative areas were carved out of the larger administration. The shires of Stephens (in the east) and Sherwood (in the west) were formed out of this larger area in the late 1880s, and the area around Tennyson was included in the Stephens Shire.

There were small industrial developments within the suburb into the twentieth century including mills and other factories. A ply mill was operating from 1925, and other factories were located south of the train line. In the early twentieth century some larger agricultural holdings were subdivided for residential purposes. By the 1920s there was sufficient residential development for calls for a school to be constructed. Before this period, children attended those schools close by, at Yeronga, Moorooka and Rocklea. The Tennyson State School opened in 1934, and was little more than a one teacher school. After some years as a state school it closed due to lack of numbers, but then reopened as a special school.

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During the 1930s some people saw the attraction of living by the river in a quiet secluded suburb, and houses were subsequently built along King Arthur Terrace. These were predominantly large and expensive houses. In addition, more houses were built in the 1950s and 1960s. In more recent times, other more modern houses have been built; among these is the house called *Tintagel*.

Tennyson remained quite isolated; however, after many years of deliberation and promises a bridge across Oxley Creek was opened in 1964, named the Pamphlet Bridge. This meant that Tennyson was more accessible for people in the south-western suburbs of Corinda and Sherwood.

In traffic terms, it is mostly used as a thoroughfare for motorists to the southern or western suburbs of Brisbane. It is a suburb which has struggled to maintain an identity, with its most well-known symbol arguably being the power house. Even at present, train services only occasionally stop at Tennyson station.

3.2.2 The Animal Research Institute

The semi-rural nature of Tennyson was consolidated with the construction of the Animal Research Institute in 1909.

Pastoralism has been a vital component of the colonial Queensland economy, especially during the late nineteenth century. Pastoralists themselves were also influential among the early colonial governments. During this period there were many instances of cattle dying from disease, with the resultant losses to personal and colonial income. Diseases such as pleuro-pneumonia could wipe out half a herd of cattle very quickly. Little work was being done during this period in researching or identifying the problems regarding the health of cattle and sheep in Queensland.

In 1888 a deputation of stockowners was received by the Colonial Secretary, requesting the government establish a laboratory to study the diseases and problems of stock animals. This request was, after some discussion, agreed to and in 1893 a man called Charles Pound, a microscopist and bacteriologist from England, was appointed the first director of the Stock Institute. The object of the institute was to discover through experimental research the nature and origin of diseases in livestock and to find ways of preventing these diseases.⁴ Its first premises were in Turbot Street but later moved to a building in College Road, Spring Hill.

The Stock Institute was originally established under the departmental auspices of the Colonial Secretary's Department. In 1897 the Institute joined the Department of Agriculture. In 1900 responsibility for the Institute was passed to the Home Secretary's Department and its name changed to the Bacteriological Institute. Later it went back to the Department of Agriculture.

However, its premises close by the city prevented it from doing its work properly. To function, better it needed a large area of land where it could house cattle and animals for long periods and observe them.

The Stock Experiment Station was established in 1909 with Dr Sydney Dodd in charge (refer to Figure 2 in Appendix A). Dodd had arrived in Queensland the year before and plans were made to enlarge the role of the Stock Institute and its investigations under Dodd's command. It not only accommodated the research activities of the Bacteriological Institute but expanded its operations on this new site. This new site was situated by the Brisbane River at Yeerongpilly, right next to Tennyson, on former agricultural land.

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The site of the station, of some 56 acres, was selected by Dr Dodd after a long search of areas around town which suited the purpose of the station. The site chosen consisted of alluvial flats with some rising ground, bounded by the river on one side and the railway line on the other. The site had sufficient area to keep and control the animals, provide feed for them and monitor their progress more effectively.

The Stock Experiment Station became a valuable and important tool for the Department of Agriculture and Stock. Queensland was taking a leading role in the research of livestock disease in the country. It was stated in a departmental report in 1909-1910 that:

...Queensland may congratulate itself upon being the first state to possess a thoroughly equipped station to deal with the epizootic diseases in stock and research work in connection therewith.⁵

The first few buildings constructed for the Stock Experiment Station at Yeerongpilly included a laboratory, stables, byres for cattle, and a mortuary. Pens and yards were provided for the various animals resident at the experiment station.

The laboratory was reputedly specially designed for the style of research being undertaken at the station. The building housed a working room, a vaccine room, an inoculating room, a sterilising room, stores and ancillary rooms, and wide verandahs on three sides. The stables had four stalls, a loose box and feed room, and rooms for tools. The floor was laid with brick and a tramway was provided for the removal of dead animals. The cattle sheds contained 12 stalls, a feed room and a tramway. The mortuary was sheeted with corrugated iron and had a concrete floor.⁶

These buildings at Yeerongpilly were probably designed by the architect Arthur Morry: Morry, who had worked privately in Brisbane in the late nineteenth century, was working for the Department of Agriculture as an architect and building surveyor by the early twentieth century. For this department Morry designed factories and prepared plans for farm buildings.⁷

In 1932 the Stock Experiment Station had a change of name, to the Animal Health Station. The University of Queensland built the Veterinary School (now A Block refer to Figure 3 in Appendix A) on the site in 1953, for the teaching of veterinary science students. At that time the University was located at the former Government House in the Domain, where there was little room for expansion. The University vacated the building in 1941 when the faculty was closed during World War II.

At the end of the war, staff of the Animal Health Station laboratory were located in the veterinary school buildings and the CSIRO used the original building (D Block) for the next twenty years.

The station grew **throu**ghout the 1950s. Its name changed yet again in 1953, to the Animal Research Institute. Other activities related to disease and livestock were transferred to the site. The Biochemical and Toxicological sections of the Agricultural Chemistry Branch moved to Yeerongpilly in 1956 as the Biochemistry branch. Further expansion saw branches of sheep and wool, beef cattle **bas**bandry, pig and poultry and veterinary services established at the Animal Research Institute.

In the early 1950s a large area of land was acquired at Rocklea, 470 acres, by the Department of Agriculture and Stock, for animal husbandry research programs. These programs were administered from Yeerongpilly by the Animal Research Institute.

State government laboratory staff were once again housed in D Block from 1967 and the Animal Research Institute continued to expand its services on site to support the livestock industries.

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Although the western section of the original reserve for the Yeerongpilly Stock Experiment Station was transferred to the power station, paddocks have remained as a landscape buffer between the Animal Research Institute buildings and the power station.

There are approximately 50 buildings and structures on the site, dating from all periods of the institute's development. Many of the original buildings from 1909 survive, and are important for their historical values.

The Animal Research Institute has played and continues to play an important role in the progress of the livestock industries in Queensland. It serves the animal industries in a number of ways. The Animal Research Institute offers diagnosis of diseases and nutritional and toxicological disorders for all manner of livestock, for sheep, cattle, pigs, goats, horses, and poultry. It provides advice on nutrition for farm animals. The Animal Research Institute is also involved in the chemical and biochemical analysis of cattle dip fluids and samples. Research is carried out to improve the health of, and the production of livestock.

3.2.3 The Tennyson Power House

The Tennyson Power House was built by the Brisbane City Council in the 1950s, and closed in the late 1980s. The background to electricity provision in Brisbane and Queensland is important when considering the commissioning and (then) decommissioning of the Tennyson Power House.

In the late nineteenth century in Brisbane, electricity was supplied by private companies. The City Electric Light company (CEL), and its predecessors, supplied most areas of the city with electricity from the late 1880s. The small municipal councils were responsible for reticulation and supply lines. City Electric Light had agreements with most of these councils for electricity supply.

An early power station was located in William Street in the city, near the river. This William Street power house was supplemented and then superseded by the construction of the Bulimba 'A' power house, on the Brisbane River at Lytton in the 1920s. In 1925 the Greater Brisbane City Council was formed, from the various municipal councils joining together into one large local authority. The Brisbane City Council had already assumed control of the local tramways system, and saw electricity supply as one of its functions. The Brisbane City Council then attempted a takeover of the City Electric Light company. This failed, and the council promptly commissioned the construction of its own power house to supply the tramway system. The New Farm power house was subsequently built in New Farm Park, on a site overlooking the Brisbane River, in 1928.

While initially supplying the trans with power the council also began selling electricity to private consumers. The City Electric Light company also expanded its network of supply, selling power to towns around Brisbane throughout South East Queensland. The city council was an aggressive competitor to the private company.

During the 1930s the provision of electricity became a somewhat thorny issue. The Queensland government conducted commissions to investigate the supply of electricity in Brisbane and Queensland. These commissions gave various recommendations, most of which were carried out. One of these was the creation of the State Electricity Commission (SEC), a state-wide body which was responsible for the overall control of electricity development in Queensland. In its first report to the Queensland parliament in 1938, it recommended that the two stations in Brisbane (Bulimba and New Farm) be interconnected, and their power shared. In 1939 an agreement was reached between the council and the City Electric Light Company; the city council would supply suburban Brisbane, while City Electric Light covered the rest of south-east Queensland.

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A further Royal Commission in 1937 recommended that power generating facilities be increased, with the construction of more power houses. By the time of World War II electricity was an essential service. The city council had increased plant at New Farm during the 1930s with growing demand and with the end of the war, construction of a new power house was a priority.

The SEC wrote numerous reports just after the war, predicting that electricity would be vital in the modern home of the post-war world. The development of consumer goods and 'gadgets' in the 1950s, which apparently freed housewives from household drudgery and demands, needed large amounts of electricity to operate. Based on the projected demand and the available supply, the SEC was alarmed that power restrictions and shortages would be an inevitable outcome in the 1950s unless action was taken. It was clear that actual growth in demand was far higher than what had been estimated. The electrification of some railways and the needs of large industrial establishments had created unanticipated pressure. More power was needed for Brisbane city in the post-war world, therefore, more power stations were imperative.[#]

As it happened two new power houses were planned simultaneously for Brisbane. One was by the city council and the other by the City Electric Light Company. City Electric Light was taken over by the Queensland government in 1953 and reconstituted as the Southern Electric Authority (SEA). The former City Electric Light Company's Bulimba A was supplemented by Bulimba 'B', built in 1953, while the Brisbane City Council built the Tennyson power house.

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The site that was required had to be on the other side of town to balance the operations at New Farm, it needed easy access to the rail line and the coal fields of Ipswich, it needed to be located near the area of high base load and within the central city, convenient to feed into existing council distribution systems and near the river but relatively isolated from residential areas. The riverbank location was needed as great quantities of water were required by the power station for condensing purposes.⁹

The site at Tennyson was chosen in 1945 by a Mr Quinn, the former manager of the Transport and Power House Department of the city council. Part of the site had been used as a staging camp during World War II, while another part had been the site of the house *Hayslope* in the late nineteenth century. *Hayslope* was demolished in the 1940s in preparation for the construction of the power station. More land was acquired from the Animal Health Station in 1947 and the site comprised more than 30 acres. The site was adjacent to an industrial area, with mostly open ground, and there were very few houses in the immediate area. It was close to the Ipswich rail line as well, which made the site very accessible. The coal for the power house came from the West Moreton coal fields. This could be freighted to Tennyson by rail to a siding near the station. Coal was also shipped to Tennyson down the river.

In 1948 the Brisbane City Council engaged the engineering firm McDonald, Wagner and Priddle to design the footings, superstructure and plant layout. The architects Stafford, Moor and Farrington of Sydney were appointed consulting architects to the project. They were responsible for the external fabric of the building, and for its overall design. The building was steel framed, with brick exterior walls, separate volumes for different parts of the power generating process, and had large horizontal areas of glazing.

The architects Stafford, Moor and Farrington were known for their industrial designs. Their work in the 1950s includes the Wormald offices and factory in Waterloo, and the former Boots Pure Drug Company laboratory in Roseville, both in suburban Sydney.

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The power house was built in stages. Construction began on stage 1 in 1950, and the third and final stage was not finished until 1964. Construction was delayed numerous times as it was difficult getting hold of building materials, particularly structural steel. The Korean War of the early 1950s also caused problems.

The delay in construction of the power house caused headaches within the State Electricity Commission and the Brisbane City Council. Power shortages and rationing were a real concern. To temporarily alleviate these shortages, a smaller 'package' power station was constructed on site and brought into commission in 1953 (refer to Figure 4 in Appendix A). It was oil-fuelled and had a capacity of 10,000 kilowatts (KW). After the main station was completed the package station remained operating, and was useful during peak loading times

The official opening of the power house (the first stage) occurred in March 1955. At the opening ceremony, the Premier of Queensland, Vince Gair, pushed a button, which opened a steam valve making a 30,000 kilowatt (KW) turbine start whirring. The power house was then operational.

The Courier Mail reported the opening of the Tennyson power house. The newspaper proudly boasted that *it's our biggest local job*, the biggest job for the city council and the city of Brisbane. It was big in many senses of the word. The building cost £10 million in total, and at a few hundred feet high (with the smokestacks), the power house would have dwarfed most city buildings. (Refer to Figure 5 in Appendix A).

The opening of Tennyson was seen as a triumph for the Brisbane City Council, which was at the time perhaps the most successful electricity authority in Queensland. It had some £2.5 million in reserves in the early 1960s. The Tennyson power house was a symbol of the new consumer society of the 1950s and beyond. Images of the power house were used by the council to promote public awareness of electricity and its provision, and to raise funds for its own expansion programs.

The second and third stages were commenced almost immediately upon completion of the first and the power house was completed in the early 1960s. The first stage consisted of two turbo generators and associated plant. The first and second stages together comprised Tennyson 'A' station, while the third stage was Tennyson 'B'. Altogether the Tennyson power house had a total of 240 MW power, making it the biggest power house in the state at the time, and the Tennyson power house was the largest project undertaken by a local authority in Australia. It was the largest industrial building in Brisbane, and probably the state.

The design of the Tennyson power house brought to Brisbane (and Queensland) a new architecture. It was arguably the first purely Modernist design in the city, and yet its low flat proportions, its aggressive horizontality, its abstract form and its bulk composed juxtaposition of planes that were reminiscent of the architecture of Europe of the 1930s and of European architects and schools such as Dudok, De Stijl, Le Corbusier and the Bauhaus.

Writing about the Tennyson power house at the time the Queensland Institute of Engineers commented about the building's design. It was stated that:

an effort has been made in the design of the building to give it an attractive appearance without unnecessary embellishment. It is considered that as the structure is a very large one and is for a particular purpose, its appearance should be functional in character and it is thought that this has been achieved without excessive cost.

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Modernism was largely a child of the twentieth century. It represented a new way of looking at architecture, and art for that matter, based on the well worn aphorism of "form following function", as well as the axiom of forgetting the past. New building materials such as steel and reinforced concrete allowed architects to fulfil their ambitions and conjure new ideas and design buildings never before seen. Modernism also translated into the new buildings forms of the twentieth century, the tall building, the ocean liner, and the cinema. This list also includes power houses, an identifiably twentieth century, building form, and arguably the most 'functional' of building forms. The perspective of the power station prepared by the architects Stafford, Moor, and Farrington, and published in 1955 makes the building appear as a sea-going vessel, afloat on the Brisbane River.

Electricity Provision is Reorganised

The development of the State Electricity Commission and its goal to regionalise electricity supply threatened the role of the Brisbane City Council in the provision of electricity. (Refer to Figure 6 in Appendix A) Both the Brisbane City Council and the Southern Electric Authority (the former City Electric Light company) supplied electricity to Brisbane. As the city council supplied only to urban areas and the Southern Electric Authority had rural consumers as well, the Southern Electric Authority was obliged to charge the same rates as the city council in Brisbane and yet had to subsidise the cost of its rural customers. This was an anomalous situation, which allowed the council to run up large amounts of reserves through its electricity provision. The State Electricity Commission was actively encouraging the creation of regional boards across the state, areas much larger than the city council's own boundaries.

The changing technologies of power supply also threatened the city council's position. Not long after Tennyson was opened, new and larger power houses with much greater capacities were possible. The larger power houses would take over from the smaller local plants. Large interconnected supply networks became the most efficient and economical method of supply. The larger power houses allowed regionalisation and regionalisation encouraged the advent of larger power houses. New power houses were planned for Queensland, in Ipswich, in central Queensland, and in other areas.

The Tennyson power house was in danger of becoming superseded, both in a technological and also an administrative sense. Before the first stage of Tennyson was complete, plans were being prepared for the amalgamation of the Southern Electric Authority and the city council's supply of electricity. While behind the scenes the path was being formed for amalgamation, the public stance was much stronger. The new ALP mayor in 1961, Clem Jones, declared that a Labour council would not allow the transfer of any section of the electricity department.

Strong words, but they were not matched with strong actions. In the following year, the city council, the Southern Electric Authority, and the State Electricity Commission were determined that the council would sell its power houses, Tennyson and New Farm, to the Southern Electric Authority, even before the third stage of the Tennyson power house was completed. The generation and supply of electricity, previously a domain of local governments, was now out of its hands across the state. Tennyson was one of the last power houses to be built by a local authority.

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During the Brisbane River floods of 1974, the Tennyson power house was affected. Early on a Saturday morning the river had risen so high that water covered the floor of the transformer bays on the riverfront. However, water levels continued to rise, and the same night, the two 60 MW units of Tennyson 'B' were forced to shut down. When designing the power house the architects and engineers included a wall which surrounded the turbine room basement of the 'A' and 'B' stations, to 'flood proof' the building. This measure was a success, although water entered the b sement through leaking floor valves. Some electric motors and turbine auxiliaries were flooded. Apart from this damage, large stockpiles of coal were ruined and the coal handling plant had to be pumped out and cleaned. In addition, the workshop was flooded and most electric tools could not be used.

In 1985 the Queensland Electricity Generating Board (formed in 1977) and the State Electricity Commission amalgamated to form the Queensland Electricity Commission, a semi-government authority. The following year the Queensland Electricity Commission's corporate plan recommended the closure of Tennyson and Bulimba power houses, along with Collinsville in the north of the state. Although large sums of money had only recently been spent on refurbishing the Brisbane power houses, the Queensland Electricity Commission went ahead with its plan and these power stations were gradually decommissioned. The newer power houses of the 1960s-1980s, Swanbank, Tarong, and Gladstone among others fed their power into the state grid. The existing houses developed by the city council and the private companies, in the city of Brisbane now belonged to another age of local supply. Electricity supply expanded so greatly during the post-war period that power houses like Tennyson and Bulimba B were only 10 or 20 years old and were already outdated. Bulimba A was taken out of action and then demolished in the late 1980s. Bulimba B and the New Farm power houses and Tennyson of course, still survive.

All plant and equipment at the Tennyson power house was put to auction on site in 1989 and sold for removal. This included the turbines, coal handling plant, fabric filters, demineralisation plant, ash handling plant, cooling systems, pumps and motors. The 'package' power house built in 1953 was demolished. A contract for the removal of asbestos and plant and partial demolition of the power house was awarded to a demolition contractor in 1991. In 1993 the riverbank moorings were removed. The power house has remained empty since this time.

Comparative Analysis

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A report prepared in 1995, by consultants Godden Mackay for the Electricity Supply Association of Australia entitled, 'Industrial Heritage of Power Generation - a Framework for Heritage Management', provides an invaluable framework for assessing the significance of the Tennyson power house in relation to other post-war power houses. This study established a typology of power houses and analysed the characteristics of each type.

Table 2.1 (refer to Appendix A) lists all the coal-fired thermal power stations in Australia. The Brisbane River based power houses fall into this type and the table notes their status (re: decommissioning, demolition, etc).

An analysis of thermal coal-fired classes listed at least four categories namely: early historic (1888-1930), urban expansion (ca.1929-1956), regional network (ca.1938-ca.1948) and packet stations (ca.1950-1955). Tennyson power house is in this latter category and is one of only eight built nationally at this time—three in Victoria and four in New South Wales. They were universally ordered in 1951 from Westinghouse in the USA and purchased in kit form. They were all constructed from 1952 and operational by 1955-6. They contained Westinghouse turbo generators of limited output and were designed to make up for shortages in supply.

Tennyson power house is a variation from the normal detail of this packet station category in that each of its turbo generators was 31 megawatts (MW) in capacity and manufactured by the British firm of C A Parsons. The first unit was operating in 1955 and a second identical unit installed in 1956, completing stage 1 of the Tennyson Power Station. Stage 2 duplicated this plant by 1959, and the two stages represented a capacity of 124 megawatts (MW). After stage 2 was completed, the capacity of Tennyson was again doubled by the installation of two 62 megawatt (MW) turbo generators. The first came into operation in 1962 and the final machine, with associated boiler and condensing plant, in June 1964.

The power house had an installed capacity of 248 MW, that is at full output it would be able to illuminate 2,480,000 100-watt electric light bulbs. It was designed to operate as a base load station working in parallel with other thermal plant in the Brisbane metropolitan area. Table 1 (refer to Appendix A) gives general information about its operation.

At full capacity the station could use up to 850,000 tonnes of coal annually and this was stored in an outdoor stockpile prior to bunkering to individual units. However the maximum coal consumption was 257,000 tonnes in 1977/78. Circulating cooling water for the unit condensers was obtained in unlimited quantities up to a maximum rate of 47,000,000 litres an hour from the Brisbane River. Once it had been circulated through the condensers it was discharged back into the river.

Table 3.1.4 (refer to Appendix A) presents an audit of the state of all the 1950s thermal coal-fired packet stations and it can be seen that all eight have been decommissioned and all plant removed and three demolished leaving five buildings remaining. Tennyson buildings should therefore be compared with those at Ballarat, Geelong, Liverpool, and Penrith for architectural similarities.

Section 6.9 identifies the planning constraints identified within the European Heritage study. Appendix A contains the criteria for assessment of cultural significance as well as time lines, bibliography and tables.

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SECTION 4.0

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Having gained an appreciation of the site's history, this section provides an overview of the current site condition and the various internal and external issues influencing it. The overview includes:

- an engineering assessment of the power house building;
- a structural assessment of waterfront structures;
- existing access and transportation arrangements;
- flooding and drainage conditions;
- existing ground conditions of the ARI including site contamination;
- an assessment of the ecological attributes;
- an outline of the planning framework; and
- a description of archaeological, anthropological and historical significance.

An assessment of the above factors will provide the basis for identifying the range of opportunities and constraints to redevelopment of the site. This assessment together with the opportunities and constraints analysis (section 5.0 of this report) comprises Stage 2 of the Land Use Planning Study.

4.1 ASSESSMENT OF MAIN POWER HOUSE BUILDING

Tennyson power house (TPH) is located on the south bank of the Brisbane River at Tennyson. The TPH was constructed in four stages during the 1950's and early 1960's with the first generator being commissioned in 1955 and the last generator (No. 6) was commissioned in 1965.

After supplying much of the power requirements of Brisbane and surrounding areas for many years and servicing as a peak load supplier in later years the last generator was decommissioned in 1986.

Since decommissioning, plant has been progressively removed and removal is almost complete. All coal handling plant, boilers, turbines, generators, some transformers, bag filters, cooling water pipes, other pipes and wiring have been removed.

The 110,000 volt switchyard to the east of the station supplied by underground cables, is still in operation together with a number of transformers located within the building north of the turbine bay. An extensive indoor 33,000 volt substation situated along the side of the turbine bay is still in operation providing supply from Powerlink to SEQEB.

4.2 BRIEF DESCRIPTION OF POWER HOUSE BUILDING

The main building complex consists of an east-west turbine bay with bays to the north and south which house the ancillary equipment. The boiler house is located further south of the turbine bay. Also part of the complex is an administration block, maintenance workshop and store located west of the turbine house. Three small annexes are also located on the south wall of the boiler house comprising workshops, offices and ablution areas for boiler house operations and staff. There are also other isolated buildings located near the main building: two brick clad pump stations located on the river bank; one small brick clad store another small store and a small office of timber construction located to the south of the administration block. (Refer to Figures I and 2 in Appendix B).

Coal was delivered by rail and the coal handling plant including the rail unloading hoppers and the coal stockpile were located to the south of the boiler house.

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4.3 EXTERNAL BUILDING DETAILS

All the buildings, except the one small store and office mentioned previously, are of steel framed construction with external brick cladding and large areas of glazing. All main columns are supported on bored piers which extend down to rock which from the limited information available is an average depth of 15m below the turbine house basement (RI 19.8 on below Australian Height Datum). Suspended floors are reinforced concrete supported by steel beams. The roof is also mainly reinforced concrete construction on steel beams. It is possible that the paint primers and top coats used for the protection of the steelwork erected during the 1950's may be lead based.

All structural steelwork is in excellent order except as noted below. There is minor damage to some light steelwork such as stairs and handrails caused by demolition operations and some cement render encasing of columns on the north wall in front of the transformers is spalling. This spalling may be due to corrosion of the encased steel. The base of one column in particular is much worse than the others.

The external brickwork except for a couple of areas described below where cracking has occurred is in excellent condition. At each end of the north wall of the bay north of the turbine bay there are diagonal cracks possibly due to expansion and contraction and growth of the brick work over the years. Also at the southwest corner of the store south of the administration block, vertical cracks have occurred in the south and east walls approximately 100 to 200mm from the corner. The cracks extend the whole height of the wall and have opened up 10 to 15mm maximum. The reason for the cracking is not known; there is no noticeable vertical displacement across the crack.

Reinforced concrete corbels supporting brick work appear to be in good condition except for some areas above the windows at the top of the western bunker structure.

At this location and at other exposed areas of wall concrete, such as those around glazed areas, edges of slabs and architectural features, are cracked and concrete has spalled off in some instances. This is not extensive at this stage but would become an expensive problem if not attended to early if the building is to be re-used. Areas where there is no deterioration at present would require treatment to prevent future deterioration.

The large window areas consist of small panels of glass fitted in steel frames. A large proportion of these appear to be openable. It is probable that some of the operating mechanisms would require maintenance before further use. The steel frames and surrounds appear to be in very good order with little sign of rusting. The grey top coat of paint is wearing off the frames and mullions exposing a pink undercoat. This may be a red lead primer. This should be confirmed if the building is to be rehabilitated. It is possible that top coats used may also be lead based. Some, rusting was noticed on a vertical mullion on a north wall of windows above the administration block roof. Apart from the west and south walls of the boiler house there are very few glass breakages. In some areas around the boiler house many panels have been broken. In most instances these have been replaced with zincanneal sheets. Large openings left after removal of plant have been covered with corrugated iron sheeting.

According to the drawings the concrete slab roof areas were covered with bituminous felt water proofing over which was laid 50mm thick concrete slabs approximately 1m square with small gaps between adjacent slabs. These gaps were filled with bitumastic. This filling has deteriorated and some sections of the roof over the administration block and turbine bay have been resealed.

The chimney stacks were located on the roof over the boilers. These and the flues and the induced draught fans and motors have been removed.

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Temporary covers have been fitted over the penetrations where the flues passed through the roof. Various fan and other plant bases remain on the roof. More substantial covers over the roof openings would be required if the building is to be re-used. Because of the plant that was previously located on the roof it would be capable of supporting a higher live loading than normally required for roofs.

Except for resealing of the gaps between slabs and the provision of more substantial covers over roof openings the roof is in good order.

Part of the roof over the two eastern pairs of boilers is steel sheeting on steel purlins. The trade name of the sheeting is "Galbestos" and is a galvanised sheeting which has a asbestos based protective coating applied over the galvanising. The sheeting is in good order and there is no evidence of the coating peeling off. Apparently the sheeting can remain in place but has to be listed on the "Asbestos Register". These two areas of roof are approximately 600m² in extent.

The roads around the building are in reasonable order. Roads south of the boiler house are either rolled concrete with asphalt topping or reinforced concrete slabs. Other roads are mainly conventional gravel base course bitumen surfaced.

Some subsidence has occurred in the courtyard and parking area outside the main entrance to the administration block. This subsidence was possibly caused by failed drainage pipes and ground being washed away in the vicinity of the failure. The subsidence has been backfilled with concrete. There is cracking in the road surface near a retaining wall on the western side of the courtyard area. This may also be due to subsidence around drainage pipes because there appears to be little movement of the retaining wall. Further west a lower level road leads to the road in front of the turbine house. Subsidence has occurred in this road at the corner north west of the administration block and has been backfilled twice. Two recent subsidence have also appeared north of the administration block between the road and the river bank. From the drawings it appears there are drainage pipes near these subsidence so it appears that movement or some other failure of the pipes is occurring.

The coal handling plant was located to the south of the boiler house and extended to the rail line which ran along the southern side of the property. The rail line is constructed on an embankment above maximum flood level.

Coal was delivered by rail to a power house rail siding beside the main line and was unloaded via underground hoppers onto conveyor where it was taken to the stockpile area or direct to the bunkers. Two large coal cranes for transferring coal to and from the stockpiles were located centrally in the stockpile area.

All the coal handling plant and associated buildings have been demolished. At the three rail unloading areas the buildings have been demolished to embankment level and the underground hoppers which were approximately 10 metres deep have been backfilled with rubble topped with approximately 1m depth of soil. The rail sidings have also been removed.

All the foundations for coal and ash conveyors, transfer towers, ash bunkers and the coal cranes remain. Some of these foundations would be large and would be difficult to demolish especially those under the transfer towers, ash hapus and coal cranes. These foundations would probably have been piled. The tops of all foundations are approximately at ground level.

The portions of the conveyor tunnels emerging from the coal hoppers are still to be demolished and covered over. This will be done shortly as part of the present demolition contract.

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A small oil fired "package" generating plant, approximately 32m by 25m in area, was located east of the switchyard. All of the building and machinery have been removed but the ground floor slab and footings remain. No details of the footings have been found, but these should not be large except for some of the machinery foundations such as the generators.

4.4 Administration Block

The administration block is 55.5m long by 13.5m wide consisting of two floors with a total floor area of approximately 600m². The lower floor consists of locker rooms, toilets and showers at the eastern end. The lockers have been removed and the toilets and showers are not operational. New WC suites, taps, shower fittings, etc., would be required if these were to be re-used. The floor is a concrete finish in the locker rooms with terrazo floors in the showers and toilets. Toilet partitions are terrazo panels. Doors and door furniture would generally need to be replaced if the area was to be reused. The western area consists of a central kitchen area with a large cafeteria area on the eastern side and a smaller dining room on the western side. The dining room overlooks a terrace on the norther side. All the kitchen fittings except a sink and cupboard have been unused. The floor of the cafeteria is tiled and appears to be in good order.

The upper floor consists of the main entrance to the administration block, small reception area, offices, strong room, records area and toilets. In some areas the concrete roof shows signs of leaking, also some concealed downpipes leak and have damaged wall finishes. There are room conditioners installed in some of the offices but these are no longer working as parts have been removed for other machines elsewhere. Internal partitions are in good order, some doors have been damaged. Floors are either tiled or carpeted and whilst generally floor coverings are in reasonable order they would not be suitable if the offices were refurbished. There is a lift at the eastern end of the administration block which is not operational at present, but after maintenance could be reregistered if required.

A communications room is situated on the southern side of the block which contains Powerlink and SEQEB communications equipment currently in use for on site substations.

4.4.1 Workshops and Stores

South of the administration block is a loading bay and mechanical workshop area which served the turbine house. The loading bay is approximately $14m \times 7.5m$ and the adjacent workshop is approximately $15.5m \times 14m$ in area. The overhead travelling crane from the Turbine House can traverse over both these areas. There is also an elevated floor at the western end of this area which was used as a electrical maintenance workshop.

South of the workshops is a store 24m square in area consisting of two floors. The upper floor has a 16m x 8m opening above an unloading area. The building is serviced by two small overhead travelling cranes. One of these, located above the unloading area traverses east-west servicing the ground floor. The second crane services the upper floor and transverses in a north-south direction. These cranes are in reasonable order and could be re-registered if required.

The building is in good order expect for the vertical cracks in the brick work mentioned previously in Building Details.

Further south of this building is another slightly smaller building currently used as a store. This building was constructed later than the other store and is in very good condition.

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4.5 **TURBINE HOUSE**

The Turbine House consists of the Turbine Bay which housed the generators. On the south side of the Turbine Bay is a lower section of the building where transformers, switch gear and cabling were located. To the south of the Turbine Bay is a narrower higher section of the Turbine House (usually called the auxiliary or heater bay) where generator ancillary gear was installed. (Refer to Figure 2 in Appendix B).

4.5.1 Turbine Bay

The Turbine Bay is 169m long x 16.6m wide x 20.7m high with one intermediate floor, (operating floor) 7.3m above basement level. The basement level is 3m above river high tide level, (RL 34.8 on Australian Heigh Datum (AHD)). An overhead travelling crane is installed in Turbine Bay. It's safe working load is 122 tonne and a 15 tonne auxiliary hook is also fitted. Except during installation and the removal of plant this crane would not have had much use and despite its age should be in good order. It is at present registered with the relevant Authority. A loading bay 9m wide (east-west direction) is situated at the eastern end of the Turbine Bay. There is also an unloading bay at the western end, refer Workshops and stores above.

The operating floor is at the approximate level of the 1893 peak flood level and the turbine and auxiliary bays below this level are enclosed by a flood proof wall. The basement floor and flood proof wall are a maximum of 915mm thick. Areas of the basement floor are covered by concrete plinths of various sizes which have been left after plant was removed. There are also numerous small columns supporting the floor above (operating floor) which, because of the large penetrations through the operating floor, due to generator foundations mainly, are rather randomly located. Part of the floor under and to the north of each generator block where condensers and circulating water pipes were located are large areas, approximately 100m², 1.5 m lower than the basement floor. To make the basement flood proof again, the penetrations where the inculcating water pipes passed through the flood proof wall would need to be properly sealed.

The six generator blocks are not being removed during the current demolition. These are large heavily reinforced concrete structures approximately 20m long by 5m to 6m wide extending up to operating floor level. The volume of concrete in each block above basement level is estimated to be approximately 500m³ and demolition if required would be costly. These blocks normally have a deep footing which would extend 2m to 3m below basement level. The basement, main columns, and generator block are supported on bored piers down to rock and it appears that the basement would support a high floor loading.

The operating floor extends into the bays north and south of the Turbine Bay. This floor which is punctuated by the generator's foundations is reinforced concrete supported by a steel beam grid.

The major penetrations through this floor are at the generators and are each approximately $160m^2$ in area. There are no other penetrations of any significance and only a small number of minor plinths. To close these penetration the floor could be extended across and integrated with the generator bases. If the generator bases were demolished, new reinforced concrete slabs could be constructed supported by steel beams spanning across the openings. The new beams could be supported mainly off the existing steelwork without the need for many extra columns down to basement level. This would provide a large area free of columns for some future use.

The main columns which are concrete encased and, other steelwork such as minor columns, crane beams and roof beams are in good order. There is evidence of minor roof leakage in some areas. One area at the western end of the turbine bay is noticeably worse than the others and may require

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more than rescaling of the roof as described elsewhere. There may also be some corrosion of the top of the roof beam in this area.

4.5.2 North of Turbine Bay (West End)

The western end of this bay is 106m long x 12m wide with one approximate central east-west row of columns. There are three floors including a basement which is 0.5m higher than the turbine bay basement and is not flood protected. An area of approximately 160m² north of each generator is 2mm below basement level where circulating water pipes were located. Numerous concrete saddles remain in these areas. Most of the remaining area is enclosed transformer bases, some of which are still in use. The north wall from basement level to the first floor is a steel grill with gates in front of the transformer cubicles. Grillage and gates are in reasonable order.

An open circulating water outlet channel is located parallel to and just outside the north wall. The channel appears to be in good order and could be covered with a concrete slab if required. Roof drainage from some of the power station building discharges into this channel.

The upper floor is at operating floor level and consists of an open area and rooms which are still in use as switch rooms, a battery room, and one larger room at the western end which is utilised as a control room. These rooms are in good condition and could be used for other purposes without the need for large repair costs. The control room is air conditioned and it is understood that the original unit was replaced round about 1982.

These rooms contain the main indoor 33,000 kv switchgear supplied by underground cable from the outdoor substation. From this indoor substation, SEQEB takes supply via an extensive underground cable network. Control panels are located outside these rooms and are presently protected by a security fence. Extensive control cabling exists under these rooms in the cable gallery. These cables run to the Control Room and the outdoor substation.

There is an intermediate floor below the operating floor. The head room to underside of the operating floor is 2.3m and the clearance to underside of supporting beams is 1.5m. Because of the low head room this area may not be of much use except for services. It was originally a cable gallery. The north wall of this are is fixed metal louvres which appear to be in good condition.

4.5.3 North of Turbine Bay (East End)

The eastern end is 63m long and with the northern wall moved south is 8.5m wide with no intermediate east-west row of columns. The basement floor is the same level as the western end and there is only one upper floor at operating floor level. There are two large pits, $13m \times 8m \times 6m$ deep approximately, north of each generator which originally housed the circulating water pumps. These pits have not been sealed and are filled with water to river water level. If the pump pits were not required for any new facility they could have a suspended floor constructed over to increase floor area. Transformer cubicles are located each side of the pump pits. The north wall is fitted with a steel grill similar to that at the western end and is in a reasonable condition.

The upper floor has large openings above the pump pits. Most of the remainder of this area is enclosed and was probably switchrooms etc., similar to those at the west end. A 12 tonne overhead travelling crane is installed under the roof above each pump pit. Longitudinal and transverse travel is hand operated by an endless chain. The cranes appear to be in good order although they are not registered at present.

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4.5.4 Auxiliary Bay (South of Turbine Bay)

The auxiliary bay is 169m long by 8.5m wide. There are four floors including the basement, and these extend the whole length of the bay. The basement, which is part of the flood proofed area and is at the same level is the turbine bay basement and has areas that are covered by concrete plinths of various sizes. These could be removed to provide a long narrow unobstructed floor area.

The next floor is at operating floor level and has numerous penetrations of various sizes which could be easily filled if required without much expense.

The next floor is 8.3m above operating floor. This floor is relatively clear of obstructions except for some switchgear enclosures at the eastern end. From this floor an elevated view of the turbine bay is possible through existing windows. An elevated view of the boiler house interior could be obtained from the southern side of this floor by installing glazing, in the existing 225mm brickwork wall.

The top floor is a further 4.5m (12.9m total) above operating floor. This floor is covered by numerous small uniform sized plinths. There are also some pipe penetrations and openings for stairways. At three locations stairways which lead onto the roof for access to the boiler house coal bunkers encroach into the available space.

4.6 BOILER HOUSE

The Boiler House is situated south of the Turbine House. It is 169m long x 34m wide x 28m high from basement level to roof level except at the three coal bunker locations where the roof is 10.7m higher. The bunker bays extend north across the auxiliary bay and 5.4m to the south of the boiler house. The bunker bays are 8m wide east-west. The basement level is 4.8m above high tide level (RL 36.6 AHD) and is not flood proofed. With the removal of the boilers there are no intermediate floors except for a perimeter floor approximately 5m wide at turbine house operating floor level around the perimeter of the building.

Roadway level to the south of the boiler house is 1.2m above basement level with ramped vehicle access to the basement at one central location. Ramped access is also available at the eastern end. Vehicle access is also available at the western end. The road here is at BH basement level and no ramp is required.

From the drawings the basement slab is a concrete slab on ground approximately 200mm thick. This has been damaged in some areas by demolition operations and some old boiler columns have been cut off at slab level or just above. At three locations against the turbine house flood proof wall a 3.5m sq pit 4m deep provides access to approximately 1.8m high tunnel under the turbine house basement which leads to the circulating water outlet channel. These tunnels carried service pipes discharging into the circulating water channel. The tunnel could be sealed and the pit filled if not required for future use. There are other small pits and plinths scattered around the basement floor which could be easily filled or removed if required. If this floor required rehabilitation a thorough clean and a thin topping slab placed on top would probably be sufficient.

Most of the slabs and supporting beams at operating floor level have been demolished during demolition of the boiler leaving a jagged edge to the concrete slab and ends of oxy cut beams around the perimeter of the boiler locations. With the remaining slab and beams not now being continuous the floor system may not be as strong as originally designed. This floor would require a structural check before re-use. If required the portions of floor that have been demolished could be replaced by reinstating the steel beam supports and pouring new concrete slabs.

The 1961 BCC Drawing TPS1057 is included to show the concrete lined water outfall structures built parallel to the bank. Other drawings included in Appendix C show details of the L shaped wharf. Photographs illustrating the structures and the extent of maintenance repair necessary are given in Appendix C.

This section gives a brief evaluation of the existing waterfront structures and the opportunities that could arise from the waterfront development of the site. Waterfront land at this site is suitable for shallow water development as the sandstone and conglomerate rock zone is located between -13 and -23 feet below the low water datum (that is, between reduced levels RL -5.7m and RL -7.0m to low water datum) based upon the test bores along the river bank. See Drawing Number 2 in Appendix C.

In order to develop the waterfront area it would be necessary to ascertain or obtain copies of the data relating to the following :

- whether the piled structures shown on plans but now with superstructures removed from the site have been extracted or merely broken off or cut off at bed level
- the pile driving results and borehole drilling results that most likely exist for the site. The results of borehole in 1967 are shown on Drawing Number 2 in Appendix C.
- the drawings for the three reinforced concrete waterfront structures in order to ascertain the consequences of infilling the chambers for future waterfront development.

Borehole drilling in the areas to be developed may be needed if existing pile driving and geotechnical data proves to be inadequate.

4.7.2 Evaluation of the Waterfront Facilities

L Shaped Wharf

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The wharf was designed in 1967 and consists of timber substructures supporting a thin reinforced concrete deck. The wharf was originally centrally located in a series of six piled dolphin structures on 50 feet centres. The dolphin structures upriver and downriver of the wharf are now removed. It has been assumed that the piles forming the coal tug wharf and the dolphin structures have now been removed completely, however, confirmation of this fact could be obtained by writing to the Department of Environment. See Drawing Number 1, 2, 3 and 4 in Appendix C for details of the L shaped wharf and the ground conditions associated with the waterfront development of the site.

As stated, the structure was designed in 1967 for the purpose of unloading coal barges. Subsequent to the wharf being built, it is clear that the following modifications have been made to the structures:

- the original timber bin on the wharf has been removed.
- the wharf conveyor unloading system was modified to import sand (and probably gravel) about the time the Expo development (1986) was occurring in Brisbane. (The remnant headstock for the conveyor support structures can be seen in Plate 1 in Appendix C.)
- the original fender system was replaced with a temporary steel tube and sheet piling system render system (unpainted) to suit the sand unloading barges. Plate 4 in Appendix C shows the unpainted circular steel fender piles and one of the two bollards remaining on the wharf head.

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LAND USE STUDY For Tennyson Power House Site

The reinforced concrete decked wharf was built about 1968 and the practice at that time allowed the use of 4000 psi (27.5 MPa) concrete with 1.5 inches of cover to the steel reinforcement. The consequences of the practice coupled with the usage of the structures has lead to the situation where reinforcement bars are exposed and the deck thicknesses and reinforcement details would be inadequate for 1996 standards. See Plate 3 in Appendix C.

The approximate area of the deck for the jetty is as listed below:

•	Head of Jetty	62 feet by 21 feet = 121 square metres
•	Approach to Jetty	90 feet by 15 feet = 125 square metres.

To reconstruct this jetty to 1996 standards to berth small vessels would cost approximately \$500,000 based upon typical unit rate construction costs. The necessary repairs to replace the fender system and re-instate the concrete deck where the reinforced concrete has failed could be undertaken for about \$50,000. To upgrade the structures to handle 20 kPa live loads and T44 truck live loads would require a detailed inspection of the substructures and it may also entail complete replacement of the thin reinforced concrete slab deck with a slab designed for 1996 design loadings.

For the above maintenance cost estimate of \$50,000, it has been assumed that the timber headstocks and girders comprising the sub-structure to the wharf are in reasonable condition. This is possible because of the weather protection afforded by the concrete deck. However, dry rot and weathering of at least some of the timber members after a period of almost thirty years is to be expected.

The timber piles supporting the reinforced concrete deck have concrete jackets to prevent marine borer infestation. Therefore, despite each pile's age (twenty nine years), it is likely that most piles at the wharf are in sound condition.

The fender system as it exists at the present time would require upgrading with the use of fender rubbers and the painting of the steel fender piles if the wharf were to be used as a future structure for development at the site.

In general, unless a specific use can be found for the wharf structure, it could easily be demolished to free the waterfront area for development.

The existing structure has value as a means of accessing the site with vessels drawing up to a draft of 2 metres (estimated) at low tide. Such a facility would be particularly valuable during a planned upgrading of any of the waterfront structures at the site. However, its present state of disrepair is such that it would need considerable maintenance for it to be used as a working structure. This is because its fender system has only been designed to last in the short term. It is likely that given its former function as a barge unloading wharf, there is probably sufficient water depth to provide between 2 metres and 4 metres at the quayline at low water tidal level.

Screen Chamber

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Scaling from Cullen and Roe Drawing Number 1 in Appendix C gives the approximate waterfront length of the screen chamber as 33.8 metres. The total width of the screen chamber is 12 metres as also established by scaling. Drawing TPS 1057 shows that there are eleven areas of the deck where grid mesh covers will be required to provide safety for access to this area of waterfront.

Drawing TPS1171 does not provide a cross-section through the screen chamber but if drawings could be located for this structure it is certain that the drawings would show the reinforced concrete structures founded on piles.

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Plates 5 and 6 in Appendix C show the vertical face of the screen chamber structure. The area is lighted by overhead lights and fencing and grid mesh covers for screen chambers were being fabricated at the time of the inspection. The deck level covering of the screen chambers (see Plate 6 in Appendix C) is needed as there is a danger that people, in particular children, could fall into the mud covered chambers.

The reinforced concrete structures do not appear to be overloaded and no significant concrete cracking was observed. The evident siltation at the river interface and the future growth of mangroves along this part of the river if not developed can be inferred from Plate 5 in Appendix C.

Short term maintenance for the structures require that the holes in the deck be covered with panels as shown in Plate 6. The timber covers are quite weathered and should be and are being replaced in August 1996. The inside of the chambers are covered by considerable thicknesses of marine silty clays.

At present the vertical wall interface with the river is not provided with fender piles or rubbers and bringing a vessel to the face could only be possible at the higher stages of the tide.

Dredging in front of the wall, providing a fendered face and possibly filling the screen chambers with sand and providing a reinforced concrete deck area would all be possible developments for this waterfront area. However because the river is on a bend and there has been accretion of silty muds in this area, continual maintenance dredging will always be needed to maintain a 2 metre water depth at low water at the river interface.

A piled waterfront structure with an approximate waterfront dimension of over 30 metres has only value if it can be utilised for a useful purpose. Demolition costs for the structure would be substantial.

Pump Houses Intake Chambers

Scaling from Cullen and Roe Drawing Number 1 in Appendix A gives the approximate waterfront length of each pump house intake as 13.3 metres with about 3 metre long end fillets. The upriver intake well has a tide gauge and has collected a considerable volume of silt. There is about a 6.5 width between the river interface and the riverside wall of each pump house.

The pump house intake chambers are associated with the Number 1 and Number 2 pump houses. A cross-section on Drawing TPS 1171 in Appendix C shows that the intake to the pump house structures are supported on piles. At the site inspection of the upriver pump house 1 intake in August 1996, it was clear that the chamber had become badly silted up. If details of the structures were checked it is very likely that the reinforced concrete walls would show that infilling of the chambers with sand would be possible.

The reinforced concrete structures do not appear to have been overloaded and no significant concrete cracking was observed. The evident siltation at the river interface and inside the chambers suggests that extensive dredging would be necessary to make use of the structures as a all tidal access point. There is no fendering provided along the river interface.

Short term maintenance for the two intake well structures would require that the existing wells be covered to prevent children being trapped in the mud-infilled intake chamber. Infilling of the chambers with sand would represent one way of making the open pit chambers safe for the public.

At present the vertical wall interface with the river is not fendered and bringing a vessel to the face could only be possible at the higher stages of the tide.

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Dredging in front of the wall, providing a fendered face and possibly filling the screen chambers with sand and providing a reinforced concrete deck area would all be possible developments for this waterfront area. However because the river is on a bend and there has been accretion of silty muds in this area, continual maintenance dredging will always be needed to maintain a 2 metre water depth at low water at the river interface.

A piled waterfront structure with an approximate waterfront dimension of over 30 metres has only value if it can be utilised for a useful purpose. Demolition costs for the structure would be substantial.

4.8 SERVICES INFRASTRUCTURE

4.8.1 Water Reticulation

Water supply reticulation adjacent to the site consists of a 300mm diameter cast iron spun lined main along the eastern and western alignments of Fairfield Road. At the intersection of Fairfield Road and Tennyson Memorial Avenue the main extends east and west. To the west of Tennyson Memorial Avenue the 300mm diameter main along the southern boundary of the road reserve crosses to the northern road reserve boundary. The main at this location then deadends at the intersection with Softstone and Curzon Streets. A 225mm diameter branch connection then extends from this section to service 100mm and 150mm diameter mains in Curzon and Softstone Streets.

In Ortive Street to the northeast of the study site a 150mm diameter branch mains extends from the 300mm diameter main in Fairfield Road. (Refer to Figure A in Appendix D).

Initial discussion held with the Brisbane City Council's Brisbane Water Section have advised the existing 300mm diameter main to the south and east of the proposed site has more than adequate capacity to cater for future planning and development options. In addition, the representative confirmed the main is fed from an 800mm trunk main in Fairfield Road.

Additional data on the water service in Fairfield Road and Tennyson Memorial Avenue was examined and from recent hydraulic gradient records as confirmed by the authority, the maximum and minimum static pressures are 950 kPa and 412 kPa respectively.

From the above data and the initial investigation and review it can be concluded the opportunities for potable water supply are not constrained by inadequate or undersized mains.

4.8.2 Sewerage Reticulation

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The existing network of sewerage reticulation adjacent to the site consists of the following:

- To the northeast of the site in Ortive Street a 150mm gravity main services the immediate residential development. A sewage pump station at the end of Ortive Street pumps sewage across Fairfield Road and the Railway Reserve into the existing gravity main along the eastern boundary of Wilke Street.
- To the west of the site in Softstone Street a 150mm gravity main services the existing residential estate.
- To the south of the site and parallel to the southern boundary of Tennyson Memorial Avenue a 225mm gravity main services the residential development bounded by Curzon and Walker Streets. From Walker Street the main extends across to Ethel Street (within the Brisbane Golf Course-Grounds) then changes direction and extends south to Allwah Street. At the

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intersection of Allwah Street and Moolabin Crescent the gravity main continues in an easterly alignment to connect into the existing 525mm Moolabin Creek Branch Sewer.

From within the Animal Research Institute portion of the study site an existing sewage pump station servicing the Institute, pumps sewage via a 100mm rising main across the Railway Reserve and Tennyson Memorial Avenue. The rising main continues along a southerly alignment through the Brisbane Golf Course grounds and into Palomar Road. In Palomar Road the rising main extends east along the southern road reserve boundary and discharges into an existing gravity sewer manhole at the intersection with Moolabin Crescent.

The 150mm gravity main from this point crosses Moolabin Crescent and continues south along the eastern road reserve boundary finally discharging into the manhole of the Moolabin Creek Branch Sewer.

Preliminary discussions held with the Brisbane City Council's, Planning and Policy and Sewerage Schemes Sections have advised the following:

- there are no proposed or preliminary layouts for the site in question as there has been no previous requests for re-zoning.
- existing sewerage reticulation and pump stations to the north east of the study site are operating at maximum capacity and further no augmentation works will be considered due to the quality and sensitivity of the existing residences.
- the existing reticulation to the west in Softstone Street is also operating at capacity.
- the 225mm main to the south of Tennyson Memorial Avenue is also in question and appears to be overloaded. Council records indicate the line surcharges and would require detailed investigation to confirm the extent of augmentation necessary.
- the existing pump station and rising main servicing the Animal Research Institute is also experiencing capacity problems and is currently being investigated to determine the cause/s.

A representative for the BCC recommended a new pump station within the study site and a rising main to the Moolabin Creek branch sewer following the alignment of the existing rising main and gravity sewer from the ARI portion of the site. (Refer to Figure B, Appendix D).

4.8.3 Gas Reticulation

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The existing network of 100mm diameter natural gas reticulation pipework is located within the western footpath reserve of Fairfield Road extending across the intersection of Tennyson Memorial Avenue and terminating adjacent to Green Street.

A 100mm diameter polyethylene branch main from Fairfield Road extends along the southern road reserve boundary of Tennyson Memorial Avenue terminating prior to Walker Street to the west.

The reticulation network is administered by Allgas Energy Limited and operated at high pressure (100kPa). Pressure reduction to service consumers needs is regulated at the boundary for the point of service.

The precinct reticulation infrastructure is supplied from a 100mm diameter steel high pressure gas trunk main adjacent Moolabin Creek operating at 1200 kPa.

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From preliminary discussions and initial assessment of the service, the supply authority has advised the existing reticulation has sufficient capacity to service the demands of the proposed planning and development options of the study site.

The supply authority representative also confirmed reticulation within the study site including all necessary augmentation works to the existing reticulation, would be provided by Allgas unless specific installations agreements are entered into with the developer i.e. common trench by the developer with pipe installation by the authority. (Refer to Figure C, Appendix D).

4.8.4 Electrical

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SEQEB has been consulted to determine what constraints may apply to a more intensive use of the site, say a relatively dense residential development. They have advised that supply to a residential subdivision would be provided under a subdivision electricity supply agreement. This would cover works to reticulate the site and connect to the existing network.

The matter of distribution augmentation in five years' time is more difficult to predict, and is dependent on development by other customers in the meantime, including their use of existing spare capacity.

Given the small size of development proposed (less than 1.5 MVA) it is likely that little or no augmentation of the existing network would be required. (Refer to Figure D, Appendix D).

Appendix D also contains a list of the major electrical infrastructure currently owned by both Powerlink Queensland and SEQEB which transverse the power house site, together with details on three cost options for relocating these assets to allow for site redevelopment.

4.8.5 Communications

The existing network of Telstra communications infrastructure adjacent to the site is contained within the southern boundary of Tennyson Memorial Avenue, the western boundary of Fairfield Road south of the intersection with Tennyson Memorial Avenue, and the eastern boundary of Wilke Street.

An existing crossing from Wilke Street crosses the Railway Reserve and Fairfield Road and enters the ARI portion of the study site adjacent the southeast corner. The service is then reticulated within the ARI site with a connection exiting to the north in Ortive Street. A second connection to the power station portion of the study site enters from Softstone Street.

Preliminary discussions with Telstra have confirmed the existing infrastructure in Tennyson Memorial Avenue contains optic fibre cable and can be extended into the proposed study site to provide service. In the event the system is found to be under capacity, Telstra can augment the service from their Yeronga Exchange approximately 3.0km to the northeast.

Telstra have also confirmed all costs associated with infrastructure upgrade, argumentation and new reticulation works will be borne by Telstra. (Refer to Figure E, Appendix D).

4.9 ACCESS AND TRANSPORT

4.9.1 Existing Road Network

The combined site of the TPH and the ARI, is bounded by the Brisbane River to the north and the Corinda to Yeerongpilly rail-link-to-the south. The road network serving the site is based on Fairfield

Road which forms its eastern boundary. Fairfield Road is an arterial route serving the industrial and residential areas of Yeerongpilly, Yeronga and Fairfield. During the 1980s, Brisbane City Council undertook a major upgrading program to maximise the efficiency of this route. The upgrading included:

- widening and creating a combined direction turning lane between Sherwood Road and Palomar Street;
- grade separation of the Corinda-Yeerongpilly rail line;
- pedestrian overpass of Fairfield Road at Yeronga Station;
- general provision of a four lane cross section through Yeronga with protected right turn lanes at signalised intersections;
- development of a new route between Ashby Street and Annerley Road to provide four lane capacity using a one-way couplet; and
- upgrading of the Fairfield Road/Annerley Road intersection to complement the increased road capacity.

As part of this upgrading process, consideration was given to access to the ARI. The intersection of Ortive Street and Fairfield Road was signalised to provide a high standard of access to the Institute via Ortive Street. A new road link was also constructed between Ortive Street and Paragon Street to allow use of the Ortive Street signals by residents of Paragon Street (who would otherwise be denied all movement access by a central median at the Paragon Street/Fairfield Road intersection).

The only other route of network importance in the area is the east-west connection between the north-south arterial route serving the Walter Taylor Bridge (Oxley Road) and Fairfield Road.

The connection parallels Sherwood Road to the south and is made up of a number of different roads including:

- Graceville Avenue;
- King Arthur Terrace;
- Softstone Street; and

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Tennyson Memorial Avenue.

The existing access to the Power House is from Softstone Street. It is likely that the east-west route will be classified in the Council road hierarchy (a formal road hierarchy document is being prepared by Council) as a suburban route.

Council has for some time received resident complaints about traffic volumes using this route - particularly from the Graceville area where alternatives to Graceville Avenue are available (e.g. Leybourne Street and Nadine Street).

The route crosses the Corinda-Yeerongpilly railway near Tennyson Station. The railway line forms a demarcation between the residential area of Tennyson and the primarily industrial area of Yeerongpilly. Access to this industrial area is obtained from Tennyson Memorial Avenue at Curzon Street and Walker Street. Curzon Street provides a secondary access to the Brisbane Markets and several large industrial developments including the QRX container depot (Moolabin Goods Yards) and the Goodman Fielder grain storage area. Both the QRX and the Goodman Fielder operations have access to Lofter Street as well as Curzon Street: Lofter Street contains the Tennyson Special

School. A pedestrian crossing of the railway links Lofter Street to Myla Terrace via Goodwin Street. A large saw milling complex is contained in Goodwin Street.

Sight distance available at the Curzon Street/Tennyson Memorial Avenue intersection is poor due to a slight bend in Tennyson Memorial Avenue and the crest in Softstone Street due to the rail overbridge. For this reason some heavy vehicles exit the industrial area using Walker Street rather than Curzon Street (requiring use of a narrow one way section of Walker Street).

The east-west route is constructed to two lane standard and currently carries approximately 10,000 vehicles per twelve hour day (12,500 over 24 hours). Fairfield Road carries approximately 20,000 vehicles per twelve hour day (25,000 over 24 hours).

Tennyson Memorial Avenue intersects Fairfield Road immediately south of the rail crossing. Prior to grade separation, this intersection was subject to extensive traffic delays when closed due to rail traffic. With grade separation, the existing railway and property constraints meant that it was necessary to provide for the right turn movement outbound from Fairfield Road into Tennyson Memorial Avenue at a new signalised intersection with Palomar Street, approximately 350 metres to the south.

As well as a proposed road hierarchy for Brisbane, the Council intends to publish a road classification for freight routes. This work is still in draft stage and Council will not nominate intended classifications. However, it is clear that Tennyson Memorial Avenue and Fairfield Road serve as important access routes to core industrial areas. B-Double trailer units currently operate from the QRX goods yard at Moolabin under licence from Council. Consequently, it is to be expected that Tennyson Memorial Avenue will be classified as a relatively important freight route.

4.9.2 Public Transport

The area is served by Council bus routes along Fairfield Road and along King Arthur Terrace (hourly service to the city). Passenger train access is also provided by the Corinda-Yeerongpilly rail link and the main southside rail line. The Corinda-Yeerongpilly rail link connects the southern and western rail routes and is used primarily for goods traffic and as an emergency link between the two main lines. An hourly passenger service to the city operates at Tennyson Station. There is also, at other times, a shuttle service operating between Corinda and Yeerongpilly Stations. Conversations have been undertaken with Brisbane City Council Officers, in relation to the new high speed ferry service currently running between Bretts Wharf, Hamilton and the University of Queensland Campus, St. Lucia. These have suggested that Council could look at the possible extension of the high speed ferry route up river to the Tennyson area in the future.

4.10 FLOODING AND DRAINAGE

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4.10.1 Brisbane River Flooding

Brisbane River Q100 flood levels in this vicinity are 7.70 to 7.75m AHD. The levels of the site vary from RL 4.1 to RL 11.0. Thus for flood immunity, filling of lower parts of the site to RL 8.0m AHD (ie. Q100 + 300mm) is indicated.

No Regulation Line (for restricting the location of development along the river) is currently set in this area. However, it is known that these are imminent in the area and will probably be set by mid 1997. Examination of the site levels suggests that a regulation line would probably not be put any further into the site than 15m from the top of the existing river bank.

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4.10.2 Local Flooding Issues

The study site has two natural drainage lines to the Brisbane River which also correspond broadly to the location of the main stormwater lines. These carry water from two catchments which each extend beyond the study site. No other catchments contribute to runoff on the site. At the river end of these lines the natural topography has been modified by filling of gullies, thus presenting overland flow. The existing drains are lacking in capacity and local flooding can therefore occur.

4.10.3 Existing Stormwater Drainage System

Refer to "Trunk Stormwater Drainage" Figure in Appendix E.

- The Brisbane City Council operates 2 major drainage lines which pass through the study site.
- The first line enters ARI from Fairfield Road opposite Stamford Street, then proceeds to Ortive Street before flowing to an outlet at the Brisbane River.
 - The second main line enters Tennyson power house site at its southern boundary with the Railway Reserve, approximately 110m east of Walker Street. The line then travels in a north easterly direction beneath old coal stockpile areas to the boundary with the Animal Research Institute. The pipeline then flows north and outlets to the Brisbane River.
- The pipelines were constructed during the early 1950's with extensions to the system (surrounding streets) carried out in the ensuing decades.

Tennyson Power House Site

- No surface structures (manholes) from the main trunk drainage line are evident in the site. The area was previously used for coal stockpiling and has been extensively filled along southern boundary. Manholes are likely to have been buried. In addition, site is overgrown.
- Extensive internal drainage has been observed. The northern part of site and carpark area drain directly to Brisbane River. The remainder of the site grades to ARI boundary and the main trunk line.
- Internal drainage is noted to be in very poor condition with several broken pipes observed.
- Manhole and inlet in Tennyson Memorial Avenue are noted to be in very poor condition.
- According to records, the trunk line consists of a single 1050mm diameter reinforced concrete pipe running from Tennyson Memorial Avenue to the eastern boundary with the Animal Research Institute.

Animal Research Institute Site

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- Trunk line from adjacent power house site increases in diameter from 1050mm to 1500mm and heads in a northerly direction to the Brisbane River.
- The other trunk stormwater line from Fairfield Road extends to Ortive Street in the form of a single 900mm diameter RCP. At the end of Ortive Street, the line continues to the river with an increase in diameter to 1200mm.

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- The Brisbane City Council's urban drainage system connects to this drain line at Fairfield Road with branch lines extending up Wilkie Street to Green, Stamford and Crichton Streets with another branch line extending up Fairfield Road itself. Branch systems from Paragon and Ortive Streets also connect to the trunk line.
- Several localised depressions within the site are serviced by field inlets in the form of headwalls or grated gullies. These field inlets appear to be clear and operate effectively Farm Manager reports no flooding problems on the site.
- Pipe outlets to the Brisbane River appear to be in poor condition with no headwalls in place and the displacement of some pipes noted.

4.10.4 Hydrology & Hydraulics

- The drainage line entering the power house site from Tennyson Memorial Avenue has an external catchment of approximately 8.4ha consisting of residential and light commercial developments. The total catchment contributing to this system (including the power house site) is approximately 24.8 ha. This corresponds to a 10 year ARI design flow of approx 8.7m³/s at the system's outlet.
- The underground pipe system has been assessed on the 10 year ARI flow which corresponds to the Brisbane City Council's minor design event.
- The drainage line passing through the ARI from Fairfield Road has a primarily residential external catchment of approximately 15.0ha. The total catchment for the system (including internal catchment area) is approximately 21.1 ha which corresponds to a design flow of about 7.8m³/s at the outlet.
- Preliminary hydrologic and hydraulic calculations have been carried out in accordance with the requirements of the Queensland Urban Drainage Manual (QUDM) and the Brisbane City Council's Supplement.
- Assessment of the existing pipelines indicates that they are under-sized for the design 10 year flow. The **pipe**line through the ARI site has a capacity of only about 40% of the required design flow. The pipeline through the power house site has a capacity of approx 60% of its design flow.
- Ultimate design flows for the site have been calculated assuming a high density residential development on both the power house and ARI sites. This manifest as increased coefficients of runoff for internal catchments and thus larger design flows.

4.11 EXISTING ARI BUILDINGS

The Tennyson power house site buildings have been described in detail above.

The adjoining ARI site is extensively occupied, right across the higher land, by a complex of between fifty and sixty buildings. These are in daily use for a wide range of functions including laboratories, animal pens, equipment sheds, store rooms, autopsy room, offices and staff amenities. The buildings house 170 staff, comprising the largest group of animal scientists within the Department of Primary Industries.

The buildings range in type from farm sheds of steel, through single storey buildings in both timber and masonry, to a multi-level laboratory/office building. The buildings range in age from almost

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ninety years old to perhaps twenty years, and are all kept in reasonable condition. In size they range from very small to quite substantial, although the greater number are not large. There is nothing on the site of comparable size to the power house.

The more substantial buildings are towards the east of the site, generally closer to the south-east corner. In terms of asset value/replacement cost, there could be an argument, in any change of occupancy and usage of the site, for the retention and re-use of some of the buildings in this vicinity.

4.12 EXISTING GROUND CONDITIONS

The following section has been prepared by Douglas Partners and Gutteridge Haskins and Davey and combines provides a brief site history, and an identification of the significant factors involved in the site contamination history of the TPH and ARI sites.

4.12.1 Topography (ARI)

The subject site is located immediately adjacent to the Brisbane River. The majority of the site is located approximately between 4-11m AHD. A steep slope comprising the embankment to the river exists in the north of the site. Drainage at the site is generally towards a bifurcating gully located in the north of the site that drains directly into the Brisbane River. In addition to that, a natural low sink area exists in the central western part of the site immediately adjacent to Tennyson Power Station. Drainage from the southern part of the site is towards this natural low point.

4.12.2 Geology (ARI)

Reference to the Queensland's Geological Survey 1:100,000 Beenleigh Sheet indicates that the site is underlain by Quaternary alluvial deposits comprising clay, sand, gravel and silt. The alluvial deposits probably overlie the Ipswich Coal Measures which comprise conglomerate, sandstone, shale, tuff and coal searns.

Local knowledge indicates that the water table in this area is located at depths in excess of 10m below ground surface.

4.12.3 Site Inspection (ARI)

An inspection of the site was undertaken during August 1996 which revealed the following:

- The site is occupied by the ARI and comprises a number of major building structures. Most buildings are located in the central and south-east corner of the site. The balance of the site is covered with open vacant land.
- A cattle dip and holding pens exist in the north of the site.
- No bowsers or bowser islands were observed to be present on-site.
- Various areas of filling were observed at the site.
- The site is generally flat to gently sloping towards the north.

4.12.4 Site History of the Tennyson Power House Site

A brief history of site processes performed at the Tennyson power house during its operation were obtained from the *Tennyson Power Station Site Environmental Site History*.

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The subsequent sections will address aspects of these processes in more detail, particularly those that may contribute to an environmental impact on the station site and its surrounds, and also those which may contribute to land contamination.

The areas and processes for consideration are:

(a) coal/coal stockpile;

- (b) water systems;
- (c) emissions/discharges;
- (d) ash disposal;
- (e) bulk chemical storage;
- (f) transformers;
- (g) asbestos; and
- (h) miscellaneous site practices.

Coal/Coal Stockpile

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Coal for the power house was obtained from the West Moreton Coalfields which was supplied from the Bundamba and Rosewood Seams.

At full capacity, the 240 MW power house was capable of using up to 850,000 tonnes of coal per annum.

Following delivery, coal was stored in an outdoor stockpile prior to bunkering to individual units.

Water Systems

Water was used on site for a number of purposes, the largest use being circulating cooling water for the unit condensers. This circulating water was obtained in unlimited quantities up to a maximum rate of 47 million litres an hour from the Brisbane River. Once it had been circulated through the condensers it was discharged back into the river.

The other main use was feed water to the boilers. This required the use of town water after treatment in the Demineralisation plant at the station to remove impurities that could corrode the boiler tubes.

Discharges

Only one water discharge licence was issued for the TPH and remained current until March 1996. This was Licence No. W 194, issued under the Clean Waters Act 1971 and the Clean Waters Regulations 1973 (Regulation 11).

Ash Disposal

Furnace ash from the forward travelling boiler grates fell into ash collection hoppers under each boiler.

Each boiler was fitted with two paddle ash extractors that transferred the ash into a hopper via a continuous conveyor belt which deposited the ash.

Each conveyor belt served two boilers and delivered as to a total of six ash hoppers serving the power house. Ash was removed from the ash hoppers by truck.

Dust Collection

The dust collecting plant consisted of pulse jet fabric filters of Flakt manufacture, designed to filter out dust and grit particles from the boiler flue gas passing to the stacks.

These fabric filters were installed in 1982; the plant had been operating with mechanical cyclone type grit collectors for approximately 20 years before the installation of the new fabric filters.

The flue gas was ducted from the twelve boilers to a total of six fabric filters arranged on the basis of one fabric filter to each pair of boilers.

The fabric filters operated on a pulse jet system, the dust collecting on the outside of banks of felted fabric bags, and is dislodged by a plume of high pressure air which operated on a sequential basis. The dislodged dust fell into collection hoppers mounted under each bank of filters.

High pressure air was supplied from a central bank of four air compressors serving all fabric filters.

Dust collected in the fabric filters was conveyed to a central storage silo by means of a dense phase conveying system. Dust may have been removed from the central collection silo dry in a partly wet state. The dust was then removed from the power house by truck.

Bulk Chemical Storage

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Bulk chemical storage at the power house included the storage of sulfuric acid and caustic soda for the water treatment processes, bulk fuel oil for the Package plant, and underground petrol and distillate tanks for vehicle use.

Transformers/Switchyard

The power house has numerous transformers all containing large quantities of oil. The power house also has a switchyard which contains oil filled equipment and transformers. The protection equipment for the switchyard is located in the turbine hall.

Two potential problems exist with the oil filled equipment, namely the potential for a leak or spill of oil to cause soil/land contamination and contaminate local watercourses, and also the potential presence, particularly in older electrical equipment, of unacceptable levels of Polychlorinated Biphenyls (PCB) if the equipment has been filled with oil containing PCB.

Asbestos

Tennyson power house like other older generating plant contained a considerable quantity of lagging and insulating materials containing asbestos. Asbestos cement sheeting was also used at the power house.

During the operational life of the power house all asbestos removed was disposed of at the Bulimba B asbestos disposal site.

Recently asbestos was removed from the site in accordance with prescribed procedures and was taken to a licensed asbestos dump. Apart from limited fugitive emissions during demolition, no other asbestos material has been deposited on the site.

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Miscellaneous Site Practices

A variety of activities have been carried out on site which had the potential to cause general environmental problems, or result in land contamination. These activities included:

- i) Grit Blasting grit blastic can result in contamination from both the grit material used, and from the material (e.g. chromate and lead based paints) removed by this process.
- ii) Paint Shop/Workshop disposal of solvents and degreasers as used in both of these areas can present problems.
- iii) Ion Exchange Resin Disposal spent ion exchange resins require appropriate disposal, Anecdotal evidence suggest that a small quantity of resin was disposed of on the Tennyson site in the vicinity of the Package Plant.
- iv) Waste packing cases were burnt on the site and an incinerator was used on the site for burning rubbish during the early years.
- v) On a number of occasions Turbine oil was split and released into the cooling water tailrace.

4.12.5 Site History of the Animal Research Institute

A brief history of the site was obtained based on information provided by Mr. Geoff Dawson, Farm Manager with ARI, and by viewing aerial photographs of the area.

Table 1 details the aerial photographs that were viewed as part of this investigation.

Title	Date Flown	Run Number	Photo	Observation
Brisbane	7-11-94	_ 10	088	New structure constructed in the south-east comer of the site (ICPMS Building).
Beenleigh	28-6-90	1	109	Pesticide storage area constructed. Three small sheds constructed in north-west comer of site
Beenleigh	26-6-87	1	208	Two sheds in north of site demolished and three sheds constructed in their place.
Beenleigh	22-8-78	1	4043	

Table 1 - Observation From Aerial Photographs

From the site history information the following activities carried out at the site are potentially contaminating:

- cattle dip and spray race;
- filling (sourced internally and externally);
- possible impacts from Tennyson power house;
- fuel storage (above and below ground);
- chemical storage (including pesticides); and

spraying for weed control.

These issues are discussed below:

Cattle Dip

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A cattle dip is located in the north of the site (refer to Drawing No. 3 Appendix F) adjacent to a steep slope which slopes down towards the Brisbane River (refer Photographs 1 and 2 Appendix F). It is reported that the dip has existed for at least fifteen years.

It is reported that the ARI is currently using Barricade S in the dip; however, it is also understood that dieldrin was used at the site. Dieldrin was stored in a small shed located adjacent to the cattle dip (refer Drawing No. 3 in Appendix F). It is reported that the shed had a concrete floor. This storage shed has since been demolished.

Arsenic products were also widely used as pesticides; however, the sale of arsenic products was effectively banned under the Agricultural Standards Act, 1952 (Qld) in the early 1970s. The sale and use of arsenic products was banned from use in 1988 by the Chemical Usage Act, 1988 (Qld).

It is reported that the dip has never been emptied onto the adjacent ground nor has the dip overtopped during heavy rainfall events.

Filling

It is reported that filling has been obtained from two sources at this site; viz, internal sources from within the site and externally from other sources.

It is reported that ash waste generated from the incinerator has been dumped for many years in the gully that exists in the northern part of the site (refer Drawing No. 3 Appendix F). In addition to this, it is understood that animal bedding has also been dumped in this gully area. Anecdotal evidence suggests that a wide variety of dumping activities took place in this area including the dumping of low level radioactive material from the isotope building. Anecdotal evidence suggests that a long history of uncontrolled filling.

Photograph 3 in Appendix F illustrates the gully area.

It is reported that there are two main external sources of fill material at the site:

- filling obtained from local building contractors; and
- filling material dredged from Oxley Creek.

Filling obtained from local building contractors is reported to have been generated during the construction of swimming pools. This material is understood to have been used as filling on an ad hoc basis throughout the site. Details of the nature of the fill material and its distribution could not be provided by the set of the refore considered to be uncontrolled filling.

In addition to the above, filling was also obtained from the dredging of Oxley Creek during the flood mitigation works that were carried out approximately twelve years ago. This material was placed in the gully area and is understood to have comprised alluvial deposits consisting of sands and clays.

Impacts from Tennyson Power House

The Tennyson power house is located immediately to the west of the subject site. It is reported that trees were planted at the boundary line within the last ten years (refer Photograph 4); however, there is a significant gap of approximately 60m where no growth of the trees has occurred at all. It is

reported that this is an area where drainage occurs from the coal stockpiles located on the power station site, towards the ARI.

It is also understood that both the power house site and the ARI site were significantly flooded during the 1974 floods.

It is probable that contaminants from the power house site were washed onto the ARI site during the floods.

Fuel Storage

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It is reported that a single above ground 2500L diesel tank exists at the site. This tank is bunded.

It is reported that the incinerator is currently gas fired; however, in the past, it is understood to have been both coal fired and diesel fired. A total of two underground diesel tanks are understood to exist in the central part of the site adjacent to the incinerator. It is understood that these tanks have not been removed from the site nor have any remediation or validation works been carried out.

Chemical Storage

It is reported that pesticides were stored in a small shed adjacent to the dip. In addition to pesticides, it is understood that the following is currently stored or has been stored at the site:

- solvents;
- pathological and biological wastes;
- radioactive isotope materials; and
- paints.

4.12.6 Stage 1 Contaminated Land Assessment : Tennyson Power House Site

The investigations undertaken for the Stage 1 Contaminated Land Assessment of the power house site allowed the following conclusions to be drawn.

The site history, provided from previous reports, records site inspections, and from the knowledge of previous persons employed or having association with the site, revealed that there have been several potential contamination sources present during the history of land use at the site.

The major potential contaminant sources, were from:

- coal and ash stockpiles and possible use of as fill on site;
- ash disposal;
- power station flue dust and associated collection facilities;
- pesticide use;
- paint shop;
- flammable goods store;
- transformers and battery rooms located on site;
- former underground fuel storage tanks;
- above ground fuel storage tanks;
- sewage treatment facilities and septic tanks;
- sand blasting; and
- visual indication of fuel/oil spillage.

As a part of the Stage 1 study the site was sampled for possible contaminants.

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The assessment methodology was aimed at identifying the presence of possible contaminants across the site as a result of previous land uses defined in the site history and through visual inspection of the site.

Some 36 sample locations were investigated with analysis of soils and groundwaters. Target analyses included heavy metals (arsenic, cadmium, chromium, cobalt, copper, mercury, nickel, lead and zinc) as well as hydrocarbon analytes (total, monocyclic and polycyclic) and specific target analytes including pesticides and PCB's. The results of this sampling are contained in the Stage 1, Contaminated Land Assessment report.

Recommendations for further investigations are set out in the GHD report.

4.12.7 Contamination History Findings : Animal Research Institute

The investigations undertaken for the study provide a brief overview of the possible contamination history that exists at the ARI site. The following conclusions can be made with respect to this site:

- i) The site has a long history of over 80 years as a research veterinary sciences institution.
- ii) A cattle dip exists at the site. It is understood that the dip has been in operation for over fifteen years.
- iii) Above and below ground fuel storage facilities exist at the site.
- iv) Coal storage areas have existed at the site.
- v) The site has been extensively filled. Anecdotal evidence suggests that incinerator waste and general waste have been used to backfill a gully at the site. In addition to this, there is historical evidence of uncontrolled filling of the site.
- vi) A wide variety of chemical storage exists/existed at the site.
- vii) The site may have been impacted by activities associated with the Tennyson Power Station.

The results of this investigation indicate that additional work would be required to complete a Stage 1 Preliminary Site Investigation. The site has a long history. It is recommended that a detailed site history be carried out at this site.

This should consist of the following:

- interviews with site personnel;
- historical searches at the State Library;
- interviews with relevant, current and former staff of the Department of Primary Industries;
- research of files and interview of staff of the CSIRO to assess the history of use of the site by this organisation;
- research of the Defence Force's activities at the site during World War II.

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In addition to this, it is recommended that a limited sampling and laboratory analysis program be carried out in discussed areas and where land use could potentially result in contamination. It is further recommended that any sampling and analysis be carried out following completion of the detailed site history to preclude the possibility of having to mobilise twice.

4.13 ECOLOGICAL ATTRIBUTES

The flora and fauna component of the study was undertaken by WBM Oceanics Australia. The flora and fauna of the land are described separately below based on information gathered during 2 site inspection by a qualified botanist and zoologist in early August 1996.

4.13.1 Flora

The entire site appeared to have been cleared of native vegetation in the past. Buildings and power infrastructure surrounded by mown lawns dominated the site, with a narrow band of riparian vegetation regenerating along the Brisbane River.

Mangroves occurred along the tidally-influenced portions of the riverbank on both the power house and ARI sites The species present were the grey mangrove (Avicennia marina), river mangrove (Aegiceras corniculatum) and milky mangrove (Excoecaria agallocha). Growing slightly higher up the bank from these species, but spreading out over them, were introduced species such as mile-aminute vine (Ipomoea cairica) and broad-leaved pepper tree (Schinus terebinthifolia).

On top of the bank, blue gums (Eucalyptus tereticornis) were the dominant tree, with others present including river oak (Casuarina cunninghamiana), silky oak (Grevillea robusta), cadaghi (Eucalyptus torelliana) and Chinese elm (Celtis sinenis). The silky oaks appeared to have been planted, but the cadaghi and Chinese elm are environmental weeds, and probably would have invaded the site.

The flat ground under these trees is regularly mown, and is dominated by grasses and common garden and pasture weeds, such as cobblers' pegs (Bidens pilosa), dock (Rumex sp.), common plantain (Plantago lanceolata) and clover (Trifolium repens), while on the uppermost slopes of the bank were long grasses (Panicum sp.), green cestrum (Cestrum parqui), castor oil plant (Ricirus communis) and climbing vines, such as siratro (Macroptilium atropurpureum) and asparagus fern (Protasparagus sp.).

One area of (relatively) flat ground near the ARI buildings has been planted with native rainforest tree species, including white cedar (Melia azedarach), kauri pine (Agathis robusta), brush box (Lophostemon confertus), blackwood (Acacia melanoxylon) and silky oak, with the understorey kept mown.

The vegetation over the remainder of the site consisted of mown grass and weeds (as described above), with scattered shade trees, including siris tree (Albizia lebbeck), Moreton Bay fig (Ficus macrophylla) and brush box (Lophostemon confertus), with various native and introduced species used for landscaping in gardens around the buildings.

4.13.2 Fauna

Most of the site is dominated by mown grass, artificial structures (buildings, power infrastructure, fences) and demolition works. These features have no role as fauna habitat. Habitats that occur on the land are:

- mangroves and muddy river banks;
- regenerating riparian vegetation; and

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garden areas.

The fauna of these habitats is described briefly below.

The mangroves and muddy river banks support small numbers of mangrove birds, two species being presents at the time of the August site inspection. Striated Heron (Butorides striatus) and Mangrove Gerygone (Gerygone levigaster). These species occur along river bank habitats throughout the Brisbane area and their occurrence on the river shores of the subject land is of local interest. From time to time, Australian White Ibis (Threskiornis molucca) and white-faced Heron (Egreeta novaehollandiae) would use the muddy shores of the river for feeding.

Regenerating riparian vegetation is still not very dense. Notwithstanding this, some bird species characteristic of suburban remnant vegetation were observed during the site inspection. As well as the introduced Spotted Turtledove (Streptopelia chinensis) and Common Starling (Sturnus vulgaris), the following native species of bird were recorded: Masked Lapwing (Vanellus miles), Superb Fairy-wren (Malurus cyaneus), Noisy Miner (Manorina melanocephala), Brow Honeyeter (Lichmera indistincta), Scarlet Honeyeater (Myzomela sanguiolenta), Magpie Lark (Grallina cyanoleuca), Grey Fantail (Rhipidura fuliginosa), Willy Wagtail (R. leucophrys), Spangled Drongo (Dicrurus bracteatus), Black-faced Cuckoo-shrike (Coracina novaehollandiae), Pied Buterchbird (Cractius nigrogularis), Torresian Crow (Corvus orru), Chestnut-breasted Mannikin (Lonchura castaneothorax), Elcome Swallow (Hirundo neoxena), Fairy Martin (H. ariel), Golden-headed Cisticola (Cisticola exilis) and Silvereye (Zosterops lateralis). These species are generally common throughout suburban Brisbane where open space, remnant native trees and rank grassland occur.

Despite warm conditions, no reptiles were observed. It is likely that the site supports the introduced pest the Cane Toad (Bufo marinus) and the native Green Treefrog (Litoria caerulea).

Few mammals would occur on the site, although the Common Brushtail Possom (Trichosurus vulpecula) and Common Ringtail Possom (Pseudocheirus peregrinus) are likely to be common in nearby suburban areas and small numbers may occur on the subject land.

Garden areas would support a less diverse sub-set of the fauna described above.

4.14 STATUTORY PLANNING FRAMEWORK

4.14.1 The Town Plan For the City of Brisbane (1987)

The site is included within the boundaries of the Brisbane City Council and as such, most development is guided and controlled by the provisions of the Town Plan for the City of Brisbane (1987) (The Town Plan).

Land Use Zoning

Under the Town Plan, the subject site is included in the Special Use zone. Land included within the Special Uses zone generally is comprised of land "owned by Council, or some other Corporate body set up under the authority of some Act". Land zoned Special Uses is generally intended for public purposes such as schools, universities, railways, hospitals, defence facilities, airports, communications and municipal services.

Although land included under a Special Uses zone is usually required for specific Council, Crown or Corporate body uses, the Town Plan recognises that such uses may not continue indefinitely and accordingly, makes provision for a change of use. Depending on the use proposed, a rezoning application may or may not be required.

Land use zonings surrounding the subject site are varied and generally reflect the land use patterns in the area (refer to Section 2.4):

- Residential zonings comprising of Residential "A" and "B" zonings are located immediately west of the Power House site and north and east of the ARI site;
- Industrial zonings comprising Future, General and Light Industries are mostly concentrated adjacent to Fairfield Road and Tennyson Memorial Avenue;
- Sport and Recreation zoned land includes of the Brisbane Golf Course to the south and the Yeronga Park and Yeronga Bowls Club to the north-east;
- Parkland areas zoned Open Space include Yeronga Park located on the north-east boundary
 of the study area and a small neighbourhood park on the northern boundary of the study area;
 and
- The Special Uses zone is the dominant zone within the study area and includes the Moolabin Goods yards to the south-west of the site, both study sites, Yeronga Primary School, Yeronga TAFE, and a deaf school to the north-east and special school the west of the study area (refer to Figure 5).

4.14.2 Strategic Plan

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Under the current Strategic Plan, the subject site is included within the Urban Fabric designation. The Urban Fabric designation is the dominant land use designation with the Brisbane City area and represents that part of the City presently developed or intended to be developed for urban purposes, either residential or non-residential.

A draft Strategic Plan has been drawn up by Council. Its envisaged gazettal in February 1997 will replace the current Strategic Plan and is discussed below.

4.14.3 New Draft Strategic Plan

Proposed amendments to the Strategic Plan see a clear delineation between major land uses, as opposed to a more general inclusion under the Urban Fabric designation, as is currently the situation.

Under the proposed new Strategic Plan, the subject site is included under the "Urban Area" Preferred Dominant Land Use (PDLU), the intent of which is to cater for urban development (both residential and non-residential) to the year 2011.

Development areas situated within the Urban Area designation could the following types of development as set out within the draft Strategic Plan:

- small centres, industrial areas, schools and other institutional uses;
- low rise detached housing, currently zoned Residential A;
- housing at higher densities greater than that of detached housing;



- development to preserve or achieve character, and identify specific to local areas including aspects of character or identity resulting from any adjoining land which forms part of the Green Space System;
- uses that provide for a range of necessary services and facilities required to support needs of residents not catered for in other PDLU areas; and
- non residential activities in urban areas are intended to serve local communities, minimising potential amenity problems and enhance for use of public transport, walking and cycling.

Development applications for land within the Urban Area designation will require assessment of the following, by Council:

- (a) social mix : maintenance of social mix should occur through development that:
 - (i) integrates with existing development in the area;
 - (ii) promotes access to the range of services, facilities and activities required to support the social and cultural needs of residents;
 - (iii) contributes to range of housing; and
 - (iv) allows residential development in appropriate locations.
- (b) character : maintenance of existing character of neighbourhoods should consider the following:
 - (i) heritage buildings contributing to a neighbourhood streetscape should be retained where possible; and
 - (ii) the diversity of residents and housing, vegetation, architectural styles, access to services, facilities and open space, places to meet and socialise, cycling and pedestrian linkages which are safe, security and specific features which provide local identify.

Adjacent to the site and where possible, running the length of the Brisbane River is a Green Space Corridor designation; the overall intent of which is to link major conservation, parkland and recreational areas within the City and neighbouring local authorities. Refer to Map 1 in Appendix G.

4.14.4 Stephens District LAP - Draft Development Plan

The draft Development Control Plan is one of a series of seven volumes which together comprise the Stephens District LAP.

The draft Development Control Plan (DCP) for the Stephens District, which makes up Volume 7, has two functions:

- 1. It provides guidance with respect to selected current provisions of the City of Brisbane Town Plan as they apply to development within the LAP area; and
- 2. It contains recommendations for the future planning and development of the area of which is intended to be included and subsequently adopted within Brisbane's new Town Plan, currently near completion.

The intent of the draft DCP is to provide a foundation for the guidance of future development and change within the Stephens District by ensuring:

(i) broad strategic planning objectives established within Brisbane 2011 are realised and implemented within the Stephens District;

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- (ii) an integrated approach is adopted for managing development and change within the Stephens District;
- (iii) character of the DCP area is maintained and enforced;
- (iv) environmental quality of the DCP area is maintained and enhanced; and
- (v) the community's views are observed when managing growth and development within the Stephens District.

The LAP area has adopted a series of ten challenges which address traffic and transport, housing and street scape, residential amenity, environmental management, open space and recreational facilities, surrounding industrial land uses, business environment and redevelopment of key sites.

The DCP for the Stephens District is supported by three sections. Firstly, the Intent Statement describes the specific planning objectives and preferred development form for an area. Secondly, the Preferred Development section contains a series of recommendations for future development which have both a proposed statutory planning status and interpretive. Thirdly, the Development Standards section contains a discussion of the developmental requirements (eg: design guidelines, landscaping recommendations) that may apply to development for a variety of purposes in the particular planning area. Additionally, these three sections are supported by maps.

The LAP area has been divided into a number of planning areas reflecting the predominant land use within in each area. These have been categorised under the following headings: Residential Areas, Industrial Areas and Key Sites and a total of 22 planning areas have been identified. (Refer to Map 2, Appendix G). The Temyson Power House site and adjoining ARI site together make up planning area Number 18. (Refer to Map 30, Appendix G). The planning intent and associated development standards for the site is discussed below.

Intent Statement

The preferred planning outcome for the site is for both residential development and parkland provision as specified within the Stephens District Business and Industry Study. It is noted within the report that both of these types of development would benefit from relocation of the substation.

The DCP recommends that if any residential development is to occur on the site, infrastructure studies should be carried out to determine current capacities (ie: for water, sewerage, etc). Most importantly, it stresses that redevelopment of the site must ensure that impacts to the physical and social character of the surrounding suburbs are minimised. Further, the DCP recommends that any redevelopment should occur in conjunction with a community consultation program. These have been undertaken as components of this Planning and Land Use Study for the TPH site.

Alternatively, the report recognises that if site constraints inhibit residential development, then a number of non-residential uses could be considered. Such uses must consider possible impacts on surrounding residential areas.

Development Standards

A number of development standards have been recommended within the DCP that provide guidelines to any future redevelopment options. They are summarised as follows:

1. Any redevelopment's built form and visual appearance should be seen as contributing to the character and scale of the existing surrounding land uses.

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- 2. Landscape elements should be incorporated in any new development to enhance existing landscaping and provide a visual buffer between the redevelopment the operational substation.
- 3. If it is likely any redevelopment should affect the water quality of the Brisbane River, or restrict public assess to the river, these will be seen as inappropriate. In addition, it is viewed that any redevelopment of land to residential use should incorporate river access to the entire length of river frontage.
- 4. Flood prone areas of the site and other flooding problems must be considered.
- 5. Any redevelopment proposal that affects the existing traffic situation by generating large volumes of traffic "will provide vehicular access from Tennyson Memorial Avenue adjacent to the Brisbane Golf Club, crossing the train line, to prevent the impacts of increased traffic volumes on surrounding residential areas", (Stephens District LAP, Volume 7, Draft Development Control Plan, p. 63).
- 6. Redevelopment should incorporate adequate parking within the site so that surrounding land uses and residential areas are not adversely affected by increased traffic volumes.
- 7. Redevelopment should aim to provide an attractive pedestrian environment that allows for easy pedestrian access through and within the redeveloped site.

These guidelines mirror those established within the Stephens District LAP's - Business and Industry Study. The requirements contained within both documents of the LAP (ie: Volumes 5 and 7) are recognised within this study. As such, the Planning and Land Use Study for the Tennyson Power House site will aims to recognise and meet the requirements at the final stages when land use design options are established.

Note that the Business and Industry Study (Volume 7) and the Environment and Recreation Study (Volume 4) for the Stephens District LAP are summarised in Section 4.15.2, to 4.15.4.

4.15 NON-STATUTORY PLANNING FRAMEWORK

Non-statutory planning instruments can provide valuable guidance and as such, are encouraged to be consulted during the preparation of development proposals. A range of relevant non-statutory planning strategies are outlined below.

4.15.1 Brisbane River Park Strategy

The TPH site is strategically located along the Brisbane River and contains approximately 700 metres of river frontage. Under the Brisbane River Parks Strategy (BRPS), this places the site under considerable pressure to be utilised as a public access node so as to increase and enhance public access to the Brisbane River. As such, the TPH site has been recognised within the Brisbane River Park Strategy as containing specific values which are discussed below.

The BRPS was conducted for the Parks and Gardens Branch of Brisbane City Council and has been implemented since August 1995. The Strategy has been prepared for use by Brisbane City Council and other proponents of development to assist in the planning and the decision making process in relation to parks and sites with proximity to the Brisbane River.

The intention of the BRPS is to provide direction for the future planning of all parks located within a 500 metre catchment of the Brisbane River from the mouth of the Brisbane River to Kholo Creek, situated north of the boundary which separates the Ipswich City and Brisbane City Councils.

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The Strategy identifies a number of major initiatives which have potential impacts for the TPH site. These initiatives are summarised below:

- the creation of a physical linear link through the development of strategic "street scape" links between open spaces so as to ensure greater parkland access;
- the potential acquisition of significant road reserves adjacent to the river through consultation with Brisbane City Council and the Department of Natural Resources;
- increasing public recreational use and level of use of the Brisbane River and adjacent parklands with the provision of landing points and launching points within the River Parks Network;
- the linking of significant parks, cultural features and similar attractions through the commercial opportunity of a ferry service;
- priority development of significant individual parks so as to highlight and complement their individual character and to ensure diversity within the River Parks Network; and
- Strategic open space designation containing high values for future parkland.

Context, Values and Issues

The BRPS is structured in three levels namely:

- (i) The Overall River Strategy which describes the overall vision, key goals and objectives for the River Parks;
- (ii) River Precincts which identify five Major River Planning Precincts; and
- (iii) The River Action Plan which provides a detailed inventory, as well as plans and recommendations on specific reaches and parks of the river.

Before an overview of these three levels is undertaken, the context of the BRPS together with an assessment of the Strategy's values, opportunities and constraints, as they relate to the subject site.

In order to conduct the BRPS, an analysis of the values that exist along or adjacent to the river edge have to be identified. These values are discussed as having recreational; visual; ecological; cultural; or commercial assets and can either directly or indirectly affect the way in which the TPH Site Land Use and Planning Study is conducted.

Value identification along the river system was undertaken in order to conduct an analysis of relevant parks and sites adjoining the River system. These key values have been summarised below.

Recreational Values

Parks and sites containing high recreational values are noted. These include sports grounds, golf courses, or the like.

The Strategy identifies both Sir John Chandler Park (reference number DO420) and the Indooroopilly Golf Course which are situated on the north bank of the River directly across from the TPH site.

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While it is unlikely that any future development of the TPH site will have any consequence on adjacent sites containing recreational value within the BRPS, it is envisaged that future development of the Tennyson site which recognises these values will be noted positively by the Parks and Gardens Branch of the BCC.

Visual Values

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Parks with high visual values have been noted within the River Parks Strategy owing to the opportunities they provide for direct viewing of the Brisbane River. Sir John Chandler Park has been noted within the BRPS as containing high visual value.

As the park is situated directly across the River, this would allow Sir John Chandler Park to provide extensive views to the TPH site and therefore may have consequences for the development of the power house site. Hence, any future development of the study area that is sympathetic to this could be looked on favourably by Council.

Ecological Values

The BRPS recognises areas adjacent to the study area which contain high ecological values. These areas consist of both intertidal and terrestrial river environments which are well intact. Areas with ecological values which may have relevance to the TPH site study area are:

- (i) Oxley Creek;
- (ii) Riparian vegetation corridor between University of Queensland and Sir John Chandler Park; and
- (iii) Indooroopilly Island and mangroves.

It is envisaged however that these areas will have minimal consequences for the study area.

Cultural Values

Both sites and zones containing cultural values have been identified. These are sites are identified "due to relatively recent historical interaction between the environment and the community, resulting in high cultural, historic and social significance". This includes also "the cultural significance of the indigenous people of the South-East Queensland area" (BRPS, 1995, p. 9). These areas are listed as either a 'Park' or ' Site' with high cultural value.

The TPH site has been listed as a site containing high cultural value and thus may have a direct impact on the way the site is developed. (Refer to Figure 2.24B, Appendix G). The criteria for listing the power house site within the Cultural Value category has not been documented within the BRPS. This creates some difficulty in determining specific cultural attributes of the site. As such, any proposal to develop the site may need to be considered by the Parks and Gardens Branch of the BCC.

Commercial Values

Sites with commercial values are perceived as containing industry and commercial uses to restaurants and theme parks. As such, commercial values are seen as a visual attraction for patrons.

Examples of sites containing commercial values include South Bank (restaurants and residential zones); the Brisbane CBD (office towers, restaurants); commuter ferry services; and, the port and shipping industries.

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While the TPH site is not identified within the BRPS as containing Commercial Value, future development of the TPH site (and adjoining ARI site) may create potential for listing within this value. This would be dependent, however, on its likely future use.

Major Constraints and Opportunities

Major opportunities and constraints have been identified within the Parks Strategy. These refer to:

- River Edge Restrictions;
- Linkages Along River Edge; and
- Major Open Space Connections to the River

Only the latter two points have particular relevance to the TPH site study area.

Linkages Along the River Edge

One of the aims of BCC's Parks and Gardens Branch is to establish open space and pedestrian linkages directly along the river edge. Within the BRPS it identifies existing and potential links along the River edge.

While no reference is made to any specific site, Figure 2.3.2 (Appendix G) within the BRPS identifies the TPH site (and possibly the ARI site) as 'Existing' or 'Potential' significant open space links along the Brisbane River edge.

It suggests that any development occurring on the TPH site must consider an open space access link along the 700 metres of frontage as a minimum requirement to open space provision. In light of this, it will be considered and noted when identifying final land use options for the site.

Major Open Space Connections to the River

Major open space connections to the river include both tributaries and green corridors of open space. These include the Long Pocket Golf Course and Oxley Creek through industrial, undeveloped and natural areas.

As these open space connections are located outside the boundaries of the study area, it is unlikely that any planning options of the TPH site will impact upon open space connections to the River.

Issues Affecting the River Parks

A number of issues have been identified within the Parks Strategy which fall under the following headings:

- Character and identity;
- Access and river edge restrictions;
- Equity for river users;
- Priority targets; and
- Extent of commercial opportunities.

Issues that directly impact upon the TPH site are discussed below.

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Access and River Edge Restrictions

The TPH site is identified with the BRPS as a site having 'Existing and Potential Access Points to River'. Sites within this category consider the following:

- the presence of development adjacent to the river's edge which prevents public access to the river;
- the absence of mooring/jetties for public use in suitable river zones;
- the restriction of access to, or along the river's edge, in parcels of private land that are reasonable undeveloped; and
- the restriction of access to, or along the river's edge, within public land leased by clubs, etc from the Council

Any future development of the site that considers the recommendations in relation to river edge access will be considered appropriate within the Parks and Gardens Branch of the BCC. Refer to Figure 2.4.2C in Appendix G.

Priority Sites for Potential Inclusion into the River Parks Network

The main issues affecting the River Parks regarding priority sites are:

- targeting large parcels of undeveloped land for river park 'nodes';
- the inclusion of suitable strips or parcels of land for inclusion as corridors and linkages within the River Parks Network;
- the process of enhancing linkages inland to other park, open space and vegetation networks;
- the process of acquisition of parcels of land from the Department of Natural Resources (previously the Department of Lands) that would homogenise park ownership and possibly increase river access; and
- acquiring new areas of strategic parkland.

While no sites within this category are identified within the BRPS, a site with the size, location and access such as the TPH site contains the potential to be a significant worthy of prioritisation by the Parks and Gardens Branch of the BCC.

Extent of Commercial Opportunities

The River Parks issues which relate to commercial opportunities include:

- identifying a suitable balance of existing commercial features and future commercial opportunities within River Parks Networks;
- any future commercial development should identify the public and Council as the main benefactors;
- how the community perceives the private use of public land and facilities for commercial gain; and

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the benefit of vitality and interest which can be achieved through commercial opportunities within the River Parks Network.

A number of sites with potential commercial opportunities are identified within this section of the BRPS. More specifically, the TPH site is included within this category. Refer to Figure 2.4.5B, Appendix G.

While no criteria or recommendations are documented within the BRPS, it is envisaged that could Council foresee some form of Commercial development as a possible land use option of the site.

Overall River Strategy

The Overall River Strategy provides key goals and objectives to implement the River Parks Vision. Goals are summarised below.

1. To create and promote the concept of an integrated linear parks system focussed on the values, diversity and essential character of the Brisbane River.

This goal is support by five objectives which support a linear park concept for the entire length of the Brisbane River through promoting awareness and through community involvement.

2. To provide a diverse range of land and water based recreational opportunities within Brisbane River Parks of the highest quality and level of accessibility.

This goal is supported by seven objectives which encourage a diversity of recreational activity through:

- an identified park hierarchy
- spatial zoning
- a variety of access facilities
- appropriate recreational facilities.
- 3. To maintain and enhance the unique scenic character of the Brisbane River Parks and to provide opportunities for its visual appreciation.

Goal number three is supported by seven objectives which support the following:

- a continuous green space corridor
- ensure private land holders on the river maintain visual amenity
- develop park and street scape elements
- develop paths, parking zones, picnic facilities so park users are offered the opportunity to view the river where possible
- create visual opportunities
- develop a network of river outlook points which provide the best opportunity
- reinforce the River Park Precincts through thematic based planting schemes.
- 4. To protect, maintain and enhance the ecological integrity of the Brisbane River Parks.

This goal is supported by a number of objectives which encourage: the identification and conservation of ecologically significant sites situated along the river; the creation of open space links from open space networks to the river; ensure river park developments, corridors and linkages provide an appropriate environment for river flora and fauna; and, maintain aquatic, intertidal and terrestrial diversity.

5. To protect the cultural values of the Brisbane River Parks and to promote their enjoyment, understanding and interpretation.

Goal number five is supported by three objectives which:

- reinforce appreciation of the historical and cultural aspects associated with the Brisbane River through art, community and cultural events
- provide "interpretive material" which explains the cultural values of the river and its parklands
- reinforces the river's past commercial and working river character through the development of historical and cultural significant points within and around the River Parks Network.
- 6. To develop and promote appropriate commercial opportunities within the River Park's Network that focus on the Brisbane River.

This is supported by the following objectives:

- promote commercial opportunities of lessees taking advantage of the Brisbane River outlook and ensuring greater public access
- promote opportunities to smaller part-time commercial ventures (eg: boat hire, jet-ski hire)
- restrict commercial development within the River Parks Network to those dependent on a riverside parkland setting.

River Precincts

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Five main river precincts have been identified from an assessment of: land use, visual amenity, vegetation, topography, cultural and historical values, ecology and recreation.

The five river precincts are identified as:

- Rural Fringes
- Residential Parkland
- City Focus
- Inner Eastern Residential
- Bulimba to the Bay

The study area comes under the Residential Parkland Precinct of which its aims are to:

- (i) provide a continuous riverside link through open space and street scape developments; and
- (ii) provide diversity of parkland types and facilities with easy access for the surrounding communities.

It is predicted that any future development of the TPH site (and adjoining ARI site) which incorporates the aims of the Residential Parkland Precinct will be favoured by Council.

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River Action Plan

The River Action Plan illustrates the specific actions, linkages, opportunities and recommendations for the River Park's Network and other adjoining lands to the Brisbane River, which have been developed in consultation with Council officers.

The River Action Plan identifies four categories in which land adjoining the Brisbane River fall under. These categories are:

- 1. Council parkland for upgrading.
- 2. Council land for transfer in whole or part or co-operative planning management and development.
- 3. Private land for acquisition in whole or part or for attempting co-operative planning management and development.
- 4. Roads reserves to river.

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Reference is made to the TPH site under category three which states:

"Priority private sites adjacent to the river that should be targeted for acquisition management between Council and the property managers/owners for incorporation within the River Parks" Network. These sites have the potential and capacity to provide facilities that are currently lacking within the River Parks Network and/or ensure that high value land is retained for future generations", (BRPS, 1995, p. 45).

Further, the River Action Plan notes designated parklands within the River Parks Network in which it identifies, among other headings, Significant Sites within the Park Network. The TPH site falls under this category, and as such, the following are noted.

- open space corridor adjacent to river as minimum prior to any development;
- strong cultural node with power house as major focus;
- commercial opportunity for day trip destination, wharf/jetty/pontoon access to public open space and facilities; and
- potential open space link from power station through to Brisbane Golf Course. Refer to sheet
 11 of 20 in Appendix G.

Although the BRPS is not a statutory document, it does recommend provisions that are sympathetic to the periphery of the Brisbane River. Therefore, it is recommended that the provisions within the BRPS that make references either directly or indirectly to the TPH site should be considered within any future development options. This will not only be considered favourable by Council, but will help provide a development option that is conducive to its unique and special environment.

4.15.2 Stephens District Local Area Plan

The Stephens District Local Area Plan (LAP) establishes a vision for the future of the Stephens District. The Stephens District area includes the suburbs of Fairfield and Yeronga, and portions of the suburbs of Annerley and Yeerongpilly. This area also includes the Tennyson Power House site and adjoining Animal Research Institute.

The Stephens District LAP comprises of a total of seven volumes which address the following:

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- 1. Challenges, Strategies and Actions
- 2. Residential Development Study
- 3. Traffic and Transport Study
- 4. Environment and Recreation Study
- 5. Business and Industry Study
- 6. Social and Community Development Study
- 7. Draft Development Control Plan.

The Environment and Recreation Study (ERS), Volume 4, and the Business and Industry Study (BIS), Volume 5, have particular relevance to the TPH and ARI sites. While the Draft Development Control Plan (DCP) has been summarised in Section 4.14, both the ERS and BIS set planning parameters and as such are summarised below.

4.15.3 Stepheus District LAP - Environment & Recreation Study (ERS)

The Environment and Recreation Study (ERS) has been prepared to address the planning issues associated with the environment and recreation matters in the Stephens District.

The ERS comprises four strategies:

1. Green Space Strategy

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- 2. Recreation Management Strategy
- 3. Landscape Character Strategy
- 4. Environmental Quality Strategy

The Green Space Strategy encompasses issues such as maintenance, safety, quality and quantity of existing parks; leasing of Council-owned land to local sporting and recreational clubs and community groups; environmental quality and protection; and the appropriateness and distribution of recreation opportunities.

The Recreation Management Strategy addresses issues such as access to recreational facilities; and the supply, diversity, management and maintenance of recreational facilities.

The Landscape Character Strategy addresses local character issues such as promoting Brisbane River as a focus point, and the maintenance and enhancements of streetscapes, within the Stephens District LAP area. The Environmental Quality Strategy addresses noise and air pollution, and water quality.

The following components of the ERS have particular importance to the power house site:

- The Green Space Strategy envisages the following along the river corridor within the site:
 - pedestrian cycle network;
 - nature trail; and
 - rehabilitated corridor.

(Refer to Maps 2 and 3 in Appendix G).

- The provision of open space is estimated as being:
 - estimated area of open parkland: 102 ha;
 - estimated level of provision : 5.96 ha/1000 population; and
 - BCC best management practice guideline : 3 ha/population.

This data suggests there is an over-provision of (passive) open space with the Stephens District LAP area.

- The provision of sporting parkland is estimated as being:
 - estimated area of sporting parkland : 27.4 ha;
 - estimated level of provision : 1.6ha/1000 population; and
 - BCC best management practice guideline : 2 ha/population.

This suggests there is an under-provision of recreation open space within the Stephens District.

- The power house and ARI sites are included within Landscape Character Unit 12 (refer to Map 17, Appendix G). This character unit notes the following:
 - the power house building is a significant landmark;
 - the Brisbane River is a significant landmark:
 - the River is an important corridor; and
 - Softstone Street connects directly to the river creating a potential river gateway.

Owing to the above, the ERS recognises that opportunities exist for:

- recycling of the power house building;
- ensuring redevelopment allows public riverfront access; and
- boulevard planting along Tennyson Memorial Avenue.

4.15.4 Stephens District LAP - Business and Industry Study (BIS)

The Business and Industry Study (Volume 5) has been prepared to address the planning issues associated with business and industrial development within the Stephens District by identifying key sites and any possible impacts from future development of these sites. A map of planning areas is included on Map 2, in Appendix G.

Both the TPH site and adjoining ARI are recognised within the LAP as a key site within the Stephens District. This has been indicated in Map 30, in Appendix G. The future development of the TPH site is noted within the LAP to be of particular importance. As such, the following aspects are addressed in relation to the site:

- Opportunities and Constraints
- Ideas/Possible Options

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- Planning Considerations
- Future Planning Intent.

Opportunities and Constraints

An assessment of both opportunities and constraints of the site have been undertaken. Constraints identified within the LAP Business and Industry Study are as follows:

- cables run underground on riverfront land which restricts future use options;
- the power house site is flood-prone;
- existing structures on the power house site will remain for some time and will be subsequently costly and difficult to remove. Further, the structure offers little opportunity to be re-used owing to the existing operational substation and fire protection costs;
- the existence of the substation decreases visual amenity and usefulness of the site;

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- access by road to the site is restricted owing to the location of the rail line;
- noise emissions from the railway line and nearby industrial uses (ie: the shunting yards) may affect future development options; and
- any further plan to develop the sites have the potential to pollute the River.

Opportunities for both sites which are identified within the Business Study are summarised as the following:

- Research Institute and utilising the proposed Integrated Catchment Management Programs for Oxley Creek;
- the provision of a public access pedestrian/cycle link between the Brisbane River and surrounding residential areas;
- rail access to both the Beenleigh and Ipswich rail lines creating good access across town and the city;
- redevelopment of the sites to residential use which considers both the position of the site and the surrounding residential uses; and
- the possibility to fill a portion of the flood prone land situated near the rail line to facilitate development.

Ideas/Possible Outcomes

Possible options for redevelopment of the site have been noted within the Study are summarised below.

Residential Redevelopment

The Study states that residential redevelopment may be the best option however, it also notes this option is constrained by the following:

- the site is flood prone
- road access is difficult owing to the location of the railway line
- the site is possibly contaminated
- the expense of having to relocate the substation and cable easements.

Open Space Provision

As indicated, a green belt or link to the Brisbane River which incorporates linkage of the Brisbane Golf Course, the ARI and the proposed integrated catchment management programs for Oxley Creek would increase the visual appeal of the area.

Also, the provision of major open space for general public use is complimented by the location of the Tennyson Rail Station. This has the potential to provide a semi-regional function for the area especially if river access (ie: boat moorings, ramp, etc) was enhanced.

Appropriate Development

An appropriate form of development is considered to be development that:

better utilises the Tennyson Power Station site than other forms of development. This may require a Special Use or Particular Development zone, (Stephen's District Local Area Plan, 1995, p. 68).

Such development may be compatible with the existing substation operations and other constraints on the site (ie: flood prone areas, etc). Further, any appropriate development should provide for public parkland and access to the Brisbane River and may be of a long-term or short-term nature.

Light Industrial Development

In the event of SEQEB's continuation of substation operations and the retention of the power station building for an uncertain period, light industrial development would be considered acceptable. Opportunities for this type of development are provided by the close proximity of rail and Fairfield Road access. Also, it is possible that land situated behind the power house, fronting Tennyson Memorial Avenue may adequately locate industrial land uses.

Any proposed option should not adversely affect surrounding land uses by increased traffic, noise or air pollution and should incorporate landscaping as a visual buffer to any such where it is considered necessary.

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The section outlines certain considerations that should be addresses when planning for the future of the TPH site. These are below:

- Any future development must consider the possible flooding of the power house site and associated water run-off and Brisbane River pollution.
- The impact of any redevelopment on the water quality of the Brisbane River must be considered.
- The ability of any redevelopment of the site to provide public access to the Brisbane river for open space a recreation use is a consideration.
- The effect of any redevelopment generating increased traffic volumes on existing roads and adversely impacting on existing residential streets should be addressed. Redevelopment of the site must address the poor access to the site and any development which utilises the current entrance to the site would create increased traffic volumes directly adjacent to residential areas. Future development of the site should look to relocating the entrance to the site closer to Fairfield Road to reduce impacts on residential streets.
- The impact of increased development on existing physical and social infrastructure services in the area must be properly investigated.
- The impacts of redevelopment on surrounding land uses should be addressed.
- The impacts of redevelopment on the existing physical and social character of the surrounding suburbs, particularly in relation to residential amenity, would need to be addressed.
- The possible impacts the redevelopment of this site may have on the surround suburbs warrants extensive community consultation by the owner/developer before deciding on major development of the TPH site.

Future Planning Intent

In light of the above, the LAP considers the preferred planning land uses for the site are for both residential development and open space/parkland provision of which both land uses can utilise Tennyson Railway Station.

These preferred land use options would benefit by:

- the relocation of the substation
- an investigation of the ability of existing social and physical infrastructure to accommodate large increases in the residential population of the area
- planning in conjunction with a process of community consultation that involves all stakeholders including the surrounding community
- non-residential uses of the site if the impacts on adjacent residential land uses are minimal

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In summary, it is recommended that:

- the built form and visual appearance of any redevelopment should contribute positively to the character and scale of the surrounding suburbs; and
- landscape elements should be incorporated in any development to enhance the existing landscaping and provide a visual buffer between the redevelopment and the operational substation located outside the TPH building
- Brisbane River

In summary, it is recommended that:

- redevelopment that adversely impact on the water quality of the Brisbane River or restricts public access to the river is considered inappropriate for this site;
- in the case of residential land uses being provided, it is expected that public access to the Brisbane River will be provided across the entire river frontage of the site;
- Specialised uses that do not adversely affect the water quality and provide public access to the Brisbane River will also be encouraged; and
- consideration must be given to flooding problems associated with the site.

Access

In summary, it is recommended that:

any redevelopment generating large volumes of traffic will provide vehicular access from Tennyson Memorial Avenue adjacent to the Brisbane Golf Club, crossing the train line, to prevent the impact of increased traffic volumes on surrounding residential areas;

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- redevelopment must ensure that adequate parking is provided within the site and does not impact on surround land uses or residential streets; and
- redevelopment will provide a safe and attractive pedestrian environment that allows for easy pedestrian access through and within the site.

4.15.5 State of Oxley Creek Catchment Report

The analysis and report are currently at draft stages and are to provide the foundations for a detailed Oxley Creek Catchment Management Plan. The Plan is to be developed in 1996-97 and ultimately integrated with the Brisbane River Catchment Management Plan.

The Oxley Creek Catchment embraces a total of 28 suburbs including the suburb of Tennyson, at which point the Creek discharges into the Brisbane River. Further, the Oxley Creek Catchment has several tributaries, one of which includes Moolabin Creek. This creek forms the southern border of the Tennyson Power House Planning and Land Use study area, contained within the suburb of Yeerongpilly.

The Tennyson Power House site and adjoining Animal Research Institute site are not situated within the Oxley Creek Catchment area (including any sub-catchment area) identified within the report. Accordingly, it is considered that any potential future development of the Power House site will not have any implications for the Oxley Creek Catchment area.
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5.0 CONSULTATION AND COMMUNITY INVOLVEMENT

The consultation process is an essential component of the overall study process and will assist in providing for redevelopment options which where possible, incorporate the needs and aspirations of all stakeholders. The process commenced at the outset of the study and has involved consultation with the following:

- Brisbane City Council;
- the local community; and
- other stakeholders.

A summary of the consultation process and subsequent findings are provided below.

5.1 BRISBANE CITY COUNCIL

Consultation with the Brisbane City Council has taken place as part of the consultation process for the planning and land use study. This has involved two meetings with Council officers from the following Departments and Branches:

- Department of Recreation and Health:
 - Parks and Gardens Branch; and
 - Community Health Branch.
- Department of Development and Planning:
 - Town Planning Branch; and
 - Strategic Planning Branch.

Throughout the study, Council has made particular reference to preferred and non-preferred types of development in relation to the TPH and ARI sites. The types of development envisaged by Council have been based on strategic planning intentions and land use compatibility with surrounding lands.

Land uses that may be considered by Council are:

- Residential (ie: Low to medium density incorporating villa style or duplex housing)
- Office Park

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- Clean Industry (ie: Technology Park), not traditional industry
- Arts/Cultural node and/or Mixed Use
- Open Space/Recreational
- Cultural/Sporting/Art uses.

Land uses unlikely to be encouraged by Council are:

- High Density Residential (ie: residential tower development)
- Manufacturing
- Medium/Heavy Industry
- Major Retail Development
- Other Commercial Development.

Overall the preferred uses for the site indicated through meetings with Council representatives were residential and cultural/community.

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5.2 STAKEHOLDER CONSULTATION

Consultation with major stakeholders to date has included the following:

- meeting and site inspections with AUSTA Electric/SEQEB and Powerlink
- meeting with key representatives of Brisbane City Council
- meetings and inspection of ARI
- meeting with State Government agencies (DOE, DTSBI, DLGP, DFYCC, DNR)
- meeting with Arts Queensland
- briefing for elected representatives
- two community design workshops with members of the local community
- correspondence with the Queensland Museum
- liaising with Queensland Rail.

In addition, the study has been undertaken in conjunction with a Steering Committee as described in the Brief. The role of the Committee is, to oversee the study and review the consultants work at various times.

Meetings with the committee have occurred on a monthly basis. Steering committee membership details are provided in Appendix H.

5.3 COMMUNITY CONSULTATION

A community consultation program has been undertaken throughout the duration of the study. The consultation process has involved notifying and briefing the local community of the study through:

- 1. Two public notices within the Southern News and South West News;
- 2. Three media releases within the Southern News and two within the South West News;
- An ongoing telephone enquiry hotline;
- Two Newsletter drops;
- 5. Two 3½ hour Community Design Workshops; and
- 6. Regular meetings with the Community Advisory Group (see Section 5.6).

5.4 **TELEPHONE HOTLINE**

The telephone enquiry hotline was established when public notices were published within the local community newspapers (namely the *Southern News* and *South West News*). The enquiry hotline has been ongoing as a source of information for the local community. Over 60 enquiries were made to the hotline up until the inception of the public display period. A summary of responses is included in Appendix I. Responses obtained throughout the public display period are included in the supplement report: *Public Display and CAG Responses*.

5.5 COMMUNITY DESIGN WORKSHOPS

Two 3½ hour Community Design Workshops (CDW) were held late September, 1996. The aim of the workshops were to identify key issues and concerns by working with representatives of the local community. A summary of the findings is included in Appendix I:----

5.6 COMMUNITY ADVISORY GROUP

In conjunction with the Brisbane City Council, the Department of Natural Resources determined that a Community Advisory Group (CAG) should be formed to allow representatives of the community and the land use study team to meet and exchange ideas and information.

The CAG has provided a forum for issues of interest to the community to be considered by the Study Steering Committee, and for the study team to brief representatives of the community on the progress and findings of the land use study.

The CAG met on a regular basis which provided an opportunity to raise issues of interest and seek further information throughout the duration of the land use study. At present, the Department of Natural Resources is in consultation with the CAG to review the role of the group.

The CAG has comprised of local residents, concerned individuals, and members of local interest groups which included resident associations and historical groups.

The submission by the CAG indicates a preference for Option 2 : Cultural/Recreational/Institutional use. This submission, together with other individual and group CAG representative submissions, are included in a separate document: *Public Display and CAG Responses*.

5.7 SUBMISSIONS

The first newsletter, distributed in August, informed the local community that submissions, outlining ideas and/or concerns of study area, could be forwarded to Connell Wagner. From the period between August 1996 and mid January 1997, seven submissions were lodged from local residents. Summaries of each submission are provided in Appendix I. Submissions received during the public display are provided in the supplement report.

5.8 PUBLIC DISPLAY

The Final Draft Report together with the final Land Use Options went on public display for a four week period between 28 January and 28 February, 1997. Local residents were notified via:

- (i) a media release within the Southern News;
- (ii) a newsletter drop;

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- (iii) the ongoing telephone hotline; and
- (iv) a poster within the Fairfield Gardens Shopping Centre.

The findings of the public display period indicate a clear preference for Option 2 : Cultural/Recreational/Institutional use.

Details of responses received throughout the period of the public display are discussed within the separate report : Public Display and CAG Responses.

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SECTION 6.0

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IDENTIFICATION OF OPPORTUNITIES AND CONSTRAINTS

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6.0 IDENTIFICATION OF OPPORTUNITIES AND CONSTRAINTS

6.1 INTRODUCTION

The previous section provided an assessment of the existing site situation from both a technical and non-technical perspective. Based on this assessment, a range of opportunities and constraints can now be identified which will form the basis for the generation and evaluation of development options. Opportunities and constraints are presented under the following headings:

Structures;

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- Services Infrastructure;
- Access and Transport;
- Hydrology and Hydraulics;
- Land Contamination;
- Ecological;
- Planning; and
- Archaeological, Anthropological and Historical

Figures 6 and 7 illustrate the opportunities and constraints which have been identified from the Stage 2 study programme. Note that these maps are for indicative purposes.

6.2 STRUCTURES

6.2.1 Power House Buildings

From the building assessment which has been recorded in sections 4.1 to 4.6; it is considered that, while a number of minor constraints exist within parts of the power house buildings, the structural integrity is very good for potential building re-use.

Further, there are other aspects of the power house building relating to its suitability for re-use which should be noted. These include climate, views, natural ventilation and spatial organisation. These are as follows:

Climate

The building has a good orientation and plan configuration (i.e. north-facing and rectangular in plan).

Views

The building faces the river and, owing to its height, provides views to open space across the river, the city and the mountains (from its northern edge).

Natural Ventilation

The building could be well ventilated given that there are tall, uninterrupted major spaces, larges areas of openable glazing, roof vents in the Turbine Hall, and the building is parallel and close to the river in which it should catch river breezes and have an improved micro climate.

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6.2.2 Waterfront Facilities

L Shaped Wharf

Removal of the wharf, repair of the wharf, upgrading of the wharf and approach jetty or its use as a construction access jetty to the site are all possibilities for future use of the wharf.

It is possible remnant structures (for example, broken off piles below the bed level) could be a constraint on cost effective development of the site. As rock exists at relatively high level (between RL -4.0m and -7.0m) and as the timber piles driven at this site were specified to be only 25 feet long, it is highly probable that the Department of Harbours and Marine (or the Department of Environment) will have required complete extraction of the piles. A letter to the regional office of the Department of Environment should establish whether complete pile extraction was a requirement of the Department or of the Brisbane Port Corporation.

Screen Chamber and Pump Houses Intake Chambers

The piled reinforced concrete structures could be used as foundations for a larger waterfront development. The accretion on the outside of a river bend of materials requiring dredging is a disadvantage of the riverside potential of the structure.

The reinforced concrete outlet channel "V" (Drawing A1 in Appendix C) is in a satisfactory condition and represents an asset only for some forms of development along the waterfront. The channels could be used for running services and pipelines but the fact that the major outlet channel runs parallel to the bank for a considerable distance represents a constraint for some forms of site development.

The build-up of mangroves along the banks has been significant and approval of the Department and Primary Industry by the issue of a mangrove cutting permit would be necessary.

6.3 SERVICES INFRASTRUCTURE

6.3.1 Sewerage

. . Following review of the available sewerage infrastructure and from discussions with the authority it can be concluded the existing reticulation has physical constraints with respect to servicing proposed development options within the study area.

The options available for incorporation into the land use development strategy requiring further investigation are:

- 1. Upgrade the existing pumpstation within the ARI portion of the site including the rising and gravity mains to the Moolabin Creek Branch Sewer.
- 2. Construct a new pumpstation to suit the development options within the site and augment the existing rising main and gravity mains described above.
- 3. Augment the gravity sewer to the south of Tennyson Memorial Avenue to cater for the potential increased demands of the study site and construction of a new stand alone pump station for the proposed rationalisation of the ARI facility. This would allow the existing rising main and gravity sewer currently servicing the facility to remain in place without requiring any further works other than reconnection to the new pump station.

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6.3.2 Overal! Services Provision

An assessment of existing services has revealed that apart from sewerage, there are no significant constraints to redevelopment of the site.

6.4 ACCESS AND TRANSPORT

6.4.1 Upgrading/New Roads

Constraints

Council has no current plans for new roads in the vicinity of the site or for major upgrading of existing roads. However, there is a long standing road scheme to connect King Arthur Terrace to Ortive Street (known in the 1960s as the Riverside Drive Scheme or the Tennyson-Yeronga Bypass). The original proposal involved an extension to connect into Stevens Street, Yeronga. Land through the Power House site has been dedicated as roadway while the remainder of the corridor has been protected by zoning (see Figure 1 in Appendix J). This scheme attracted adverse comment from residents of Yeronga in the early 1970s and was not proceeded with.

The eventual decision to grade separate the Fairfield Road rail crossing essentially negated the need for the road proposal. However, a section of the corridor connecting Paragon Street to Ortive Street was constructed to rationalise access to residents of Paragon Street.

The existing road dedication through the Power House site and zoning through the Animal Research Institute site represents a constraint on site development.

Other constraints on site development include:

- the arterial standard of Fairfield Road which requires the number of access points to be minimised;
- the presence and proximity of rail lines (both the Corinda-Yeerongpilly and the main suburban and interstate lines) which restrict opportunities for interchange;
- sight distance problems in Softstone Street; and
- active resident action groups that are concerned with increased traffic flows.

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There is an opportunity to capitalise on the existing road scheme either as a discontinuous roadway to essentially provide site access or to adopt the scheme in a modified form to provide a "River Drive".

There are a number of advantages in adopting a scheme similar to that previously envisaged but with the following modifications:

- construction of a new link to Fairfield Road;
- deletion of the extension to Stevens Street;

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- widening of Fairfield Road into the site at the new intersection formed to allow for a double right turn lane from Fairfield Road. Such a new intersection would need to be as close as possible to Ortive Street commensurate with providing adequate capacity and standards of geometry. This is required to maximise separation of the intersection from the crest formed at the rail overpass;
- signalisation of the new intersection formed to operate in two phases with the right turn out of the new road prohibited; and
- removal of the signals at Ortive Street and Fairfield Road but with a new link constructed between Ortive Street and the new route.

This modified scheme is provided in Figure 2, Appendix J.

The proposal would provide future development on the site with a high standard of access and would also provide substantial travel distance advantages to traffic between King Arthur Terrace and Fairfield Road to the north (approximately 0.5 km for inbound traffic and 1.0 km for outbound traffic).

This option has been discussed with Council officers who advise that careful consideration would need to be given to the possibility of the more attractive route generating more east-west traffic to the detriment of residential amenity in surrounding areas.

There is also the option with this scheme of removing the existing rail overbridge between Softstone Street and Tennyson Memorial Avenue. This would ensure the segregation of residentially generated traffic in Softstone Street and industrial traffic using Curzon Street and would overcome existing sight distance problems in this area. However, disadvantages of removing the bridge include:

- loss of the use of a grade separated access to Fairfield Road southbound for residents;
- need for a more complicated 3 phase signal system to allow for the right turn southbound demand at the new intersection with Fairfield Road; and
- reduction in access flexibility for members of the Brisbane Golf Club.

The other main opportunity is to improve public transport services to the area. Upgrading of the existing Tennyson Rail Station is the obvious option to service a large new population centred on the subject site. However, it is possible that insufficient rail services could be routed via this line to make this a viable proposition. A more appropriate option may be to provide internal pedestrian and cycle links to the Yeerongpilly station (which has more frequent services) with grade separated pedestrian access constructed across Fairfield Road.

6.4.2 Access

A major redevelopment of the site will almost certainly produce a significantly higher traffic generation than the existing and former uses. Detailed assessment of access options and establishment of lane numbers and layout for intersection operation will need to be undertaken when firm development options are prepared. However, the two existing access points (the TPH to Softstone Street and the ARI to Ortive Street) are likely to prove inadequate.

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	For Tennyson Power House Site

The existing access to Softstone Street from the TPI is situated mid-way between a crest at the rail overbridge and a 90 degree bend at King Arthur Terrace. Consequently, the sight distance is inadequate in both directions. The existing signalised intersection at Ortive Street and Fairfield Road is constrained by existing private property and the railway line and is limited in its ability to be upgraded to adequately provide access for a major traffic generating development.

Figure 3 in Appendix J shows indicatively the likely access arrangements that will need to be employed. These arrangements involve:

- access to Softstone Street at the bend where Softstone Street joins Dexter Street. Consideration
 will need to be given to the form of this new intersection so that priority is correctly allocated
 (for a T intersection). Alternatively, depending on generated flows, a higher order of
 intersection may be required to be constructed at this point (e.g. a roundabout);
- a new signalised intersection with Fairfield Road just to the south of the existing signalised intersection with Ortive Street. Using some of the subject site will permit a much higher standard of intersection to be constructed commensurate with the expected demand volumes; and
- removal of the signals at Ortive Street/Fairfield Road and construction of a new link to the access road.

As suggested previously, attention should be given to a network of pedestrian and cycle paths to serve the site with the primary focus being the Yeerongpilly Rail Station (with the pedestrian overbridge extended over Fairfield Road) but with secondary accesses to Tennyson Rail Station, the Golf Club (pedestrian link over rail and road) and the river.

With or without a through connection between King Arthur Terrace and Fairfield Road, there should be provision for a pedestrian/cycle link, preferably along the river bank to join the Tennyson and Yeronga areas.

6.5 HYDROLOGY AND HYDRAULICS

6.5.1 Required Works

Two options exist for underground drainage of the site. The existing system may be left intact and augmented to accommodate surplus runoff. Alternatively, the existing system could be abandoned and replaced by a new pipe system. In any case, the existing pipelines are undersized and will require upgrading as part of any redevelopment works.

Augmentation

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- To accommodate the surplus runoff through the ARI, it is anticipated that an additional 1200mm diameter pipeline would be required between Fairfield Road and Ortive Street, with the diameter increasing to 1500mm between Ortive Street and the Brisbane River.
- The system through the power house site would require a 1050mm diameter parallel system between the Railway Reserve and the ARI. The supplementary system would be required to increase to a diameter of 1500mm between the ARI boundary and the river.
- Pipe design is preliminary only and assumes the system is flowing full, but not under head. Detailed design will include hydraulic grade line analysis.

Abandon Existing System

- Installation of an entirely new system would be likely to consist of a 1350mm diameter pipe between Fairfield Road and Ortive Street and an 1800mm diameter pipe from Ortive Street to the River across the ARI site.
- The system through the power house site would be likely to be replaced by a 1350mm diameter pipe between Tennyson Memorial Ave and the ARI boundary. Beyond this point, a 1950mm diameter pipe would be necessary.
- Pipe sizes are indicative only and not based on detailed hydraulic grade line calculations.

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- No clear overland flow path is evident on either site.
- Extensive filling of old gullies has taken place over time (mid 1980's in particular).
- Existing surface flow is captured by field inlets at low points.
- Location and form of overland flow paths will be dictated by final development use of internal roads and/or easements is desirable.
- Designated overland flow paths will be required to accommodate Q₅₀ flow in accordance with BCC requirements for major events.

6.5.2 Other Considerations

- Filling of low lying areas including former coal stockpile area in the Power Station Site and the adjacent area in the ARI will be necessary in order to satisfy flood immunity requirements. (Refer to "Extent of Earthworks" Map, Appendix E).
- Former gullies in ARI site are completely filled and thus offer no flow path. During the fill operation, several manholes for the pipe systems were buried. Fill depth varies but is thought to be up to 5m in some locations.
- Fill material consists of various waste materials including rubble (concrete lumps, etc.) and general waste from the ARI. site. The surface of the fill is made up of dredged mud.
- No records of fill material or level information were kept for the gullies it is not known what quality and quantity of fill there is.
- Excavation of fill material (for pipe trenching) would prove difficult discussions with the farm manager suggest some very large pieces of concrete were placed in gullies.
- Visible surface structures (manholes) appear to be in fairly poor condition.
- The pipeline through the ARI site passes under private property, and in particular, a private tennis court - following existing pipeline alignment for new system does not seem viable here.
- There is little to gain by following existing alignment of pipelines for new system natural gullies no longer exist and backfill material is variable, deep and unpredictable.

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- any redevelopment of either site to incorporate landscape elements (draft DCP/Stephens District LAP); and
- a built form/visual appearance that could contribute to the character/scale of surrounding land uses (draft DCP/Stephens District LAP).

6.8.2 Planning Constraints

From an analysis of the statutory and non-statutory documents and an assessment of other planning parameters, the following constraints to development are identified:

- new development restricting public access to the river is considered inappropriate (draft DCP/BRPS/Draft Strategic Plan/Stephens District LAP);
- new development which may affect the water quality of the River during and after construction stages is considered inappropriate (draft DCP);
- heritage buildings contributing to a neighbourhood streetscape should be retained where possible (draft Strategic Plan).

In terms of site planning, the reinstatement of the currently closed road reserve has the potential to:

- divide the site and power house by cutting access off from the river;
- increase traffic noise to the rivers edge;
- decrease the value of a riverside park; and
- impact upon riverside flora and fauna.
- 6.9 HISTORICAL SIGNIFICANCE
- The TPH building has been found to be a place of cultural heritage significance in accordance with the criteria outlined in the *Queensland Heritage Act 1992* and a recommendation has been made that the building be considered for addition to the Queensland Heritage Register.
- Where possible, original building fabric of the power station should be conserved and maintained. The enormous bulk of the building contains massive embodied energy which should be maintained by recycling the structure for a new use.
- Any new use for the building should contain an interpretative panel/board detailing the previous public use of the building as Brisbane City Council's last power station and the largest constructed in the 1950s in Queensland.
- Three buildings at the ARI at Yeerongpilly have cultural significance and have been recommended for addition to the Queensland Heritage Register, after more detailed architectural history research of the buildings there. (Refer to Appendix A Assessment of Cultural Significance).

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- A master plan should be drawn up to rationalise the design and location of any new buildings/structures or the relocation of existing ones at the ARI site.
- Historical assessment considers that the rural open space nature of the paddocks between the ARI and the power house be maintained, as well as the revegetation of the riverbank reserve, as it has been associated with the site from earliest European settlement giving a distinctive and continuous rural character to the area.

6.10 ARI OPERATIONS

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The ARI will continue to have a role in exotic livestock disease outbreaks and therefore any development proposals on the power house site will need to be consistent with the maintenance of restricted access to the ARI site and at the same time continue to minimise the risk of a biological escape to livestock outside ARI.

ARI has specialised animal isolation facilities which were specifically located near the power house site and away from more public thoroughfares as a means of minimising the entry or exit of animal diseases. Development on the TPH site which might increase the human and/or animal population on the ARI boundary has the potential to increase the risk of disease transfer in both directions. As such, the following scenarios need to be considered:

- 1. The typical development on the TPH site which may jeopardise the biological security at ARI is restricted to any form of livestock activity. Livestock developments such as a commercial poultry, piggery, dog kennels or cattery, while unlikely to be proposed or receive council approval, would be incompatible with current ARI activities. Backyard activities such as poultry or aviaries, resulting from residential development, could pose a potential threat to biological security at ARI if they were located within 100m of those ARI facilities which may be used for exotic poultry disease diagnosis.
- 2. Current arrangements at ARI are that, in the event of an exotic disease emergency, the iso¹ation facilities (marked as Buildings 1, 2 and 3 on Drawing No 2 of Appendix F) would be utilised to undertake disease diagnosis as the existing necropsy facility (which is normally used for such purposes) does not meet current standards. Veterinary Pathologists at the ARI believe that while these arrangements are in place, residential development should be excluded from within a 100m radius of the western extremity of Building No 3 and that this area be retained, preferably, as "Open Space". An alternative to the use of Buildings 1, 2 and 3 and the requirement for a 100m residential development exclusion area is to construct a new necropsy facility (at a cost of approximately \$500,000 in the vicinity of the high temperature incinerator (Building 26 on Drawing No 2 of Appendix F).
- 3. Development on the power house site which might increase the human and/or domestic animal population on the ARI boundary and thus increase the risk of animal disease transfer could be minimised by upgrading existing fencing. At present the fencing on the western boundary is a 2m chain wire fence supplemented for most of its length with an additional fence which has rabbit proof netting and an electrified wire. Upgrading of these fences to provide an acceptable buffer area in the ARI side would effectively remove any constraints to development (other than those referred to in (1) and (2)) above imposed by current activities on ARI.

Therefore, there is a need to recognise the requirement for biological security at the ARI site as a constraint to certain types of development of the TPH site.

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SECTION 7.0

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DEVELOPMENT OPTIONS

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7.0 DEVELOPMENT OPTIONS

This section examines a range of generic land use options for the Tennyson power house site. Each option is evaluated in relation to criteria which evolved during the analysis process with and without taking into account the future of the adjacent Animal Research Institute land.

The options include both retaining and demolishing the existing buildings and are as follows:

Retention Options

Option Option	1	:	Corporate Headquarters
Option	2	•	Cultural, recreational, institutional
Option	3	:	117
	3A ad	;	warehouse
	3B	:	Light Industry

Demolition Options

Option 4	:	Residential
Option 5	:	Open Space

7.1 ARCHITECTURAL SIGNIFICANCE

7.1.1 Architecture

Tennyson power house may be regarded as a relatively important example of large scale 1950s industrial architecture. Built in stages, it boldly expresses the modernist style of the period where form was largely derived from function. This attitude is clearly seen, for instance, in the character and expression of the three gravity-fed coal bunkers above the roof line and in the scale and massing of the Turbine House, Boiler House and Administration sections.

Designed by a Sydney architect of the time, Stafford Moor and Farrington, Tennyson power house has been carefully modelled from other viewpoints, in particular the incorporation of the lower horizontally-scaled Turbine House reducing the overall scale along the riverfront. Fenestration proportions directly reinforce the change of scale, mostly vertical as comprised on the tall Boiler House and horizontal along the Turbine House. The quality of detailing and construction, in the brickwork and glazing systems is outstanding and virtually unachievable in contemporary design.

7.1.2 Context

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Another way of viewing the building's significance is as one of a series of dominating waterfront buildings which characterise Brisbane River. These include the New Farm power house and the Bulimba power house both of which are retained for new uses. Others include the Teneriffe Woolstores and CSR Sugar Refinery currently being adapted or considered for adaption to new uses.

Like Tennyson power house, the buildings depended upon the river for water supply and collectively provide a history of industrial use of the Brisbane inner city riverfront which is generally otherwise disappearing.

Contemporary buildings which have continued the dominant aesthetic of riverfront architecture include Queensland Art Gallery, Queensland Performing Arts Centre, and Brisbane Convention and Exhibition Centre, such that the expression of large scale building mass along the river is one of the city's identifying features. This expression is generally in context with current planning controls which endeavour to minimise development scale along the riverfront serving to reinforce the architectural relationship of these buildings.

7.1.3 Precedent

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A third way of considering the argument for retaining or demolishing the power house is precedent. Both in Australia and overseas, there has been a history of success in finding new uses for defunct power house buildings; for example in Australia:

- The Sydney power house Museum in the Sydney Powerhouse
- The Casula power house conversion to a Regional Arts Centre in New South Wales
- The Grenfell Street Power Station conversion into 'Tandanya' National Aboriginal Cultural Institute in Adelaide
- The likely conversion of New Farm power house into the Queensland College of Art and community arts facility
- The Bulimba power house conversion into the Visy Paper Recycling Plant

Major international examples include:

- The conversion of Montreal power house, Canada into galleries for young contemporary artists
- The conversion of the 'White Factory' power station in Lodz, Poland into the Central Museum of Textiles

Conversion of other types of defunct industrial buildings along waterfronts has been one of the major trends of the last two decades, coupled with urban waterfront revitalisation of disused parts. In Australia, relevant areas are Sydney's Pyrmont/Darling Harbour and Brisbane's Teneriffe with their conversion of large woolstores to residential buildings, conversion of the Swan Brewery in Perth into tourism and recreational uses, and the soon-to-be redeveloped port buildings in Melbourne's Docklands.

Internationally, Liverpool and London Docklands have extensive recycling of industrial waterfront structures into major art galleries, museums, colleges of art, speciality retail centres as do many North American cities such as Toronto (Queens Wharf), Boston (Fanheuil Hall Marketplace), New York (South Street Seaport) and Vancouver (Canada Place). By adapting and recycling old buildings, these cities have retained significant historic cultural identity while generating distinctive places for people to work and visit.

In Brisbane, the major example of reuse is the conversion of Bulimba power house into the Visy Paper Recycling Plant which has successfully reused not only the power house but other buildings on the site, in a unique industrial context.

For the TPH itself, there have been several suggestions and approaches for its reuse since 1985 and from the time of its decommissioning in early 1986. These in summary include:

- Conversion into a refuse incineration plant for producing power for peak times and emergency load periods (1985);
- Conversion into a garbage collection and compaction centre for Brisbane (1987);
- Conversion into an indoor family entertainment centre (1989);

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- Conversion into a Transport Technology Museum (1989);
- Conversion into 40,000 square metres of office space for all three divisions of the DPI (Primary Industries, Forestry, Water Resources) (1990);
- Conversion for a major Pharmaceutical enterprise (1994); and
- Adoptive re-use for gas fired power peaking plant (1996).

The fact that none of these proposals eventuated demonstrates the difficulty in adapting new uses to such a large obsolete building, with other possible deterrents being, in particular, its structural framework and impeding interior spaces.

Details of power house re-use that were identified from research conducted as part of the study are outlined below.

1. Casula Power House, Liverpool, Sydney

The Casula power house was one of several built in the early 1950's to overcome postwar energy shortages in Sydney. It was decommissioned in 1976 and over 15 years later has been redeveloped into a cultural centre.

Few structural changes have been made owing to the project's budget and also due to the idea that the "heritage movement has the preconception that buildings need to be pretty to be worth saving, but if they're not, they need to vanish", (Peter Tonkin, Project Architect responsible for its redevelopment).

Internally, the power house was divided into the following spaces:

- exhibition spaces at ground and mezzanine levels;
- dance studio;
- studios, workshops, offices;
- audiovisual and sound booths; and
- 250 sea theatre (soon to be constructed).

The Casula power house has recently won a 1996 Royal Australian Institute of Architects merit award, with the jury commenting that "this is one of the most sympathetic adaptions of an industrial structure or building ... there is a sense of understanding and sympathy for the original fabric as well as indications of community participation and support", (Qantas Airways Ltd, p.41).

2. Electricity Supply Company Building, South Adelaide

The Electricity Supply Company Building in South Adelaide was erected in 1901 for the Electric Lighting and Traction company of Australia to generate and supply electricity for the city of Adelaide. It was last used for that purpose in 1925, and until recently, was the Plumbing Trade School.

In 1989, the building was converted to `Tandanya', the National Aboriginal Cultural Institute, the name of which originates from the Kaurna People who are the original land owners of the Adelaide Plains.

The conversion to the National Aboriginal Cultural Institute (the first of its kind in Australia) has included the following facilities within the redevelopment scheme:

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- (i) A Performing Arts Area: a 160 seat venue which accommodates music, dance and theatre.
- (ii) Art/Craft Workshops: used by practitioners of various art forms and artist-inresidence.
- (iii) Retail Sales Outlet: a ground floor location with retailing of artefacts, books, magazines, fashions and accessories including a display area.
- (iv) Resource Area: a library for publications, A/V resource and educational material.
- (v) Visual Arts Gallery: a major gallery hall space suitable for a variety of exhibition of art, craft, photography, etc.
- (vi) Cafe: a casual snack and beverage area used for seminars and functions.

The Tandanya redevelopment has resulted in a re-use that allows Aboriginal Australians to express their culture, heritage and history within a building recognised to be of historical importance.

3. Power House Museum, Ultimo, Sydney

The Ultimo power house dates back to 1899 when it was built to power Sydney's electric tram system until 1963 when trams were removed from Sydney Streets.

Work began on the power house in 1980, and eight years later, the site was transformed into the Powerhouse Museum which now houses a collection of ceramics, planes, steam engines, trains, furniture and other innovative Australian examples. The Powerhouse museum is Australia's largest museum with over 35,000m² of floor space (the entire site area is 2.4 ha).

The redevelopment of the power house has included within its design:

- museum shop
- specialty shops
- exhibition spaces (over 30)
- galleries
- interactive galleries including touch screen computers, audio phones and science experiments
- coffee shop
- kiosk

The functional areas of the power house museum are divided as follows (as a percentage of the total available area):

- exhibits (46%);
- common areas (16%);
- services (16%);
- support (13%);
- administration (4%);
- amenities (3%); and
- auditorium (2%).

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Therefore, what was previously an operational power station for the tram system in Sydney from the turn of the century until the sixties has been successfully converted and reused as a museum for art expression indicative of contemporary Australia. In the process the work won the 'Restoration/Renovation of a Historic Building, \$20 million and Over' award from the NSW Department of Public Works, Architectural Division in 1988.

7.2 REUSE OPTIONS

A possible range of alternative uses for the power house taking into account its size and historical trends, but excluding some town planning parameters identified in Stage 2 of the study include:

- 1. An office and facility headquarters for a major corporation or for a group of compatible companies.
- 2. A manufacturing plant and headquarters for a large clean industrial company (such as Visy Paper now reutilising Bulimba Power House).
- 3. An educational facility such as a semi-autonomous school or college of a university or TAFE facility.
- 4. A cultural institution with uses such as museum, gallery, studio, storage, performance and rehearsal space.
- 5. A sports and recreational facility possibly combining indoor and outdoor spaces.
- 6. A major retail centre combining large warehouse uses and storage areas.
- 7. A major trades exhibition centre.
- In order to increase either viability or attraction, combinations of some of the above may also be considered appropriate such as:
 - 8. Private/public sector facility such as a tertiary education centre combined with 'high-tech' or other technology industries.
 - 9. A combined educational and cultural facility, for example, combining arts education with performance, gallery and studio spaces.
 - 10. A combined cultural and recreational facility, for example, themed recreational attractions (leisure pools etc) combined with popular museum activities (science and technology etc), interactive galleries, conventional and high-tech cinemas, and theatres.
 - 11. A combined retail and recreational facility with major distributors creating a recreational attraction integral with retail attraction.
- 12. A combined retail and trades exhibition centre.
- 13. A combination of compatible company offices with a trades exhibition centre.

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7.3 POTENTIAL USES

The preferred range of options has been determined following analysis of the building fabric, of the compatibility of uses with neighbouring environments and of uses which may be appropriate to a building size in the region of 25,000 - 35,000 square metres.

From this analysis the following uses were rejected:

Residential or Hotel Adaptation of the power house

This option would require substantial remodelling of the walls and fenestration to accommodate apartment or room modules. The option type is more suitable to woolstores where fenestration modules are more appropriate.

Major Retail Centre

Traffic generation renders this option inappropriate, placing too a high a demand on neighbouring areas. No justifiable demand for a major retail facility in the region could be identified.

Major Manufacturing/Heavy Industry

Such a use would be incompatible with surrounding residential land use.

Each of the remaining options for re-use were considered appropriate for further examination, as follows.

7.3.1 Corporate Headquarters

This option could entail either a single major corporation occupying the whole building, or a group of compatible companies co-locating for mutual benefit, for example in the high technology/computer industry.

Example Proposal

The example proposal refits the main Boiler House for atrium-style offices with vertical circulation cores coinciding with the existing coal bunker structures. The atrium space is conceived as a large garden hall and public concourse. The smaller Turbine Room is conceived as a joint use facility with either/both manufacturing. computer data, library, recreational facilities.

Approximately 26,000 square metres of offices would be provided in the proposal, with joint use areas accounting for a further 13,000 square metres. Car parking for about 200 vehicles would be internally provided in the existing basement.

The remainder of the site would be revised as open space for visitor parking, passive and active recreation areas, and landscape buffering to the railway and Memorial Drive.

A possible ferry terminal is indicated to provide public riverfront access, together with boardwalks and riverfront cafes incorporated into the pump station buildings.

Vehicular access would be facilitated by a new roundabout off Softstone Avenue. (Refer to figure of Option 1 overleaf).



OPTION 1 CORPORATE HEADQUARTERS



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This option is considered to be highly appropriate in that it provides a use compatible with the building fabric and surrounds the building with open space potentially usable by both workers and the general public.

There are many precedents internationally for either large corporation headquarters or joint use cooperatives which do not require, or are too large for, central city sites (eg. IBM Headquarters in Markham Ontario, Canal and Television Headquarters, Paris, Renault Administrative Headquarters, Boulogne France, various regional Government offices).

The option would not require over-extensive modification to the structure or fabric. Gross floor areas provided in the example proposal are as follows:

OPTION 1	
CORPORATE HEADQUARTERS	
Commercial	8 4 ha
Public Open Space	2.4 ha
Substation site	0.9 ha
Lower Level Car parking/Storage/Plant	11.241 m^2
Undercover Carpark Cover	200 Spaces
Storage Area	1.750 m^2
Offices - Gross Floor Area	26.097 m^2
Offices - Net Leasable Area	23.500 m^2
External Site Area (including Public Open Space)	9.5 ha
GROSS FLOOR AREAS/LEVEL	
Lower Level	11.241 m^2
Entrance Level	12.297 m^2
Level 2	4.865 m^2
Level 3	4.235 m^2
Level 4	4.235 m^2
Level 5	-7,230.111
TOTAL	2,040 m
	37,513 <u>m</u> -

7.3.2 Cultural, Recreational, Institutional Uses

These uses have been combined because they are mutually compatible and because the viability of an integrated facility is potentially greater than a single use facility.

The option converts the power house and its environment into a vibrant public domain, putting arts and recreational uses together either publicly and privately funded.

Demand for such a use has been identified by Brisbane City Council and Arts Queensland, and by various private organisations, seeking large spaces for film and television studios, theatre production and storage.

A further demand identified is for a tertiary educational facility such as a TAFE or University college. For example, the Queensland College of Art is currently examining the possibility of redeveloping on the New Farm Powerhouse site - Tennyson power house offers potential for over 30,000 square metres of space which is the College's ultimate space requirement.

Example Proposal

The example proposal looks primarily at a combined arts and recreational re-use although an arts college use would be equally achievable.

The principal advantage of the building for this purpose is the flexibility to subdivide or modify space by partitioning, making it able to adapt and re-adapt over time as needs change.

The larger Boiler House is conceived as a Film and Theatre centre together with extensive production, storage, rehearsal and storage facilities, taking advantage of the space's height, the strength of the roof structures and docking accessibility.

The lower Turbine Room is devised as essentially space for public interface with the riverfront comprising galleries, administration and indoor recreational areas. The pump stations are converted to cafes and retail outlets line the riverfront. Parking for approximately 200 cars is accommodated in the existing basement.

The remaining site area is reconfigured for outdoor performance and recreation areas which would relate to the facility, forming further public domain, with potential ferry access and boat ramp. (Refer to figure of Option 2 overleaf).

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This option has high potential because of the need for large (and expensive to build) internal volumes needed for film, TV and theatre production uses.

The option's potential for creating public interface makes it appealing for its riverfront location. The range of compatible uses in this category is extensive and makes the use type of further appealing, such uses including:

- Film and TV studios, for which there is identified demand
- Theatres of various formats, lacking elsewhere in Brisbane
- Production and Art Storage Spaces, identified by both Arts Queensland and Brisbane City. Council
- Arts and Crafts Workshops for the regional community
- Visual Artspace, Galleries and exhibition areas
- Retail and cafe outlets
- Outdoor performance spaces
- College for the Arts or Industry
- Indoor sports and recreational uses

Precedents exist both in Australia and worldwide for this type of conversion including the Jam Factory in Hobart, Sydney power house Museum, the Casula power house Arts College in New South Wales, the Tate-of-the North and Merseyside Maritime Museum in Liverpool, the Musee D'Orsay in Paris.

The option requires consideration as to whether to continue to consolidate arts uses in the central city area, or to facilitate some regionalisation of the arts. However, the location of the site on the river accessible by ferry from other compatible centres such as the University of Queensland and the South Bank Cultural Centre add attraction to this option.

The option could be achieved without major disruption to fabric or structure. The proposal achieves the following gross areas:

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COX RAYNER ARCHITECTS

OPTION 2	
CULTURAL/RECREATION/INSTITUTIONAL	
Institutional	
Public Open Space	8.4 ha
Substation site	2.4 ha
5455124011 SIL	0.9 ha
Lower Level Car parking/Storage/Plant	10 700 3
Undercover Car Park Spaces	10,720 m ⁻
Storage Areas - Gross Floor Area	220 Spaces
Storage Areas - Gross Lepenhla Area	3,300 m²
Cultural/Recreational/Institution 1.0	3,000 m²
External Site Area (1) I I'm Data Floor Area	25,100 m ²
External Site Area (including Public Open Space)	9.5 ha
GROSS FLOOR AREAS/LEVEL	
Lower Level	$13,020 \text{ m}^2$
Lauri 2	$12,297 \text{ m}^2$
Level 2	5,280 m ²
	5,280 m ²
	$3,240 \text{ m}^2$
IVIAL	39,117 m ²

7.3.3 Warehouse and/or Light Industry

Warehousing is the most easily accommodated re-use, requiring minimal remodelling and taking advantage of the high floor loadings inherent in power house construction.

Light clean industry is another readily achievable re-use particularly those involving linear production processes.

Example Options

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Two example options are provided (3A and 3B), both leaving the structure substantially in place. The major warehousing or factory processes are shown in the larger Boiler House, with offices accommodated in the lower Turbine Room having views over the river. Alternatively, it would be possible for warehouse, light industry and offices to occupy the Boiler House solely, with the smaller Turbine Room converted to community-related uses such as indoor swimming, courts and meeting spaces.

Either option works well because carparking for the warehouse/industry use can be accommodated in the Boiler House basement, and public parking located externally at grade. The remaining site could be utilised for external storage and public open space. (Refer to figure of Options 3A and 3B overleaf).

Analysis

This option may prove to be the most viable because minimal alteration to the building is required. It is, however, the least attractive from a public use perspective, particularly with urban renewal objectives elsewhere in the city to revitalize waterfronts away from industrial uses.

The proposal involves the least amount of additional floor space to be constructed, and provides gross floor spaces as follows:

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OPTION 3B LIGHT INDUSTRY

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OPTION 3A	
WAREHOUSE	
industrial	8 1 ha
Public Open Space	. 0.4 Ha
Substation site	2.4 Ha
Warehouse Area	0.9 114
Offices/Services - Gross Floor Area	$11,241 \text{ m}^2$
Offices/Services - Gross Leasable Area	$13,028 \text{ m}^2$
External Undercover Storage	11,700 m²
External Site Area (including Public Open Space)	23,500 m ²
GROSS ET OOD ADEAGA ENTER	7.15 ha
Lower Level	
Entrance Level	$11,241 \text{ m}^2$
Level 2	7,154 m ²
Level 3	$2,374 \text{ m}^2$
Level 4	1,750 m ²
TOTAL	<u>1,750 m²</u>
	24,269 m²
OPTION 3B	
LIGHT INDUSTRY	
Industrial	8.41
Public Open Space	8.4 ha
Substation site	2.4 na 0.0 h-
	0.9 да
Lower Level Carparking/Storage/Plant	11.241 m^2
Undercover Carpark Spaces	200 Spaces
Officer/Services C m	6.450 m^2
Offices, Come Land 1	11.721 m^2
External Site Area Grate His D 111 0	$10,500 \text{ m}^2$
External Sac Alea (including Public Open Space)	^{-9.5} ha
GROSS FLOOR ARFAST EVEL	
Lower Level	
Entrance Level	$11,241 \text{ m}^2$
Level 2	12,297 m ²
Level 3	$2,374 \text{ m}^2$
Level 4	$1,750 \text{ m}^2$
TOTAL	$1,750 \text{ m}^2$
	29,412 m ²

7.3.4 Residential and Open Space

This use requires demolition of Tennyson power house as the building overshadows the site eliminating its residential amenity. The adaption of the building for wholly or largely residential re-use is also infeasible due to the volume of space within the building envelope.

The redevelopment provides for a long term use of the site and potentially for the adjacent Animal Research Institute site into which future residential will grow.

Example Option

The example option locates open space, a recreational lake and landscaping on land which is most prone to flooding. The scheme would nevertheless require landfilling to achieve levels appropriate for housing development.



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Example Option

The example shows a combination of active and passive open spaces. Active spaces could accommodate sports for schools lacking facilities. Passive areas could be utilised by neighbouring employment and residential areas.

A ferry wharf and boat ramp are provided to enhance the range of potential activities. (Refer to figure of Option 5 overleaf).

Analysis

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The option is consistent with a number of regional open space strategies and is the least expensive of all options although it also offers least potential return.

The option would be more appealing if the adjacent site was planned for future residential development able to generate a populating using the open space.

The limited accessibility of the site from surrounding areas (by the railway and major roads) makes pedestrian linkages difficult, further lessening this strategy's rationale.

OPTION 5 OPEN SPACE Sports Fields/Facilities Public Open Space Substation Power Link

8	.4 ha
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EVALUATION OF OPTIONS

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8.0 EVALUATION OF OPTIONS

Section 7.0 suggests generic land use options for the TPH site. Section 8.0 illustrates the evaluation process which has been undertaken of each option to date.

8.1 EVALUATION CRITERIA

The Government Land Management System (GLMS) requires an assessment of the likely uses to which a site may be put, consistent with the capability of the land and within existing land use constraints. All surplus properties are to be assessed to determine their best use before an allocation decision is made. The best use should provide the greatest net community benefit by balancing:

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- community land requirements;
- development of the State; and
- maximisation of financial return.

Generic land use options have been identified in Section 7.0 to encompass possible land use scenarios for the TPH site. In light of the above and owing to the nature of the study, the following objectives have been considered in order to quantify final land use options. An additional set of criteria relating to architectural/heritage considerations have been added to criteria identified under the GLMS assessment categories.

Planning Objectives

- compatibility with strategic directions;
- traffic impact:
 - traffic generation
 - impact on local network;
 - mix of traffic
- compatibility with surrounding residential areas:
 - noise
 - amenity
 - character
 - scale
 - compatibility with the ARI site remaining as animal research facility (based on the number and proximity of people and domestic pets to the ARI site);
 - compatibility with future development of ARI site (assuming mixed density residential development is the most likely option); and
 - ability to provide open space along the river and public access to the river (assuming public/community uses encourage public accessibility while private industry/committee tends to inhibit community accessibility).

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Community and Land Requirements

- ability to meet open space linkages;
- potential to provide linkages; and
- opportunity to link other community lands.

Contribution to State Development

• potential to provide a facility of state/regional significance (at either a social, cultural or economic level).

Financial Return

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- site preparation costs;
- construction costs; and
- return on investment (percentage of total capital cost).

A financial assessment has been undertaken by Rider Hunt Quantity Surveyors, for each option. This is included in Appendix K.

Architectural/Heritage Considerations

- ability to maximise architectural attributes of the power house (both internally and externally);
- potential to maintain heritage value of the building; and
- contribution to townscape/riverscape/landscape.

8.2 EVALUATION OF GENERIC LAND USE OPTIONS

A matrix has been formulated to assess each final land use option against the evaluation criteria in order to guide future decision making about the future of the site. (Refer to Table 8.1).

A summary of each option's performance against evaluation criteria, as set out within the matrix, is provided below.

Corporate Office/Headquarters: Option 1:

Option 1 has:

- moderate compatibility with *Planning Objectives*;
- medium compatibility with Community Land Opportunities criteria;
- compatibility with the Contribution to State Development criterion;
- medium compatibility with Architectural/Heritage objectives; and
good compatibility with *Financial Return* objectives in terms of financial return, assuming that demand exists for the volume of space proposed.

Cultural, Recreational, Institutional Uses: Option 2:

Option 2 has:

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- medium to high compatibility with *Planning Objectives* criteria;
- strong compatibility with Community Land Opportunities criteria;
- high compatibility with the Contribution to State Development criteria;
- generally low compatibility with *Financial Return* criteria owing to the high site preparation costs and low financial return to the State; and
- high compatibility with Architectural/Heritage objectives.

A cultural use for the building has strong community support.

Warehouse/Storage Uses: Option 3A:

Option 3A has:

- low compatibility with Planning Objectives;
- generally low compatibility with Community Land Opportunities criteria;
- low compatibility with Contribution to State Development criterion;
- medium compatibility with Financial Return criteria; and
- medium compatibility with Architectural/Heritage criteria.

Industrial Use: Option 3B:

Option 3B has:

- predominantly low compatibility with *Planning Objectives*;
- generally low compatibility with *Community Land Opportunities* criteria. The actual degree of compatibility however is likely to depend upon the type of industrial development and availability of land within the site for open space purposes;
- potentially high compatibility with *Contribution to State Development* criterion if the future use involves high technology or brings new industry to the State;
- medium compatibility with Financial Return criteria;
- medium compatibility with Architectural/Heritage criteria.

Any industrial use would need to demonstrate that noise and other impacts would not affect local residential amenity.

Residential and Open Space Use: Option 4:

Option 4 has:

- high compatibility with *Planning Objectives* (except in the case where the ARI continues its operations);
- high compatibility with *Community Land Opportunities*;
- low compatibility with regional/State development criteria as a residential use would not be unique to the region;
- Financial Return compatibility varies as full site preparation are required, however a high return on investment is likely; and
- low compatibility with Architectural/Heritage criteria as the option involves demolition of the building.

The residential and open space option is highly compatible with surrounding land use.

Open Space Scheme: Option 5:

Option 5 is:

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- highly compatible with Planning Objectives;
- highly compatible with Community Land Opportunities;
- compatible with part of the criterion for Contribution to State development;
- generally incompatible the *Architectural/Heritage* criteria except in its ability to contribute to riverscape/landscape; and
- return to low compatibility with *Financial Return* criteria as site preparation costs are minimal but there is also minimal financial return to the State.

The open space scheme is highly compatible with surrounding land use and would be appropriately located to provide the open space needed if the ARI site were to be redeveloped in the future for residential purposes.

8.3 TRAFFIC GENERATION AND ACCESS

A traffic and access assessment of the site options was undertaken by Viney Traffic Engineering in December 1996.

8.3.1 Traffic Generation

A major redevelopment of the site will almost certainly produce a significantly higher traffic generation than the existing and former uses. A traffic analysis has been undertaken to determine the likely impact on access and the road network of traffic generated by possible future uses. Six alternative uses have been developed and illustrated on architect's Cox Rayner site plans.

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LAND USE STUDY For Tennyson Power Flouse Site

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Table 8.1 TENNYSON LAND USE OPTIONS EVALUATION MATRIX

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Evaluation Criteria						
а.			SITE (OPTIONS		
		Retain	Power House		Demolis	h Power House
	Option 1 Corporate Offices	Option 2 Cult./Rec./Inst	Option 3A Warchouse/Storage	Option 3B	Option 4	Option 5
PLANNING				1 Englist Industry	ICesidential	Open Space
Compatibility with strategic directions (included within the new draft strategic plan's 'Urban Area' preferred dominant land use*)	Not a designated Business Activity Centre (within the Strategic Plan). Not a preferred use within the Stephens District LAP Development Control Plan (DCP).	Compatible with the Urban Area. Would encourage public access to the site.	Not a designated major industrial area or mixed industry/business area. (Strategic Plan).	(See Warehouse/Storage) The Stephens District LAP - Business and Industry Study views light industry as acceptable if it does not adversely impact upon surrounding hand uses (ie. in terms of traffic, noise, air pollution).	Highly compatible	Highly compatible particularly on river frontage. (meets requirements of the Brisbane Green Space system within the strategic plan).
 traffic generation mix of traffic 	High with significant peak hour flows.	Low traffic generation	Low	Medium (dependent on type of industry) but similar to previous power station use.	Medium level of Traffic generation.	Low Traffic generation likely to be sporadic - more traffic on weekends than weekdays.
	vehicles.	Predominantly light vehicles.	Light and heavy vehicles.	Light and heavy vehicles.	Predominantly light volucies	Light vehicles.

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LAND USE STUDY For Tennyson Power House Site

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Table 8.1 Continued

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Evaluation Criteria						
			SITE (OPTIONS		
,		Retain	Power House		Demolis	h Power House
impost on local sectors	Option 1 Corporate Offices	Option 2 Cult./Rec./Inst	Option 3A Warehouse/Storage	Option 3B Light Industry	Option 4 Residential	Option 5 Open Space
impact on local network	Moderate increase in traffic in residential areas. Requiring upgrade in access to site	Moderate increase in traffic in residential areas. Requiring upgrade in access to site	Significant increase in heavy vehicle traffic in residential areas. Upgrade in access to site.	Increase in heavy vehicle traffic in residential arcas. Upgrade in access to site required.	Moderate increase in traffic in residential areas. Requiring upprade in	Some increase in traffic at times, Upgrade in access to site acceded.
					access to site	
Compatibility with surrounding residential areas:						
- noise	Highly compatible. Some increase in traffic noise at peak hours.	Highly compatible. Some increase in traffic noise at peak times.	Risk of incompatibility (dependent on nature of stored and materials).	Risk of incompatibility (dependent on type of industry).	Highly compatible. Some increase in traffic noise. (Amount of noise will be	Highly compatible. Some increase in traffic noise (at times)
- amenity	Medium to high. Additional open space provision is likely.	Medium to high. Community/ public use will enhance amenity.	Low	Low	dependent on densities). High	High
- character	Medium	Medium to high	Low	Low	High	filial
- scale	Low (existing building retained).	Low (existing building)	Low (existing building)	Low (existing building)	High	rugn Very High

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LAND USE STUDY For Tennyson Power House Site

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Table 8.1 Continued

Evaluation Criteria		·····				
			SITE	OPTIONS		
	Outlou I	Retain	Power House	· · · · · · · · · · · · · · · · · · ·	Demolis	h Power House
Compatibility with AR1 site remaining on	Corporate Offices	Option 2 Cult./Rec./Inst	Option 3A Warehouse/Storage	Option 3B Light Industry	· Option 4 Residential	Option 5 Open Space
animal research facility (based on the number and proximity of people and domestic pets to the ARI site).	Medium (buffering required)	Medium (buffering required)	High	High	Low (extensive buffering, appropriate fencing and relocation of necropsy facility required)	Very high (buffering can be incorporated into open space scheme).
ARI site (assuming mixed density residential development is most likely option).	Medium	Medium to high	Low	Low	Very High	Very High
Ability to provide open space along river and public access to the river (assuming public/community uses encourage public accessibility while private industry/commerce tends to inhibit community accessibility).	Medium (assuming that public access is conducive to a positive corporate linage)	High	Low (warehouse/ storage uses tend to utilise building circumference space, for reasons of access, maintenance, safety, etc.)	Low (light industrial uses tend to utilise building circumference space for reasons of access to building, maintenance and safety).	High	Very High (open space opportunities are optimised)
COMMUNITY LAND OPPORTUNITIES		·····	I	· · · · · · · · · · · · · · · · · · ·		
Ability to meet local and regional open space needs	Medium (assuming corporate offices provide additional public open space on top of riparian park).	High (cult/rec./inst. uses conducive to encouraging local/regional open space usage).	Low (if balance of area is utilised for storage/warchouse use).	Low (if balance of arca used for industrial use).	High (riparian park would provide a regional function, remainder open spaces linkages to provide a local function).	Very High
e otentiat to provide open space linkages	Medium (but would be dependent on intentions of future owner of site)	High (conducive to encouraging open space networks).	Low (if balance of area is utilised for storage/warehouse use)	Low (if balance of arca used for industrial use).	High	Very High

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LAND USE STUDY For Tennyson Power House Site

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Table 8.1 Continued

Evaluation Criteria						
	· · · · · · · · · · · · · · · · · · ·		SITE (OPTIONS	······	
· ·	0	Retain	Power House	·	Demolish Power House	
Opportunity to link add	Corporate Offices	Option 2 Cult./Rec./Inst	Option 3A Warehouse/Storage	Option 3B Light Industry	Option 4 Residential	Option 5
opportunity to fink other community lands	Medium (but would be dependent on intentions of future owner of site)	High	Low	Low	High	Very High
CONTRIBUTION TO STATE DEVELOPMI	ENT		<u> </u>			l
Potential to provide a facility of	Large corporate entity	Similar	1	·····		
cultural or economic level.	on site may contribute to economic significance of regional/state level.	opportunity to contribute to social/cultural development of the State.	Unlikely to make a significant contribution to the region/state.	Potential for regional/state significance if a high value-adding industry, which lends itself to the scale of the building is identified.	Residential use would not contribute unless designed as a demonstration project (i.e. low	Remainder of site as recreational open space could provide a regional function. Passive open space usage is unlikely to be of reficient.
FINANCIAL			i		energy).	significance.
Site preparation costs (includes	\$1,950.000	\$1.950.000	**		······	
Construction estimate).			\$2,700,000	\$1,950,000	\$3,200,000	\$1,350,000
Construction costs	\$28,813,000	\$43,228,000	\$20,181,000	\$18,369,000	\$80,314,000	\$6,560,000
Total Capital cost (includes land costs, finance costs, development expenses and other costs)	\$45,189,000	\$50,271,000	\$29,116,000	\$27,070,000	\$102,066,000	\$9,445,000
Return on investment (percentage of total	8 1 2%	Dublish D. 1.4				
capital cost)	0.1270	ruonciy funded	7.20%	7.24%	16.52%	Publicly Funded
Electricity Industry Costs for substation and cable rebuild and relocation	\$20,000,000	\$20,000,000	\$16,000,000	\$16,000,000	\$20,000,000	\$20,000,000

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LAND USE STUDY For Tennyson Power House Site ا سبب ، بعب

Table 8.1 Continued

Evaluation Criteria	SITE OPTIONS					·····
		Retain	Power House		Domolia	
· · · · · · · · · · · · · · · · · · ·	Option 1 Corporate Offices	Option 2 Cult./Rec./Inst	Option 3A Warehouse/Storage	Option 3B	Option 4	Option 5
ARCHITECTURAL/HERITAGE	· · · · · · · · · · · · · · · · · · ·		B		<u>Kesidential</u>	Open Space
Ability to maximise architectural attributes of the power bouse (both internally and externally).	Medium. Office style use does not require the internal architectural features of the building. Building is retained.	Medium to high compatibility particularly for uses which require large internal spaces.	Potentially high, cspecially if sophisticated storage infrastructure is utilised, otherwise low if floor is used only.	Medium to high compatibility particularly for uses which require large internal spaces.	N/A	N/A
Potential to maintain heritage value of the building	Potentially high. Physical appearance is linked to corporate identify.	Potentially high. Dependent on the degree of public funding.	Low to medium. Potential user may not maintain heritage character.	Medium. Potential user may be interested in protecting the heritage character as part of image (e.g. Visy Paper).	Low. Option would involve demolition of the building.	Low, Option would involve demolition of the building.
Contribution to townscape/riverscape/landscape	Retention of building will create a continuation of dominance of the building in the local area. Appropriate landscaping has potential for building to blend with surrounding residential areas.	Retention of building will create a continuation of dominance of the building in the local area. Appropriate landscaping has potential for building to blend with surrounding residential areas.	Retention of building will create a continuation of dominance of the building in the local area. Appropriate landscaping has potential for building to blend with surrounding residential areas but may not be as extensive as other uses.	Retention of building will create a continuation of dominance of the building in the local area. Appropriate landscaping has potential for building to blend with surrounding residential areas but may not be as extensive as other uses.	Provides continuity between existing residential areas to cast and west.	Opens up vistas to river and is likely to provide green space linkages to the Brisbane Golf Course.
 The strategic intentions of the site can be As specified within the Strategic Plan, the low rise detached housing, currently zon amenity problems and enhance use of put N/A Not Applicable. 	e assessed by viewing the n ne Urban Areas preferred do red Residential A, as well as iblic transport, walking and	ew draft Strategic Pla uninant land use coul bousing at higher de cycling. Any such u	n (due for gazettal in Ma d allow for the following nsities; and non residenti se will be assessed on the	rch, 1997) and Stephens Distr uses: small centres; industrial al activities which serve local blikely impact to surrounding	ict Local Area Plan areas; schools and communities, minir land uses and comm	(LAP). other institutional uses; nising potential nunity.

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The various options and the likely traffic generation for each are listed in Table 8.2. The level of traffic generation adopted is an estimate based on data collected over many years by Brisbane City Council, Main Roads and the Roads and Traffic Authority of N.S.W. The generation for some uses, particularly the "open space" and the "cultural/recreational/institutional" will be extremely dependent on factors that cannot easily be quantified and these uses would exhibit wide fluctuations in peak activity in practice.

Option	Use	Gross Floor Area or Unit	Expected Generation Day	Expected Generation Peak Hour
1	Corporate Headquarters	26,097m ²	2,600	520
2	Cultural/Recreational/ Institutional	25,100m²	1,000	150
3A	Warehouse	24,269m ²	950	260
3B	Light Industry	18,171m ²	2,200	220
4	Residential/Open Space Commercial Apartments	- 2,550m² 500 -	2,250	275
5	Open Space Sporting Facilities		1,000	250

Table 8.2 Expected Vehicle Generation (total two-way volume)

It can be seen that the corporate headquarters use is likely to generate the highest daily and peak hour traffic flows. For each of the other options considered, a peak generation of around 150-300 vph could be expected. This is considered to be similar to the peak traffic generation that would have been recorded for the power house which had 250-260 employees.

Only the warehouse and light industry uses would generate a significant proportion of truck or articulated vehicle traffic.

8.3.2 Access Location and Type

The only vehicular access to the power house site is from Softstone Street and is situated midway between a crest at the rail overbridge and a 90 degree bend at King Arthur Terrace. Sight distance in either direction from the access point is approximately 80-90 metres.

There are considered to be four options available for access to the power house site:

- 1. to Fairfield Road via a new road connection;
- 2. to Tennyson Memorial Avenue via an underpass or overpass of the railway;
- 3. to Softstone Street at the existing access point; and
- 4. to Softstone Street at the intersection with King Arthur Terrace.

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These options have been considered in detail and are discussed below:

Fairfield Road

A connection to Fairfield Road is possible only with the cooperation of the Department of Primary Industries (DPI) as the route would pass through the adjoining Animal Research Institute (ARI) land. In order to properly achieve an access from the east it would be necessary to substantially modify the existing signalised intersection at Ortive Street (a double right turn is likely to be required). In practice, to achieve the intersection design required it would be necessary to relocate the existing intersection further to the south using ARI land. It is unlikely that the combined power house and ARI sites, when developed to their potential, could be adequately serviced by a single access point on Fairfield Road. Consequently, even with a high standard of access to Fairfield Road, either now in the future there would be a need on capacity and safety grounds for a secondary access point to some other frontage.

There is a separate narrow strip of land connecting the power house site to Fairfield Road to the south of the ARI land but this would not be suitable for a major access to the site due to the presence of the grade separated interchange of Fairfield Road/Tennyson Memorial Avenue and the railway.

Consequently, access to Fairfield Road is seen as a future possibility that would, with suitable intersection works, provide an alternative access point for the power house site.

This option is not available at present as the ARI does not propose to redevelop. Further, it is considered that a connection to Fairfield Road would not be acceptable as the sole access point for the power house site and that a secondary access to some other frontage would need to be provided.

To Tennyson Memorial Avenue

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The presence of the railway line requires any connection between the site and Tennyson Memorial Avenue to be grade separated.

The existing constraints of developed industrial property on the southern side of Tennyson memorial Avenue and the railway on the northern side make a full interchange unlikely. A low standard of interchange (underpass) catering for all movements would be possible with acquisition of land from the Brisbane Golf Club.

An intersection can be located within the existing road and rail reservation providing a low level underpass to the site. The intersection would provide for all movements. The cost of the intersection and the underpass would be in the vicinity of \$1.5 million and the underpass would require attention to drainage to avoid ponding during wet periods. The underpass is likely to have a height limit and therefore may not be able to cater for all vehicles that may need to gain access to the site.

To Softstone Street at the existing access point

The sight distance at the existing access point is considered to be marginal at 80-90 metres. However, due to the severe nature of the physical constraints the speed environment is considered to be lower than 60km/hour. Improvement to the intersection could be obtained by providing a protected right turn lane at this point. Storage for right turn traffic would be limited and it may be necessary, if this option is proceeded with, to slightly modify the bridge structure to accommodate the angled approach from the north. This is a low cost option (construction cost estimated at approximately \$10,000) that will maximise the use of existing infrastructure but provide a safer. environment for users. The widening of Softstone Street to provide the protected turn lane also

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allows right turn egress traffic from the site some protection if a two-stage turn movement is used. The critical movement for the intersection is the right turn egress from the site to the north. Table 8.3 gives the volume/capacity ratios for this movement for the various options.

Option	Volume/Capacity Ratios for Right Turn Egress
1	0.72
2	0.14
3A & 3B	0.33
. 4	0.19
5	0.22

Table 8.3 Volume Capacity Ratios Softstone Street Access

These results indicate acceptable operating conditions would be experienced for all use options although at peak times there would be noticeable delays for the right turn movement with Option 1.

Softstone Street at King Arthur Terrace

An access at this point is considered appropriate for two reasons:

- the existing right angle bend is deceptive and the corner has a poor accident history (as advised by BCC traffic officers);
- (ii) problems of sight distance at other possible access locations in Softstone Street are overcome.

However, a standard T intersection obtained by extending King Arthur Terrace is not considered to be an appropriate treatment because it would give intersection priority to a smaller volume movement.

A roundabout constructed at this point has a number of advantages not only for the site but also the community at large. These include:

- Increased Safety. The physical presence of the roundabout and associated lighting will provide better visual cues to drivers and will reduce or overcome the current accident problems at the bend. The roundabout is also operationally safer than the T intersection alternative;
- Speed Reduction. The roundabout, by its visual impact and travel path requirements could form a part of an integrated speed management plan for the area; and
- Entry Statement. The roundabout is one traffic control device that lends itself to sympathetic landscaping. A landscaped roundabout at the King Arthur Terrace/Softstone Street corner would provide a far more attractive entry to the site than the T intersection mid-block. The uninterrupted Softstone Street frontage and the landscaped entry statement at the roundabout would also improve the amenity of the surrounding area.

These options have been considered in detail and are discussed below:

Eairfield Road

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To Tennyson Memorial Avenue

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allows right turn egress traffic from the site some protection if a two-stage turn movement is used. The critical movement for the intersection is the right turn egress from the site to the north. Table 8.3 gives the volume/capacity ratios for this movement for the various options.

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- Entry Statement. The roundabout is one traffic control device that lends itself to sympathetic landscaping. A landscaped roundabout at the King Arthur Terrace/Softstone Street corner would provide a far more attractive entry to the site than the T intersection mid-block. The uninterrupted Softstone Street frontage and the landscaped entry statement at the roundabout would also improve the amenity of the surrounding area.

The cost of a new roundabout is of course much higher than the cost of upgrading the existing intersection. An estimate cost of approximately \$50,000 is for a single lane roundabout with a central island of \$0 metre radius.

Table 8.4 provides the volume/capacity ratios for the worst approach direction during peak operation for the various options.

Volume/Capacity Ratios (worst approach)	пойqO
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89.0	7
SL'O	86 & A6
72.0	4
02.0	\$

Table 8.4 Roundabout Volume/Capacity Ratio

These results indicate reasonable operating conditions for all options with the exception of Option 1, a 1 (Corporate Headquarters). To accommodate a high traffic generating use such as Option 1, a larger roundabout may need to be constructed to provide for two circulating lanes.

From a traffic engineering viewpoint, the roundabout option is considered by far to provide the safest and most efficient access to the subject site. Satisfactory access is also provided by the undergrass from Tennyson Memorial Avenue however at significantly greater cost and with height restrictions on vehicles using the access.

8.3.3 Impact of Traffic Flows of Local Road Network

Residents of the Tennyson and Graceville areas have long complained about traffic problems created by the through movement between Oxley Road and Fairfield Road. However, Council traffic counts indicate that, compared to the rest of the city, growth in the use of this route based on King Arthur Tenace has been moderate. The existing 12 hour volume of 8,000 vpd is in keeping with its role as a suburban connector route. In assessing traffic flows generated by the power house site, it has been and Tennyson memorial Avenue to the east. Consequently, if residential amenity to the west site is considered to be an important determinant of the ultimate use then a number of the proposed uses are less desirable than others. Three of the proposed alternative uses are considered to be in uses. The Warehouse and Light Industry uses could generates a substantally higher peak flow than other uses. The Warehouse and Light Industry uses could generate truck traffic along King Arthur this category. The Corporate Headquarters use generates a substantally higher peak flow than other uses. The Warehouse and Light Industry uses could generate truck traffic along King Arthur the state.

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However, traffic generated by the remaining uses (2 - Cultural/Recreational/Institutional; 4 - Residential amenity of the area. Importantly, the flows generated by these uses are considered to match in volume those generated by the previous power generated by these uses are considered to the site (commercial and sporting) have the potential to reduce overall travel demand by providing the site (commercial and sporting) have the potential to reduce overall travel demand by providing more convenient services for existing residents.

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CONCLUSION AND RECOMMENDATIONS

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9.0 CONCLUSIONS AND RECOMMENDATIONS

9.1 CONCLUSIONS

The Tennyson Power House Site Land Use study has examined the power house site in the context of existing and future land use within the Tennyson/Yeronga/Fairfield area.

The study has examined the constraints to development within the power house site and presented a number of feasible options for the future use of the site.

The conclusions of the study are as follows:

- The future use of the TPH site is limited by poor road access, the constraints imposed by the bulk and scale of the TPH building and the uncertainty surrounding the future use of the ARI site.
- Access to the TPH site requires upgrading with the preferred form of access being a connection to Fairfield Road via the ARI site. Alternative access points at Softstone Street and Tennyson Memorial Avenue to the TPH site have been examined. A possible roundabout at Softstone Street has raised local community concerns and a possible Tennyson Memorial Avenue underpass is feasible but at a high cost.
- The land use opportunities for the combined TPH and ARI sites are significant and are best achieved by considering the combined land area as one surplus government land holding. It is likely that financial return can be maximised by combining both sites.
- The power house building has been identified as having heritage significance and a recommendation has been made as part of the study that the building be listed under the *Queensland Heritage Act 1992*.
- Contamination from previous activities on the site requires further investigation; however it is unlikely that this will prove to be a fundamental constraint to future use (including residential use) of the site, although significant site clean up work will be required.
- Upgrading of urban services, in particular sewerage, will be required to provide adequate infrastructure to a future redevelopment. Drainage of the site is poor and a significant volume of fill will be required to raise the south-eastern area of the site above flood levels.
- The site continues to provide a role in electricity transmission and distribution and there are no plans or need to replace existing facilities for 10 years. Studies undertaken by Powerlink and SEQEB have confirmed the suitability of the site for a major substation in the future. Accordingly, an area of some 0.9 hectares will be required within the site boundary for a substation as part of any future redevelopment.
- There are no known flora/fauna or Aboriginal cultural issues that would impact on any future development of the site together with easements for underground cables and substation road access.
- There is a wide variety of opinion on the future use of the site including the issue of retention versus demolition of the power house building. The uses which have strongest community support are cultural uses (i.e. museum/arts/community purposes) and residential uses.

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- Residential re-use of the power house building is not practicable due to the size and shape of the building.
- A residential use of the site involving demolition of the building would require a buffer zone to the ARI site, if the ARI remains as a research facility in the long term.
- The sheer size and bulk of the TPH building limits the re-use potential of the building.
- The findings of the public display period together with the submission from the Community Advisory Group indicate a clear preference for Option 2 : Cultural/Recreational/Institutional use.

9.2 RECOMMENDATIONS

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In responding to these conclusions, the following recommendations are made:

- Opportunities for future use of the Tennyson power house site are limited when the site is considered in isolation. In order to maximise opportunities for the site, the larger government land holding, including the ARI site, should be considered.
- The preferred access to a redeveloped power house site is from Fairfield Road via the ARI site, however a secondary access to Tennyson Memorial Avenue or Softstone Street will also be required.
- If the ARI site is not available, further investigation of traffic and access will be required to identify access arrangements satisfactory to the State government, Brisbane City Council and local residents.
 - If the electricity transmission and distribution facilities within the building are not to be replaced/relocated for 10 years, an interim use for the TPH building and site will need to be found until such time as the full potential of the site can be realised. Any such interim use would need to be compatible with local land use.
- Further investigations are needed to confirm the extent of contamination on the power house site and the means and costs of site clean-up.
- Further consideration needs to be given by the community and local and State government (including the Department of Environment) to the need for a heritage listing of the power house building. Retention of the building places significant constraints on the use of the land (particularly when considered in isolation from the ARI site) and the re-use options for the building are very limited in this, mainly residential, locality.

The study has identified a number of feasible land use options for the TPH site. In order to pursue the opportunities provided by particular options, the following key issues raised by the study will need to be resolved by government:

- the future of the ARI site;
- the timing of the replacement/relocation of transmission and distribution equipment on the TPH site and within the TPH building; and
- the recommended heritage listing for the TPH building and the need to retain the building in any future use of the site.

SECTION 10.0

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APPENDIX A

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at the left and the stables at the right



3. The Vetinary Science Building, constructed by the University is now part of the complex

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4. The 'package' power house was built to prevent any power shortages

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5. This aerial photo appeared in the Courier Mail story of the opening of the power house



6. The sketch prepared by the architects shows the modernist design of the Tennyson Power Station

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APPENDIX A

ASSESSMENT OF CULTURAL SIGNIFICANCE

In the Burra Charter of Australia ICOMOS (the Australian national committee of the International Council on Monuments and Sites) cultural significance means *aesthetic, historic, scientific or social value for past, present and future generations.* The concept of cultural significance helps in estimating the value of places or items to the community which cannot be expressed in financial terms alone. Assessment of cultural significance endeavours to establish why a place or item is considered important or valued by the community.

Significance is embodied in the fabric of the place, including its setting, the records associated with the place, and the response that the place evokes in the community. Significance is normally expressed through the Statement of Cultural Significance which answers the question "Why is this place important?" The statement uses the categories of values outlined in the Burra Charter.

- *Historic* value refers to the length of association a building or place has had with the historic environment in which it is located, or its associational links with historically important places, people or events.
- Aesthetic value refers to the formal or aesthetic qualities of the place or structure, either its own design or its landmark quality within its setting.
- Scientific or technological value refers to the contribution a place or structure makes to the understanding of the history of the technology of the area, either through its extant fabric or through the relics and artefacts with which it is associated. Some items/structures are identified as technologically significant primarily because they demonstrate or represent a particular process or innovation. Rarity, quality and representativeness are also considered.
- Social value refers to the importance a place or structure may have to a social group as part of a spiritual, political, national, or cultural sentiment or development.

These values have been incorporated in criteria for assessing places under the various state's heritage legislation for addition to heritage registers which ensure some statutory measure of protection. Table 5.6 (refer to Appendix A) prepared by Godden Mackay adapts the standard criteria to fit power houses and also lists the relevant criteria from Section 23 of the *Queensland Heritage Act* 1992.

Godden Mackay has also deduced that power houses have a range of heritage values which need to be analysed according to the criteria at a site specific level. However, the following generic values are relevant in understanding overall policies and principles:

- all power houses have some cultural significance.
- in general, power houses are more significant if they remain in operation.
- the significance of power houses is increased if they are totally intact (although they may have been extended and expanded over time).

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	For Tennyson Power House Site

- some power houses are regarded as important visual icons and landmarks, while others are regarded as eyesores.
- many power houses exemplify state of the art or representative technologies.
- power houses may be associated with important events or processes.
- built in obsolescence is an aspect of the historic process of some power houses.
- the power generation industry has played an extraordinary and important role in modern Australia's development and history.¹⁰

STATEMENT OF SIGNIFICANCE

Tennyson Power House located on the south bank of the Brisbane River eight kilometres from the city centre is culturally significant for its historic role in post war electricity generation and supply in south-east Queensland, its architectural significance as a landmark structure of post-war industrial Modern design and its social value as an object of civic pride for being Brisbane's biggest construction project in the early 1950s.

Historic

Tennyson Power House was the last major electricity generation and supply project constructed by the Brisbane City Council, before its generation and supply function was transferred to the Queensland Electricity Commission in 1977.

It epitomises the fierce political struggle for centralised control of electricity generation in Queensland and this is further highlighted by its abandonment following decommissioning in 1989.

The design and materials of the building and the particular equipment installed were all chosen for availability and speed of construction following post-war shortages and the need to commence generating as early as possible.

Aesthetic

The power house complex was designed in the European Modern functionalist style as a harmonious group of structures, compared to its contemporary Bulimba 'B' power house which was much more pedestrian in its design.

It is a well known and prominent landmark on the Brisbane River especially when viewed from Long Pocket and the higher areas on the north side. The massive scale is a distinctive feature.

The boiler house is a powerful expression of architectural style and display excellence in design and workmanship in steel.

The complex displays considerable architectural innovation, expressing not only the capabilities of its designers but also the difficulties of post-war material shortages. This is expressed in details such as steel encasement and the variety of fixings for sheet metal and glass cladding.

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Tennyson Power House was only one of eight 'packet' power stations constructed nationwide in the 1950s to meet the rapid post-war electricity power demands.

At the time of its construction the power house was the largest industrial structure built in Brisbane.

The closure of the power station 33 years after completion illustrates the rapid growth and increasing sophistication of electricity generating technology since the end of World War II.

The removal of all plant and equipment and resultant loss of integrity has lessened the technological value of the power station as Queensland's only post-war packet station.

Social

The siting of the Tennyson Power House deliberately isolated from residential areas and involving the demolition of an architecturally significant country house, demonstrated a growing awareness after World War II of the negative impact of industrial activity. It was also a sign of the 1950s when industrial progress was more important than retaining a country house.

The construction of the largest post-war industrial structure in Brisbane became a symbol of civic pride.

The threats to the continuing operation of the power house resulted in contemporary industrial protests during the 1970s.

Although not investigated to any great depth, the Tennyson Power Station would have some social value. It is an important and dominant feature of the suburb of Tennyson, a suburb which has struggled to achieve and maintain an identity for itself.

Opinion no doubt varies regarding the worth of the power station in the eyes of residents. Some may see it as an eyesore, others as a breathtaking structure.¹¹ However, since its construction it has become an important feature of the suburb and is a readily recognised symbol of both power generation in Brisbane in the 1950s and of the suburb itself.

Tennyson power house satisfies criteria (a), (d), (e), (f), and (g), of the Queensland Heritage Act 1992.

The Animal Research Institute at Yeerongpilly has cultural significance because of its pivotal role in the history of livestock research and disease control in Queensland. In addition it was the first livestock disease laboratory established in Australia.

It contains at least three buildings of historical significance.

- **D** Block the original 1909 state animal disease laboratory established under the control of Dr Sydney Dodd;
- A Block the original University of Queensland Veterinary School built in 1933;

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• Ex-surgery block - a concrete bunker style small building reputedly constructed by the USA Army during World War II.

The scientific research conducted at the Animal Research Institute has been of fundamental importance in the diagnoses and control of livestock diseases for the whole state. It is the largest

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entre in Queensland for an quipment.	imal research with a 1	ange of multidiscip	olinary skills and expen	sive
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The original Stock Experiment Station was located in an area sloping away from Fairfield Road to the river, remote from residential development. Although the Animal Research Institute has expanded its building stock higgledy-piggledy across the site, there is still a buffer of paddocks between it and the power station and this functions aesthetically as a rural backyard to the encroaching residential development.

The Animal Research Institute at Yeerongpilly is valued by the Department of Primary Industries staff as a successful facility, the source of pride for three generations. It is also valued by local residents as a quiet rural enclave.

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TIME LINE

The important events in the history and land use of Tennyson and the areas being examined are distilled in the following time line.

1823

Pamphlett, Parsons and Finnegan walk along the southern side of the Brisbane River near the Tennyson area, and find some canoes near Oxley Creek.

1823

John Oxley charts the Brisbane River with Finnegan as a guide. They went ashore near the power station site. Oxley names the creek Canoe Creek.

1850s

Land cleared around banks of the Brisbane River in preparation for survey.

1861

Pratten, the government surveyor surveys land in the Tennyson area for purchase. These are 'country lands', and are used primarily for farming.

1860s

The early land purchasers begin growing crops, such as sugar cane, bananas, corn, arrowroot, and cotton. Small mills are established.

1863

Severe floods ruin corn crops. Other floods in 1864, 1870 and 1893 cause damage. The land, near the Brisbane River, is low-lying and susceptible.

1884

The railway line is built from Corinda to South Brisbane. A 'stopping place' is established at Tennyson.

1887

The grand house *Hayslope* is built for Thomas Martin, an auctioneer, on the future site of the power station. Most other Tennyson residents however are farmers.

1909

The Stock Experiment Station (now Animal Research Institute) is established at Yeerongpilly. A laboratory, stables and other buildings are constructed.

by 1911

The Brisbane Golf Club has been formed, on land south of the rail line. The golf club manages to get the train to stop at Tennyson again, and a station is constructed.

1910s

Residential subdivisions are being created out of some former farms. Other farms remain and the suburb maintains a rural character.

1932

The Stock Experiment Station changes its name to the Animal Health Station.

The Veterinary School of the University of Queensland constructs a building at the Stock Experiment for teaching vet students.

1934

The Tennyson State School opened due to demand.

1945

Site of Tennyson Power Station chosen by Brisbane City Council, as more electricity is needed to power the post-war world.

1948

The Brisbane City Council engages McDonald, Wagner, and Priddle as engineers, and Stafford, Moor, and Farrington as architects to design the Tennyson Power Station.

1950

Construction of the power station commences.

1953

The Animal Health Station changes its name again to the Animal Research Institute. Further building work on site throughout the 1950s and 1960s.

1955

The first stage of the Tennyson Power Station officially opened. It is the largest industrial building in the state. Further two stages commenced immediately.

1964

Final stage of the Tennyson Power Station finished. The Brisbane City Council, however, no longer owns its power station.

1964

The Pamphlett Bridge is constructed across Oxley Creek, linking Tennyson with Graceville and Corinda by motor car.

1974

During the Australia Day floods water gets into many parts of the power station.

1980s

In reorganisation of electricity supply industry, decision made to close Tennyson down.

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1989

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All plant and equipment of the power station put to auction.

1991

Asbestos removed and the power station partially demolished.

LAND USE STUDY For Tennyson Power House Site 3

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TABLES

The following tables are referred to in the text of this report. They are derived from Godden Mackay's nationwide study on power stations. The original table numbers have been retained.

A current site plan of the Animal Research Institute is also included here.

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GENERAL INFORMATION

	Stages I & II	Stage III
Station capacity	124 megawatts	124 megawatts
Height of boiler house	24.5 metres	24.5 metres
Number of chimney stacks	4	2
Height of stacks	55 metres	55 metres
	BOILERS	
Number of boilers	8	4
Manufacturer	Babcock and Wilco	Babcock and Wilcox
Evaporation	20.2kg a second	33.5kg a second
Steam pressure	4 150 kilopascals	6 200 kilopascals
Steam temperature	455°C	483°C
Furnace temperature	1 400°C	1 400°C
Fuel	Crushed coal from West Moreton/. Rosewood fields	Crushed coal from West Moreton/ Rosewood fields
Coal consumption (per boiler)	6.5 tonnes an hour	11.5 tonnes an hour
Ash produced (per boiler)	1.5 tonnes an hour	2.5 tonnes an hour
Ash disposal	-Conveyor belt to ash hoppers	
TURBO	D-GENERATORS	S
Number of turbo-generators	4	2
Manufacturer	C. A. Parsons	Brown Boveri
Rotational speed	3 000 r.p.m.	3 000 r.p.m.
Capacity	31 megawatts	62 megawatts
Generation voltage	33 kilovolts	11.8 kilovolts
Condenser cooling water	River water - direct	River water – direct
cooling water circulation	7 600 litres a second	5 450 litres a secon

Front Cover: Tennyson Power Station from the air.



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THERMAL COAL			OUTPUT MW				1	LINITS I			
	No-			0019	UINW	1			<u>></u>		
Date	Таше	Slate	<100	101-500	501-	1000+	2	3-6	>7	Notes	
1888	Tamworth	NSW	.018MW				2			Replicated in	
1891	Richmond Phase 1	VIC	╺┼┈╼───			†				Decommissioned	
1891-1892	2 Redfern	NSW	.002MW		<u> </u>		2	·†		Decommissioned	
1898	Spencer Street Phase 1	VIC			i			+	120	Decommissioned	
1899-1909	Ultimo Phase 1	NSW	20MW		<u> </u>				1 10	Decommissioned	
1901	Geelong Phase 1	VIC	1	<u> </u>	1			+	+	Decommissioned	
1901-1913	Former Adelaide	SA				<u> </u>		- <u> </u>		Decommissioned	
	Electric Supply Co.			ĺ	1	į –	Í	1	1	1075	
1904-1914	Pyrmoat A	NSW	48MW				1	4	1	Decommissioned	
									1	1959 Demolished	
1905	Ballarat Phase 1	VIC							1	Decommissioned	
1909-1914	Balmain Phase 1	NSW	SMW					5	1	Decommissioned	
1912-1917	White Bay Phase I	NSW	64MW			1		5		Decommissioned	
1913	Mount Morgan	OLD	9MW				2	1	<u> </u>	Decommissioned	
									[1970s	
1914-	Yanco	WSW	25MW					4	1	Decommissioned	
1930s								<u> </u>	1	- Demolished	
1915	AGL Montake	NSW					1			Decommissioned	
1916-1928	East Perth Phase 1	WA_	32MW					5		Decommissioned	
1917 .	Cockatoo Island	NSW	3MW							Decommissioned	
1918	Newport A	VIC								Decommissioned	
									<u> </u>	- Demolished	
1919	Kingston	ACT	3MW				2			Decommissioned	
1919-1936	Zarra St Phase 1	WSW	30MW					4		Decommissioned	
				ł			1			1975 -	
		<u> </u>	<u> </u>							Demolished	
1919-1951	Port Kembla A	NSW	44MW					6		Decommissioned	
10204	Distance d Diver D		<u> </u>							- Demolished	
19205	I RUCOMODO Pase 2				_	<u></u>				Decommissioned	
1922-1934	UIUBO Phase 2	NS₩	60MW	ļ	i			3		Decommissioned	
1077		<u> </u>	<u> </u>							1963	
1925	USDOME A	SA		1						Decommissioned	
1973	Neurost 9	100								- Demolished	
17-3	Newpon B	VIC	63MW					3		Decommissioned	
1073.1078	White Day Phase 7				<u> </u>					- Demolished	
1923-1928	Palacia Phase 2	WCM	86MW					5		Decommissioned	
1923-1933	Nollar A	WSW	49MW					4		Decommissioned	
1924	Talloard A		75MW					6		Decommissioned	
1920	Bulimba A		ľ				1		·]	Decommissioned	
1025 1020	м			<u> </u>						- Demolished	
1920-1929	New Farm Phase !								•	Decommissioned	
1474	Bunnerong A	NSW		175MW			Í		7	Decommissioned	
										1979.	
					1				1	Decommissioned	
1932	Yallourn B		<u> </u>			<u> </u>	— -	<u> </u>		1950	
031.1036	New Farm Physe 7			IUUMW				4		Decommissioned	
015,1012	Fast Parts Direct	<u>vw</u>		· · ·	-					Decommissioned	
0001-502	Last rerus roase 2	WA	25MW		· · · · ·	. 1	1		1	Decommissioned	

Table 2.1 TYPE: Thermal/Sub-Type: Coal Fired

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TYPE: Thermal/Sub-Type: Coal Fired (Continued)

	THERMAL COAL	·····	1	OUTPU	TMW		1	UNITS		
Consi. Date	Name	State	<100	101-500	501- 1000	1000+	22	3-6	>7	Notes
1938	Mackay	ou					<u> </u>	!	l	Decommissioned
1939	Bunnerong B	NSW		200MW				4		Decommissioned
										Decommissioned 1986
1940	New Farm Phase 3	വാ								Decommissioned 1971
1940-1946	Zarra St Phase 2	NSW	48MW					3		Decommissioned 1975 - Demolished
1940s	Newport C	vic		120MW				4		Decommissioned - Demolished
1941	Ultimo Phase 3	NSW	25MW				1			Decommissioned 1963
1941	Koolkhan	אצ₩	35MW					4		Decommissioned 1980s
1945-1958	White Bay Phase 3	พรพ	SOMW				2			Decommissioned 1984
1947-1956	Balmais Phase 3	NSW	84MW					+		Decommissioned 1976
1948	Сочта	NSW	SMW				1			Decommissioned Demolished
1948	Lithgow	NSW	30M₩			-		4		Decommissioned 1969 - Demolished
1948	Howard		38MW	1			1	5		Decommissioned
1948-1956	Yallourn C	VIC		100MW			2			Decommissioner
19505	Ballarat Phase 2		20MW					4-5		Decommissioner
1950	South Fremantle*	WA		100MW				1		Decommissione
1950s	Ругаов В	NS₩		200MW				4		Decommissioned 1984 Demolisher
1950s	Richmond Phase 3	VIC							-	Decommissioned 1976
1950s	Теваузов					-		۱ <u> </u>		Decommissione
1950s	Plavford A	SA	<u></u>	1			1			Decommissioned
1950s	Scencer Street Phase 2	VIC		109MW			1	3-4		Decommissione
1950s	Geelong Phase 2	VIC	30MW				1	5-6		Decommissione
1950s	Red Cliffs	VIC	c.20- 30MW					4-5		Decommissioned
1952	Port Kewbla B	NSW	20MW					4		Decommissioner 1976 Demolishe
1953	Maidaod	NSW	20MW					4	-	Decommissioner 1975 Demolished
1953	Liverpool	NSW	20MW					4		Decommissioned 1976
1951	Bulimba B			i			1			Decommission

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Note: \*This station was converted to oil in the 1960s.

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| THERMAL COAL   |                              |       | OUTPUT MW |               |              |        |    | UNITS | ;       | [                      |
|----------------|------------------------------|-------|-----------|---------------|--------------|--------|----|-------|---------|------------------------|
| Const.<br>Date | Nаше                         | State | <100      | 101-500       | 501-<br>1000 | 1000+  | >2 | 3-6   | >7      | Notes                  |
| 1953-1955      | Peorith                      | NSW   | 20MW      | 1             |              |        |    | 5     |         | Decommissioned         |
| 1953-1958      | Yalloure D                   | I VIC | 1         | 100MW         | <u> </u>     |        | 2  |       |         | Decommissioned         |
| 1954           | Tallawarra A                 | NSW   | 1         | 120MW         |              |        |    | 4     |         | Decommissioned<br>1988 |
| 1956           | Wangi A                      | NSW   |           | 150MW         |              |        |    | 3     |         | Decommissioned<br>1989 |
| 1956           | East Perth Phase 3           | WA    | 30MW      |               |              |        | 1  |       |         | Decommissioned         |
| 1956-1958      | Yallours E                   |       |           | 240MW         |              |        | 2  | 1     |         | Decommissioned         |
| 1957           | Wallerwang A                 | NSW   |           | 120MW         |              |        |    | 4     |         | Decommissioned<br>1988 |
| 1957           | Ulan                         | NSW   | 6MW       |               |              |        | 2  |       |         | Decommissioned<br>1976 |
| 1957           | Bunbury                      | WA    |           | 120MW         |              |        |    | 4     |         | Operational            |
| 1958           | Wangi B                      | NS₩   |           | ISOMW         |              |        | 1  | 3     |         | Decommissioned<br>1989 |
| 1958           | Morwell                      | NC NC |           | 170MW         |              |        |    | 5     |         | Operational            |
| 1959           | Mt Isa Mines - Mica<br>Creek | QLD   |           | 150-<br>200MW |              |        |    | 6     |         | Operational            |
| 1960-1964      | Playford B                   | I SA  |           | 240MW         |              | 1      |    | 4     | <b></b> | Operational            |
| 1961           | Tallawarra B                 | NSW   |           | 200MW         |              |        | 2  |       |         | Decommissioned<br>1988 |
| 1961           | Wallerawaog B                | NSW   |           | 110MW         |              |        | 2  |       | ·       | Decommissioned<br>1988 |
| 1963           | Vales Point A                | NSW   |           |               | 875MW        |        |    | 4     |         | Decommissioned<br>1985 |
| 1964           | Collinsville                 | OLD   |           | 180MW         |              |        | [  | S     |         | Decommissioned         |
| 1964 ·         | Hazelwood                    | VIC   |           |               |              | 1600MW |    |       | 8       | Operational            |
| 1964           | Muja                         | WA_   |           |               |              | 1040MW |    |       | 8       | Operational            |
| 1965           | Callide A                    | OLD   |           | 120MW         |              |        |    | 4     |         | Decommissioned         |
| 1966           | Swanbank A                   | OLD   |           | 396MW         |              |        | L  | 6     |         | Operational            |
| 1967           | Muumorah                     | NSW   |           |               |              | 1200MW |    | 4     |         | Operational            |
| 1969           | Gladstone                    | 0.0   |           |               |              | 1630MW |    | 6     |         | Operational            |
| 1970           | Swaabaak B                   | OLD   |           | SOOMW         |              |        |    | 4     |         | Operational            |
| 1971           | Liddel                       | NSW   |           |               |              | 2000MW |    | 4     |         | Operational            |
| 1973 ·         | Yalloura W                   | VIC   |           |               |              | 1450MW |    | 4     |         | Operational            |
| 1976           | Walicrawang C                | NSW   |           |               |              | 1000MW | 2  |       |         | Operational            |
| 1978           | Vales Point B                | א sw  |           |               |              | 1320MW | 2  |       |         | Operational            |
| 1979           | Tarong                       | QLD   |           |               |              | 1400MW |    | 4     |         | Operational            |
| 1981           | Callide B                    | QLD   |           |               | 700MW        |        | 2  |       | - 1     | Operadonal             |
| 1982           | Erariog                      | NSW   |           |               |              | 2640MW |    | 4     |         | Operational            |
| 1983           | Nonbern                      | SA    |           | 500MW         |              |        | 2  |       | ]       | Operational            |
| 1984           | Showell                      | 010   |           |               |              | 1400MW |    |       |         | Operational            |
| 1954           | Loy Yang A                   | VIC   |           |               |              | 2000MW |    | 4     | T       | Operational            |
| 1985           | Bayswater                    | NSW   |           |               |              | 2640MW |    | 4     |         | Operational            |
| 1992           | Mt Piper                     | NSW   |           |               |              | 1320MW | 2  |       |         | Operational            |

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 Table 2.1
 TYPE: Thermal/Sub-Type: Coal Fired (Continued)

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| Table 3.1.3 | Audit: Thermal Coal Fired Regional Network Stations |
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| NAME                    | STATE          | DATE OF                | NOTES                                                                                                     |
|-------------------------|----------------|------------------------|-----------------------------------------------------------------------------------------------------------|
|                         |                | CONSTRUCTION           |                                                                                                           |
| Thermal, Coal           | Fired, Station | ns Associated with the | Growth of Regional Networks -                                                                             |
| Mackay                  | QLD            | 1938                   | Decommissioned - all plant removed -<br>buildings remain.                                                 |
| Zarra Street<br>Phase 2 | NSW            | 1840-1946              | Decommissioned 1975 - demolished.                                                                         |
| Koolkhan A              | NSW            | 1941                   | Decommissioned 1980s - 3 x 6.5MW +<br>1 x 8.25MW turbines remain as does 7<br>boilers - buildings remain. |
| Cowra                   | NSW            | 1948                   | Decommissioned - demolished                                                                               |
| Lithgow                 | NSW            | 1948                   | Decommissioned 1969 - demolished                                                                          |
| Howard                  | QLD            | 1948                   | Decommissioned - $3 \times 7.5$ MW + $1 \times 15$ MW turbines remain as do 7 boilers - buildings remain. |

Table 3.1.4 Audit: Thermal Coal Fired Packet Stations

| NAME             | STATE        | DATE OF        | NOTES                                                     |
|------------------|--------------|----------------|-----------------------------------------------------------|
|                  |              | CONSTRUCTION   |                                                           |
| Thermal, Coal F  | ired, Packet | Power Stations | · · · · · · · · · · · · · · · · · · ·                     |
| Ballarat Phase 2 | VIC          | 1950s          | Decommissioned - all plant removed -<br>buildings remain. |
| Tennyson         | QLD          | 1950s          | Decommissioned - all plant removed -<br>buildings remain. |
| Geelong Phase 2  | VIC          | 1950s          | Decommissioned - all plant removed -<br>buildings remain. |
| Red Cliffs       | VIC          | 1950s          | Decommissioned - demolished.                              |
| Port Kembla B    | NSW          | 1952           | Decommissioned - demolished                               |
| Maitland         | NSW          | 1953           | Decommissioned 1975 - demolished                          |
| Liverpool        | NSW          | 1953           | Decommissioned - all plant removed -<br>buildings remain. |
| Penrith          | NSW          | 1953 - 1955    | Decommissioned - all plant removed -<br>buildings remain. |

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Table 5.6

| POWER STATIONS CRITERIA                                                                                                                                                                      | QUEENSLAND HERITAGE ACT 1992<br>CRITERIA                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Criterion 1: Significant in the evolving<br>pattern, of or for associations with, the<br>history of power generation in Australia<br>&/or exhibiting high diversity of cultural<br>features. | A. The place is important in demonstrating the evaluation or pattern of Queensland's history.                           |
| (Historic; Evolution and Associative [AHA<br>Criteria A, sub-set A3 & A4]).                                                                                                                  |                                                                                                                         |
| Criterion 2: Significant in possessing rare,<br>endangered or uncommon aspects of the<br>history of the development of power<br>generation.                                                  | B. The place demonstrates rare, uncommon or<br>endangered aspects of Queensland's cultural<br>heritage.                 |
| (Rarity; [AHA Criteria B, sub-set B2]).                                                                                                                                                      |                                                                                                                         |
| Criterion 3: Significant for their research<br>potential to yield information contributing<br>to an understanding of the development or<br>historic environment of power generation.         | C. The place has potential to yield information<br>that will contribute to an understanding of<br>Queensland's history. |
| (Technology, archaeology, architecture, [AHA<br>Criteria C, sub set C2])                                                                                                                     |                                                                                                                         |
| Criterion 4: Significant in demonstrating<br>the characteristics of a class of historic<br>items, or environments in the State or<br>nation.                                                 | D. The place is important in demonstrating the principal characteristics of a particular class of cultural places.      |
| (Representative [AHA Criteria D, sub set II, D2])                                                                                                                                            |                                                                                                                         |

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Table 5.6 (Continued)

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|                  | Criterion 5: Demonstrates aesthetic           | E. The place is important in exhibiting            |
|------------------|-----------------------------------------------|----------------------------------------------------|
| <u>ب</u>         | characteristics held in high esteem or        | particular aesthetic characteristics valued by the |
|                  | otherwise valued by a community or            | community or a particular cultural group.          |
|                  | cultural group.                               |                                                    |
| ,                | (Application volume (AUA Criteria D and and   | · · ·                                              |
|                  | (Acstiletic value, [ARA Citteria E, suo-set   |                                                    |
| <b>6 T</b>       |                                               |                                                    |
| <b>ن</b> ې کې کې | Criterion 6: Significant for technical        | E. The place is important in demonstrating a       |
|                  | excellence, innovation or achievement in the  | high degree of creative or technical               |
|                  | generation of electrical power.               | achievement at a nasticular period                 |
| -1<br>🚓          |                                               |                                                    |
|                  | (Outstanding creative &/or technical          |                                                    |
|                  | achievement, [AHA Criteria F, sub-set F1])    |                                                    |
| ~1<br>•          |                                               |                                                    |
|                  | Criterion 7: Demonstrably held in special     | G. The place has strong or special association     |
| -                | high regard by a broad section of the         | with a particular community or cultural group      |
| 3                | community of a cultural group.                | for social cultural or spiritual reasons.          |
| NPX64            | (Social cultural or spiritual reasons fatta   |                                                    |
|                  | criteria G sub-set G11)                       |                                                    |
| - 19<br>2        |                                               |                                                    |
| 4<br>4           | Criterion 8: Important for association with   | H. The place has a special association with the    |
| · •              | an individual important in the power          | life or work of a particular person, group or      |
|                  | neration industry or with some other          | organisation of importance in Queensland's         |
| °.<br>₽          | person or group, important to the life of the | history.                                           |
|                  | nation.                                       |                                                    |
|                  |                                               |                                                    |
| 2                | (Association with a new second                |                                                    |
| 1.               | Triteria H sub-set HIL)                       |                                                    |
|                  |                                               |                                                    |
| - 6.             |                                               |                                                    |

Criteria Context "A place may be entered in the Heritage Register if it is of cultural heritage significance and satisfies one or more of the following criteria...."

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## **APPENDIX B**

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## APPENDIX C

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TE 1 L- shaped Wharf, 18.3m long by 6.4m wide in head dimensions. View is looking upriver towards the screen chamber and pump houses



PLATE 2 View looking downriver from the screen chamber towards the Lshaped Wharf.

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PLATE 3 Approach Jetty Kerbs requiring replacement or maintenance.



PLATE 4

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View looking downriver showing temporary tubular fender piles and bollards

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## APPENDIX D

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## **TENNYSON 110/33kV ELECTRICITY**

## SUPPLY FACILITIES

## JOINT REPORT ON

## POSSIBLE REDEVELOPMENT OPTIONS

2

Supplied for the "Tennyson Power House Site Land Use Study" conducted by the Department of Natural Resources

POWERLINK QUEENSLAND SOUTH EAST QUEENSLAND ELECTRICITY BOARD

OCTOBER 1996





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### **TENNYSON 110/33kV ELECTRICITY**

#### SUPPLY FACILITIES

### JOINT REPORT ON

#### POSSIBLE REDEVELOPMENT OPTIONS

#### 1. LAND

All owned by, or in AUSTA Electric's name. The land is held as Freehold with part as a Deed of Grant in trust, granted by the Crown to AUSTA Electric for electricity purposes only.

Powerlink and SEQEB have no lease or legal right to the land.

#### POWERLINK QUEENSLAND EQUIPMENT -2.

- 1. Indoor 33kV switchgear and panels
- 2. 4 x 40MVA 33/110kV transformers plus tie cables
- 3. 110kV outdoor substation
- 4. 2 x 33kV outdoor capacitor banks
- 2 incoming 110kV underground cable routes, each with 2 circuits. 5.
- Communications, panels, DC supplies, emergency diesel & 415v 6. supply to the substations.

A recent audit on all plant concluded that another 10 years of life could be expected.

#### **SEQEB EQUIPMENT -**

- 1. All 33kV feeder cables
- 2 outgoing 110kV underground cable routes, one of which is 2 2. circuits.
- 3. Communications and 11kV AC supply

### AUSTA ELECTRIC EQUIPMENT -

- 1. Land, Buildings and river structures 2.
  - All 3.3kV and 415V supply in the station
- 3..... Water, sewerage, roads, boundary fences etc.

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# IMPORTANCE OF TENNYSON BULK SUPPLY

T3 Tennyson is one of Powerlink's major 33kV bulk supply substations to the Brisbane area. The 110/33kV injection point into SEQEB's extensive 33kV network, also provides duplicated 110kV supply to Queensland Railways at Corinda, and 110kV supply into the Central CBD via West End.

| No. of feeders by Store |   |                                         |
|-------------------------|---|-----------------------------------------|
| Maximum load            | - | 14 at 33kV, 3 at 110kV                  |
| Energy 96/97            | - | 140MVA                                  |
|                         | - | 816 GWh (5% of total SEQEB)             |
|                         |   | . – – – – – – – – – – – – – – – – – – – |

Suburbs supplied are shown on the attached map, and comprises established suburbs south and west of Brisbane. It ranks in size with Bulimba and Victoria Park in the top three bulk supply 110/33kV substations on the SEQEB system.

### FUTURE PLANS

 Previous joint Planning studies for this area concluded that Tennyson would always remain a major 110/33kV bulk supply site due to the geography of the load supplied and the extensive 33kv supply network. A present review confirms that this is still applicable.

- Based on the recent plant and equipment audits, there is no need to replace existing plant within the next 10 years. Because AUSTA Electric will be demanning the site, adequate security arrangements will have to be made to protect the assets of all organisations, as AUSTA Electric owns the building and site.
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- The community land use study now being conducted by Department of Natural Resources will identify potential uses to which the site can be used, most of them including retention of the building.
- 4. In the event of Powerlink and SEQEB having to move their assets from within the building or away from the riverbank to allow other uses for the site, the following preliminary cost estimates have been prepared:-
- Relocate to a site adjacent to Riverbank (Site 1 - Old Package Plant) with minimum cable relocation
- As above but removing 33kV cables from riverbank in front of station

INDUSTRY COST

\$18.0M

\$16.0M

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#### **SUMMARY**

- There is no technical or economic requirement at present for Powerlink or SEQEB to relocate their transmission and distribution facilities from the existing location. SEQEB intends that all 110kV and 33kV cables are to remain in service. There are no plans to replace or remove from service any of these cables over the next ten years. The final scope of works associated with redevelopment at Tennyson will be subject to future review, and Powerlink and SEQEB Board approval.
- Because there will always be a need for 110kV and 33kV facilities on or close to the Tennyson site, the Electricity Industry will require tenure of title for a portion of the land where the substation and road access is located and easements for the cables.
- The cost of replacing/relocating Powerlink and SEQEB facilities on the Tennyson P.S. site lies between about \$16M and \$20M depending upon the location selected

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Powerlink Queensland



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# APPENDIX E

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# **APPENDIX F**

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Photographs 1 & 2: General views of the cattle dip.

| ANIMAL RESEA                 | RCH INSTITUTE  |  |  |
|------------------------------|----------------|--|--|
| FAIRFIELD ROAD, YEERONGPILLY |                |  |  |
| Project No. 21595            | September 1996 |  |  |



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Photograph 3: Dumping in gully area.



Photograph 4: View towards Tennyson Power Station.

| ANIMAL RESEARCH INSTITUTE    |   |                |  |  |
|------------------------------|---|----------------|--|--|
| FAIRFIELD ROAD, YEERONGPILLY |   |                |  |  |
| Project No. 21595            | : | September 1996 |  |  |



|         | ANIMAL RESEARCH    | INSTITUTE      |
|---------|--------------------|----------------|
| <u></u> | FAIRFIELD ROAD, YE | ERONGPILLY     |
|         | Project No. 21595  | September 1990 |
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# APPENDIX G

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Map 3 Stephens District Natural Area Management Strategy

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Map 4 Major initiatives: Stephens District Parkland Management Strategy

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Map 30 The Tennyson Power Station ----

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## **APPENDIX H**

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## TENNYSON POWER HOUSE SITE PLANNING AND LAND USE STUDY

## STEERING COMMITTEE MEMBERSHIP

Steering Committee membership for the Tennyson Power House Site Planning and Land Use Study is as follows:

- Department of Architecture, University of Queensland
- Centre Coordinator, Animal Research Institute
  - Property Services Manager, AUSTA Electric
    - Power Station Disposals Superintendent, AUSTA Electric
- Planner, Strategic Planning Branch, Department of Development and Planning, Brisbane City Council
- Environmental Planner, Town Planning Branch, Brisbane City Council (part membership\*)
  - Principal Officer, Parks and Gardens Branch, Brisbane City Council
- Masson, Social Planner, Brisbane South Region, Department of Families, routh and Community Care
- Planning Officer, SEQ Planning Division, Department of Local Government and Planning
  - Manager, Department of Natural Resources

Senior Valuer, Department of Natural Resources

Industries Executive Officer, Research Resources, Department of Primary

Senior Engineer, Transmission Coordination, Powerlink Queensland

Conveyancing Officer, Powerlink Queensland

Manager, Property Acquisition and administration, SEQEB.

- Community Advisory Group Representative (part membership\*).
- replaced from the Strategic Planning Branch of the Department of Development and Planning. joined the Steering Committee shortly after the CAG was formed in October.

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# **APPENDIX I**

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# **TELEPHONE HOTLINE FINDINGS**

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COLUMN TO

# TENNYSON POWER HOUSE SITE LAND USE PLANNING STUDY

# TELEPHONE HOTLINE COMMENTS - SUMMARY

# (From the period between August and December 1996)

The local community was first informed of the telephone hotline for the Tennyson Power House Site Land Use Planning Study at the inception of the community consultation process when media releases together with public notices were published within the Southern News and South West News.

This section provides a summary of the comments that have been made by the local community throughout the duration of the study. Approximately 60 inquiries have been made to the hotline to date.

All comments made have been recorded and are summarised below together with the number of respondents - provided alongside each comment.

• No comment: 26 respondents

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- Suggestion of an open space link: 19
- Suggest access to the river: 15
- Pedestrian and cycle linkages along river/near site are important: 5
- Part of the power house site should be nominated open space: 7
- Must consider traffic impact: 5
- High density residential development is not a good idea: 4
- Mixed use development is inappropriate: 2
- Low density residential development is appropriate: 2
- Not just town housing development: 2
- The power house site has significance prominence: 2
- New options should make the site available to the public: 1
- Medium density residential use is recommended: 1
- The power house building should be kept: 10
- The power house building should not remain: 7

حدروبه **TENNYSON POWERHOUSE STUDY** いっかい Community Design Workshops: Key Findings Prepared by for Connell Wagner Architect COMP. 财力 WWWWAT VANNA 题日 調調 G 1.10.0 111111 1111

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# Tennyson Powerhouse Study Community Design Workshops: Key Findings

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# Contents

## Introduction

1. Key Issues and Concerns

2. Key Land Uses

3. Design Principle

Appendices:

(i) Transcripts and Notes from Community Design Workshops

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(ii) Maps Produced During Workshops

## Tennyson Powerhouse Community Design Workshops: Key Findings

## Introduction

The aims of the community design workshops for the Tennyson Powerhouse were to work with representatives of the local community to identify key issues and concerns, and to gain input on appropriate land uses and design principles for the redevelopment of the site.

The Community Design Workshops were held on Saturday September 21, 1996 from 8.30am till 1pm, and Tuesday September 24, 1996 from 5.30pm till 9pm. The two different time slots were organised to give participants a choice of times to attend. The workshops were held at the Animal Research Institute Conference Room, Yeerongpilly. Forty people attended over the two workshops, representing a cross section of interests including local business people, and residents. Local State and Council representatives also attended.

Both the workshops followed an identical format. The workshops began with a presentation to the Tennyson Powerhouse Project from lead consultants Connell Wagner comprising a slide show of the site and a description of initial study findings on issues such as heritage, drainage services, and possible re-uses for the Powerhouse building. Participants were introduced to the workshop activities and were then organised into small groups which were facilitated by designers from Connell Wagner, Cox Rayner, and

Fewer participants attended than was expected but the workshops ran well and invaluable information and ideas were recorded.

## 1. Key Issues and Concerns

During the first workshop activity, groups were asked to list key issues and concerns in relation to the future development of the site, and then to prioritise these issues. Highly-rated issues and concerns included:

## 1.1 TRAFFIC

- A concern about the prospect of increasing levels of local traffic generated by the future redevelopment of the site.
- A perception that the site redevelopment should be accompanied by solutions to existing traffic problems on Tennyson Memorial Ave in relation to flow, volume, speed, and noise of traffic.
- A desire to see a dangerous bend in the road adjacent to the entry to the Powerhouse site rectified.
- A desire to see a traffic study which takes into account local and through traffic, including to industrial areas, prior to the redevelopment of the site.

## 1.2 RIVER'S EDGE

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- A desire to see usage of the river's edge developed with boats, ramps, parks, and ferry stops.
- A desire to accompany access to and usage of the rivers edge with significant public open space.
- A concern about the impact of development on the river environment particularly in relation to the erosion of the river bank, and the prospect of mangrove removal.

## **1.3 PUBLIC TRANSPORT**

 Site has public transport infrastructure nearby, but currently there is inadequate service to the site - needs improvement. Site redevelopment should explore potential for use of train, bus, bikeways, walkways, river (including extending high speed ferry service to the site). ( <sup>1</sup> J

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## 1.4 POWERHOUSE BUILDING

- Desire to see Powerhouse building recycled and used as a facility with public access although some difference in viewpoint expressed here, with some participants preferring to see the building demolished.
- Visual dominance of building on site commented on, and a desire to see some elements of a more human scale introduced to the site.

## **1.5 SITE CONTAMINATION**

- Queries about asbestos in the building and its removal.
- Concern about the substation noise, and radiation, should it be relocated?
- Is there contaminated fill on site?

## 1.6 DRAINAGE AND FLOODING

- Concern about poor drainage on site and desire to see new development take account of this.
- Queries and concerns about the levels of flooding on the site.

## 1.7 OPEN SPACE

- Desire to see consolidation enhancement of existing open space on the site.
- Desire to see public parkland linking to existing green zones, extend existing rainforest.

## 1.8 FUTURE LAND USES

- Desire to see a mix of uses on the site.
- Preference for commercial/industrial/offices to be avoided in future development.
- Desire to see development strongly based on thorough assessment of community needs.
- Desire to see future development based on a visions that has value not only to the local area, but to the whole city, and future generations.

## **1.9 ACCESS TO/AROUND THE SITE**

- Access to the site is poor at present and needs improving.
- Need to examine a number of new entrance points to the site(s) to alleviate traffic congestion.
- A desire to see a bikeway connecting to other bikeways in the area, and the development of bikeways around the site.

## 1.10 HERITAGE/HISTORY

Design should be sympathetic/in context with the history and the heritage of the site.

## **1.11 CHARACTER**

- Development to compliment and be of appropriate character with surroundings.
- Desire to see low density and leafy surroundings in new development.
- Monumental character of Powerhouse building should be recognised and developed.

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## 1.12 COST

- Development needs to be economically sustainable and viable.
- Concern about cost of upgrading building for re-use and relocation of cables.

## Other Issues

- Consider proximity to high quality housing in new development.
- Consider views and vistas in new development.
- Encourage and increase the amount of flora and fauna.

## Key Land Uses

After considering key issues, participants were then asked to 'brainstorm' what they considered to be appropriate uses both for the Powerhouse building and the whole site. Land uses which were most commonly suggested included:

#### Broad Mixed Use - non residential 2.1

With no residential component, but including recreational, cultural, and some commercial around the site.

## 2.2 Mixed Use - including residential

Cultural/public uses in Powerhouse buildings, some commercial with ARI site containing residential, including a retirement village.

## 2.3 Arts/Cultural Centre

Focused on the Powerhouse building.

#### 2.4 Education

Focused on the Powerhouse building.

## 2.5 Broad Public and Community Uses

Including education, sport, cultural, open space.

#### $2.6^{-}$ Science and Technology Centre

With a museum in the Powerhouse building, and outdoor displays, and student village.

Other Uses suggested during discussions included:

- Sporting Complex.
- Employment Centre.
- Community oriented development.
- New industry providing employment opportunities.
- Retail and commercial shops, cafe, convenience stores, pub, coffee shops, retail shops.
- Informal education not institutional.
- Film and television studio space.
- "New Farm Park" development park area.
- Retirement village or housing.
- Demonstration/Market Garden produce stall.

Tennyson Powerhouse Study, Community Design Workshops

- Mix of different priced accommodation.
- Accommodation to suit a range of ages and needs.
- Have a sustainable residential area low power usage alternative technology, waste reduction, energy saving, solar panels on roof.

### **Design Principles** 3.

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In the second half of the workshop, groups were asked to re-form around land use options they were interested in developing with the facilitators. They were then asked to 'flesh out' the land use options with their facilitators, consider how these might be accommodated on the site, and what design principles should be employed in accommodating these uses on the site. The

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groups mapped and sketched the land use options on the site, and these maps are included in the appendix of this report. Key design principles which arose from these mapping exercises included:

#### 3.1 **Rivers** Edge

Develop public open recreation space along the river front with bikeways and pedestrian paths.

### 3.2 Scale and Character

- Work uses on the rest of the site around the Powerhouse to compliment the scale of development in the surrounding area.
- Develop a grand axis through the site which deals with the scale of the Powerhouse building.

### 3.3 Transport and Access

- Develop new transport systems in relation to site development which link up to existing transport systems.
- Carparking to be located underneath the Powerhouse.
- Develop access from river to the site by Ferry.
- Bring a new train stop to the site.

#### April ...... 3.4 Building Height

- Keep new buildings to a height limit of 2-3 stories.
- Restrict height of new buildings to below height of Powerhouse.

#### 3.5 Site Planning

- Optimise views and breezes on the site.
- Develop a buffer zone on the site between new development and existing residential areas.
- Protect existing significant vegetation on the site.
- Establish re-vegetation of the environment.
- Rest areas to be dispersed through-out the site,
- Keep the site accessible to the community.
- Capitalise on opportunities for water-related recreation.
- Develop areas of publicly accessible park and open space on the site.
- Re-use the flood prone area with drainage problems as a wetlands park.

#### 3.6 Powerhouse

Maintain a 'great space' in re-use of Powerhouse.

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# Appendices:

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(i) Transcripts and Notes from the Community Design Workshops

(ii) Maps Produced During Workshops

## WORKSHOP OUTCOMES

for the

- **TENNYSON POWERHOUSE STUDY**
- Animal Research Institute Conference Room, Saturday September 21

### **GROUP** 1

| Facilita     | tor      |  |
|--------------|----------|--|
| <u>Group</u> | members: |  |
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### Key Issues:

- (H/M) Traffic build up noise, increase of traffic, speed of traffic.
- (H) Softstone/Dexter Street corner- steep, sharp, visibility.
- (H/M) Public transport does not connect up to other transport, frequency of trains a problem, more variety i.e. ferry, park and ride connection.
- (H) Health issues transformer, radiation problem, noise from the generator, distance of the generator from development - health risks.
- (H)River front public access not road or cars.
- (H) Economically viable options consideration.
- (L/M) Powerhouse to stay used.
- (M) Roof recreation area, parkland area, interesting architecturally, restaurants.
- (L/M) Poor drainage area wetland area.
- (H/M/L) Rest of the site as parkland.
- (M) Mixed use mixed residential/cheap and expensive.
- Access onto the site not enough at present and it is in difficult position is on corner that is dangerous.
- (H) Landuse preservation of residential areas.
- History in the area should be considered be sympathetic and in context.
- Like to see no commercial. .
- . (L/H) Educational centre on site - Powerhouse, Aquatic Studies interest, still want public access, consolidate what is already there, communication/access to Uni. (Low priority because too restrictive, funding).
- Don't want site heavily commercialised.
- (H) Construction concern if noise after hours quiet at night.
- Corner of Dextor Street increase of public to site therefore want other options for transport.
- (H) Volume of traffic along Tennyson memorial not coping.
- (M) Preserve building study to see how important, don't want to knock down old building, subject to further consideration, like to see stay with public use.
- ٠ Inside to be modified, outside to stay the same.
- (H) No industrial/offices design or use needs to complement existing housing.

### Future Uses:

- Educational facility(Tertiary) and residential development aquatic studies and research.
- Retirement style living with a child minding facility linked.
- Mixed residential, people's need old, young, students, mixture of price for accommodation.
- Museum/public space public access.
- Combination Education (Learning centre), mixture of living, public area, cultural aspect, recreational of wetland - wildlife corridor.

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appendix |

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## <u>GROUP</u> 3

### Facilitator Group members:

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## Kev Issues:

- (L) Open space along river.
- (L) Bikeway as part of open space connecting to bikeway to city/Southbank.
- (L) Access problems to site/transport.
- (M) Building fabric high cost of up-grading building for new use, non-structural features such as re-glazing.
- (M)Structural beams cost of rearranging beams, heritage value of beams.
- Dominance of Powerhouse building on the site small area of site remains, needs ARI site to provide land to do a worthwhile redevelopment.
- Constraint of continuing the use of the site for Power distribution cost of relocation of cables.
- Cables on site is it cost effective to relocate cables?
- Location is good, transport good from river, road (access poor currently, rail, ferry access from river).
- Ground conditions unknown smaller depth to rock on river but what are foundation conditions like near rail line.
- What are community needs in the area? limited arts/theatre facilities but what is demand in the area, competition with Southbank, open space, rail heritage, aircraft heritage, engineering heritage.
- What uses are not acceptable? markets, shopping centre, high traffic generation uses, heavy industry.
- Proximity of land to golf course.
- Retention of building not a problem.
- Site is of value to city of Brisbane not only locally.
- Financial return on the development.

## Future Uses:

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- Rail heritage, aircraft heritage, engineering heritage (Museums) collection of uses.
- Sustainable residential area low power usage alternative technology, waste reduction, energy saving - demonstration project, retain building, solar panels on roof.
- Residential use of the Powerhouse building Atrium stage internally but taking advantage
- Incorporate open space into planning of site.
- Uses not favoured see key issues.
- College of Art?
- UQ campus extension, engineering faculty.

## <u>GROUP</u> 3

## Facilitator:

## Key Issues:

- A public facility (Tennyson) that has a future viability/public uses.
- It's central to area and to Brisbane scale of building, location, tourism, ferry stop.
- "Human scale' commercial opportunities needs e.g. coffee shops, markets, shops.
- Riverscape!!
- A major concept/tenant for building (Powerhouse).
- Traffic transport rail, water, bicycle, vehicle (cars), buses, ferry.
- Public access to river front!!
- ARI site is 'susceptible' to irresponsible development more than Tennyson site sizes,

The broad public value of the site - to city, to future generations. Mix of uses for site(s) - social/economic, uses. Youth facilities - lacking, integration with other uses. Costs (who pays)/benefits - public/private mix, staging. Cost of power upgrade a HEC cost (must be done anyway). Local - social economic impacts. Environmental - noise, air. Archeological issues over? historical issues of use - cultural centre. "Green" issues - river rata - dredging, site impacts on river (silt/hydrology), no sensitive area on site, EIS required. Character - Steven's area plan, DCP. Future Uses: Nothing. Mixed - low residential (No), medium residential (Yes), High residential (No), commercial (shops, offices), recreational (Future types). Demolish Powerhouse. Another Southbank. College of Art/TAFE (education) related to a cultural centre (needed in Brisbane). High Tech (communications) public and private (corporate) centre (a high tech park). **GROUP** 4 Facilitator: Group members: Key Issues: 1. Redevelopment of Powerhouse site only. 2. Access to and from site including DPI property. 3. (H) Traffic - different flows, access, routes, industrial verses residential traffic, volume. 4. (H) Should the building be kept? - conflicting views, residential verses community activities. 5. Yes to keeping the Powerhouse: economics - good idea to recycle it. Potential for re-use : ] should be used. - not more industrial. - room for more research. 6. No demolition: visual eyesore - blot. 7. (H) River access - wharf? 8. (H) River access - could it be road or pedestrian? - bike track. 9. (H) Open space on the river front - key need - PUBLIC ACCESS. 10. (L) Not million dollar names on the river front. 11. (M) Question about heritage value. 12. (M) Residential road on the front and commercial at the back. Future Uses: Public river access high priority - public. 1. Arts centres/Multi-use. 2. Multi-use sports centre - water, coffee, shops along a promenade. 3. Film and TV studio space, open space - parks, bikeways and boat ramps. 4. Green street development, open space, cultural, road, bike. agree not to put river in private hands. 5. Leave ARI as is, develop power station site, open space along river front. Tennyson Powerbouse Study Community Design Workshops Caroline Statker Architect appendix 3 1

## VISIONS

### GROUP 1. - NON-RESIDENTIAL MIX Facilitator:

## Visions:

- Images and examples West End, Darling Harbour, Southbank.
- Identify the Powerhouse word a place to go, outlook to river, high tech theme. Not shopping centre - not Coles/Myer regional. Small shops - small retail, Bakery, Pie shops, Vine back, Coffee shops.
- Restaurant in the Powerhouse.
- No large traffic generation into area.
- Parkland esp. on the river open space.
- Public transport via river.
- Arts centre.
- Community centre.
- Recreation centre high tech, virtual reality.
- Office/studios but with qualifications, optional use (patterns), complementary to others facilities, character/size limit (e.g. decentralise).
- Boating/river use canoe club, sailing club, water sports on ARI site.
- Outdoor sport facilities Basket Ball, Skating, Indoor Cricket/soccer.
- High tech facilities commercial (business), recreational.
- Rainforest develop "natural" environment.
- Public transport upgrade but conflict of use and availability.
- Light rail/monorail link to existing facilities (transport).
- Pedestrian link to public transport facilities.
- Cycling, archery, beach volley ball, super 8 cricket arena.
- Bikeway/walkway from Tennyson, Yeronga, Duttonpark etc., via river to Southbank.

## Design Principles:

- Keep existing building.
- Height scale to relocate an
- existing building, a "frame" to match existing scale but open. (Scale needs to complement)
- Low scale between/around.

## Mapping:

- One grand axis/boulevard links the site together passes through the Powerhouse.
- Boulevard to have frame like system to keep in context with the scale of the Powerhouse.
- Different residential are located are where the ARI is located.
- A sports field dominates the middle of the site.
- Powerhouse to house facilities such as Art Galleries, restaurants, education, theatre etc.
- A transport link loops around the entire site.
- Develop river front and provide a ferry system.

## GROUP 2. - ARTS/CULTURAL

Facilitator: Group members.

### Visions:

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- Museum in Powerhouse (Technological museum that is interactive) charge an admission
- Aboriginal imput centre.

Tennyson Powerhouse Study Community Design Workshops

Caroline Stalker Architect

appendix 4
- Brisbane College of Art visual Art displays, concerts.
- One main tenant.
- Multi-Use Centre Aquatic centre, skate boarding area, Basket Ball courts, Youth/community Arts facilities, Art/Printmaking space, Photography studio.
- Centre for isolated children.
- Need some money making areas.
- Defined truck route.
- Roads to connect to Rocklea Curzon Street.
- Three main uses: 1. Multi-use, 2. Museum, 3. Sporting.

## Mapping:

Multi-use Sporting Complex -

- Powerhouse Aquatic centre on one side with mezzanine levels in the middle section (Rockclimbing on the sides with courts in layers along the sides).
- Improved access and transport to and around the site.
- Powerhouse in plan 3 sections, Queensland Art Gallery, Sporting facilities, and aquatic centre with an ice rink above it.
- Open area the Powerhouse to be landscaped with band rotunda and other low key facilities.
- Generator to be relocated near the train line.
- Multi-use Complex -
- Powerhouse to be divided into two halves in plan and section 1. theatre uses, photography, craft, printing, art studios, film, TV, 2. Residential, penthouses, hotel, resort, roof garden.
- Powerhouse to retain atrium to maintain space and feeling.
- Underground parking under the Powerhouse.
- River front to be developed ramps for boating, fast cat ferry service, mooring of boats.
- Open space around Powerhouse to be landscaped with an amphitheatre/band rotunda.
- Generator to be relocated to near train line.

Museum (Dominant use) -

- Powerhouse to be Museum with carparking underneath, and road access from both sides, and partly underground.
- Upgrading of the railway station.
- Open space landscaped picnic area.
- River front to be developed fast cat ferry access, boardwalk raised with cafes and restaurants.
- Railway museum next to train tracks.
- Lights at intersection that is presently dangerous.
- Maintain public access along the river front.

## GROUP 3. - RESIDENTIAL MIX

Facilitator Group members:

## Visions:

Retirement Village -

- Distance from city/character.
- Public transport/bus.
- Traffic problem not as great.
- Access not as important.
- Riverside still, park, bikeway, parkland, facilities along.
- Health care centre/medical facilities with dentist, chemist, hub with village. .

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- Different stages cater for different age levels.
- Over 60's.
- Greenstreet Idea -
- 2-3 levels maximum

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appendix 5

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- Greenspace.
- Strip between development/riverfront.
- Views important/breeze.
- Buffer zone mandatory, landscaping, to combat noise.
- Access to bus/grades.
- Ferry.
- Corrinda line special access stop/provided stopping point.
- Secondary access point either under railway or along river.
- Remove Powerhouse.
- Re-use existing materials, bricks, fill, same trucking.
- New ferry facilities access rakes/upgrade.
- River access.
- Botanical gardens feel.
- Fishing.
- Older people kites/activities/walk dogs, BBQ.
- Parking/sensitive landscaping.
- Trees for public areas.
- Breaking down the momentum of traffic.
- Tower/view sailing on Oxley (idea) facilities on river.
- Trees buffer /sound buffer mandatory, no board barriers.
- Minimum standard of houses \$150 300,00, quality of lifestyle (Selected range).
- Cinema complex associated with development.
- Community hall/facility/hire the facility out.
- Contrast greenstreet, old v's new.
- Low cost housing areas/incomes lower.
- Cluster housing/community facilities/(Near golf club) Victoria Park.
- Community oriented development.
- Interest groups (with facilities to serve).
- Allowing low income groups to develop communities near the city.
- Department of Housing (not likely to be private developers).
- VPO (vegetation protection order) on site.
- Continue walkway through the site.

## Mapping:

Retirement Development -

- Powerhouse to become accommodation for retirement development, chapel, doctors, dentists, hair dressers, small shops, newsagents.
- Addition of Sports facilities i.e. lawn bowls, tennis.
- Opening up of the river walking track, ferry terminal, buffer zone, wildlife sanctuary. Access through the middle of the site.

Greenstreet housing -

- Development of the powerhouse into residential.
- River front developed cafes, stress free zone, ferry stop, environmental walk, access
- Buffer zone between Powerhouse and railway tracks.
- New train stop ...

# GROUP 4. - EDUCATION

## Facilitator:

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#### Visions:

- Elements of science -
- Film and television school with associated film making facilities.
- TAFE college, faculties of environmental studies, water quality (Yeronga) engineering
- Associated accommodation, cheap accommodation for students.
- College of Art needs space associated with art display.

• Live theatre associated with complex.

• River front open space, alleyway, public access, and water based sports clubs (Boat sheds) Design Principles - \*\* 7

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appendix 7

- Education uses in building (Retention of Tennyson Powerhouse).
- Traffic realignment of Memorial Avenue/Foresmoke Drive.
- Water feature in area with poor drainage.
- Lower height to south of Powerhouse in future education area.

#### Mapping:

- Powerhouse to be developed into an education centre, with a future education development to be located between the Powerhouse and the railway line.
- Wetland and lake area to be position in area that has poor drainage at present.
- Relocate train station.
- ARI at a later date to possibly become education facility or development to complement existing.

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Caroline Stalker Architect

Tennyson Powerhouse Study: Community Design Workshops

# WORKSHOP OUTCOMES

for the

# **TENNYSON POWERHOUSE STUDY**

Animal Research Institute Conference Room, Tuesday September 24

## KEY ISSUES

## GROUP 1.

Facilitator: Group members:

## Key Issues:

- Asbestos removal?
- Impact in negative way on residents.
- Volume King Arthur/Memorial Ave, want change.
- Access to site landuse of site for roads.
- Access to connection to Fairfield Rd.
- One-way traffic.
- Means of slowing down. claming lights and roundabout.
- Rat-running.
- Close residents have big imput.
- Village type atmosphere exists. wants to keep this community value.
- Flooding very important.
- Flood constraints that already exist.
- Powerhouse on fill?
- Contamination on ARI site/Powerhouse.
- Erosion of the riverbank.
- Powerhouse no higher that it is, outside facade retained as it is without alteration or addition, new buildings compliment Powerhouse.
- Concern for existing Flora and Fauna wildlife corridor.
- Mangrove removal for development will bank erode away.
- Amount of green area comply with recreation size.
- Preserve flora and fauna that we have.
- Tree planting to encourage more animals.
- ARI had started up rainforest planting should extend and link up.
- Access to river boat ramps, park public access, ferry.
- Not so much vehicular traffic more bikeways, link to bridge.
- Overpass(Softstone Street) heavy traffic and speeding.
- Relocation of main transport routes for heavy vehicular traffic.
- Tenant of Powerhouse to economically sustain itself.
- Roads to service suburb of 800 impact of the traffic has increased.

## Future Uses:

- Like bulk to be open space.
- Inside powerhouse to be no residential.
- Activities not to create more people.
- Sporting complex.
- Drop in ctrs.
- Community centre mothers, old people, range of groups of people.
- No offices/residential too much traffic.

- Educational learning etr. different types, needs, multi-use with environmental focus, informal education, costs are minimum.
- Cultural space musical college, museum, theatre space storage, art gallery.
- Film and TV studio production space.
- Mix commercial help pay for itself recreational.
- All developments to compliment each other.
- Greenspace along the river.
- Around Powerhouse open space for kicking balls i.e. "New Farm Park" development.
- No hotel accommodation.
- Community educational casual not institution, Sporting not organised fields, cultural space for art theatre and music, open space with rainforest, no exotics.
- No residential/offices high traffic generating area.

## GROUP 2.

Facilitator: Group members:

## Key Issues:

- Traffic corners are dangerous, access into site, design to respond to this level.(H)
- Open space access to open space.(H)
- Character to existing no manufacturing, low density, leafy. (L)
- Character to surrounding must be appropriate to character of surrounds, low density, character today.(H)
- Site as whole planned long term for both. (H)
- Public transport/animal research rail and bus. (H)
- Access potential other than road bicycle and walkways. (H)

### Future Uses:

- Education and low density public access v. important.
- Recreation along the water front.
- Rowing boating.
- Parklands need young character.
- Mangroves along river to be maintained.
- Older generation meeting places.
- Education and sporting.
- Not all open areas and space.
- Complimentary uses.
- Residential studio, not six packs.
- Use by existing educational "special school".
- Powerhouse residential, Newstead.
- Sporting for local institution and public.
- Sewerage upgrading.
- Should remove Powerhouse if it is possible arts and craft use, theatre..
- Economic study.
- Master plan for the whole site.
- ARI site retain character of the buildings, development to start there.
- River access and rail access potential to utilise.
- The River retail, commercial, shops, cafe, convenience, hot bread, butcher, pub, Coffee shops.
- Residential small part, major role open space, with dining, light retail and convenience stores, mangroves, community uses.
- Residential low density, contextual, Powerhouse use residential, loft style accommodation.
- Powerhouse end is less development; ARI end should have the majority of development.

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Mixed use site with emphasis on residential and open space - access to river with community based precincts of retail and commercial.

## GROUP 3.

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| Group    | mem  | bers: | • |
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|          |      |       |   |

## Kev Issues:

- Substation relocation \$.
- Public access to river.
- Problems with rail displace Memorial Dr., widening road.
- Environment buffer zone between residential and industry, Traffic of the animals?, links with green zones, fauna link, re Marooka DP.

Traffic -

- Car truck, re-access to the site, control speed limits around the site, traffic industrial and traffic - residential.
- Reinstate as a "Memorial Ave".
- Bike ways/pedestrian.
- Traffic access all types.

## Character -

- Surrounding green treed environment, demonstration garden, educational facility, market
- Hayslope homestead reproduced which creates a theme and a basis. Power -
- Educational facility.
- Arts.
- Retaining the Powerhouse education links with the surrounding colleges etc., implication surrounding the site.

## Future Uses:

- Education and public access.
- Community area playing ground, parkland, skateboard, bikeways, BBQ, arts, services, art galleries, sports oriented.
- Need for land-use that provide a return local historic museum, conference facilities.
- Residential and parkland community based development.
- Retirement living.
- Powerhouse high profile educational facility, sophisticated performing area.

## GROUP 4.

Facilitator:

## Key Issues:

- Small site if considered in isolation too constrained.
- Prox. to high quality housing.
- upgrading nearby industrial area.
- Views and vistas important from unit blocks retention of building limits opportunity for opening up views and vistas.
- Did heritage assessment constraints it places on the redevelopment of the site?
- Access to the river is important, need to maintain public space along the river, design to provide access to river ...
  - Potential for development node at this location.

- Scarce site opportunity to do something imaginative not standard residential areas.
- Transport alignment of memorial drive future of the road.
- Size of site creates opportunity not often this happens.
- What happens to the road and rail in the long term will have impact on future redevelopment.
- What is Brisbane lacking? Provide something that we don't have.
- Road access from Fairfield Rd from where?

## Future Uses:

- Relocated Science Centre (Powerhouse Museum) for the site. Associated at the rear of the rear of the site. Destination of boat operators. Retail/commercial component.
- Strong cultural theme.
- Botanical museum as part of site development what were the original species of Brisbane?
- Facilities for unemployed employment centre.
- Does the site need to maximise return in \$ what about heritage/open space value as it is. Retain open/semi-rural ambiance.
- Mixed use not only one use.
- New industry providing employment opportunities.

## GROUP 5.

#### Facilitator:

## Key Issues:

- River access.
- Maintain and enhance open space provision for recreational purposes i.e. boating, fishing, teaching H2O sports, boat handling.
- River utilisation as a public transport route i.e. ferry.
- Improve public transport to the areas.
- Extend high speed ferry service.

Public transport/traffic -

- Road hierarchy (current) causes traffic problems: traffic study necessarily urgent.
- Re-route traffic out of sensitive areas to more appropriate routes.
- New development to examine a number of entry points to the site to alleviate congestion.

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- Heavy traffic in/out of Moolabin yards to be re-routed.
- Traffic study on local and through traffic (and industrial vehicles).
- The above should access road and rail in the area.

## Future Uses:

- Retail uses not viable.
- Sporting and recreation.
- Cultural and performing.
- Educational facility.
- Technical museum facility.

## VISIONS

## GROUP 1. - Mixed Uses - Residential and Commercial

Facilitator: Group members:

Caroline Stalker Architect

appendix 11

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## Visions:

- Commercial including restaurants, demonstration garden, community garden area for the young and old that turn into produce selling markets. No shopping centre development type to be included.
- No heavy commercial in the short term.
- Possible low profile connection to the Brisbane markets.
- ARI residential, Powerhouse recreational.
- Powerhouse restaurant on the top, theatre in the middle, specialty shops, parking on the lower floor.
- Public transport ferry, paddle steamer, railway line, buses, bikeways, walkways.
- Residential Use existing, some new accommodation that is suitable, zoning and building restrictions, pocket parks, mix of accommodation types i.e. single detached, duplex, townhouses, units, accommodation for students, retirement housing.
- Restrictions Building height limit 2 stories, zoning limit the type and the number.
- Open space green area that acts as a buffer zone between the residential and commercial, reconstruction of Hayslope house to it's original state and develop into a restaurant.

# GROUP 2. - Public and Community Use - Education, Sport, Cultural

## Facilitator:

Group members:

## Visions:

- Education Safety on water, water sports, rescue underwater, history of river boat cruise, boat trips, teaching boat handling, fishing, boat repair, rowing sheds(women), sailing, canoe, care for mangroves, history of Brisbane and Australia, work training, no university,
- history of river transport, Information for services, resource info/help, voluntary work ... Centre - boat ramps etc., so public is not locked out.
- Sport Powerhouse to become a pool, temporary accommodation, Basket ball courts, Gymnasium, spa, sauna, tennis courts.
- Cultural history of transport, re-vegetation/environmental, literature society published and unpublished, dance youth, theatre youth arts, public music not conservatorium, painting - modern artists workshops, local artists, based on randal concept, film and media.
- Water Institute. Uses on the site:
- Powerhouse to go.
  - 2 options 1. site with the ARI, 2. site without using the ARI.

# GROUP 3. - Public and Community Use - Education, Sport, Cultural

## Facilitator:

Group members

## Visions:

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- Facility for different groups.
- Community environment groups traffic facilities Memorial Drive, industrial traffic.
- Accessible to the community.
- Environmental educational centre research groups, back-up facilities, cafes, food from the
- environment, tourist access ferry, nursery demonstration. Local and cultural heritage.

## **GROUP 4.** - Science Centre Concept

## Facilitator:

#### Visions:

- Museum of technology aircraft, display and history of steam, industrial heritage, inventions. Relocation of Science Centre from George Street.
- Not another Powerhouse unique in Australia.
- Access from river to the site by ferry boat.
- Rail heritage as part of Ipswich Museum.
- Botanic museum, in grounds representing species within Brisbane, associated with rainforest. Replicate site species of southern bank species. Focus on mangroves to river river ecology.
- Mining and metallary history/heritage.
- Local history of fuel and technology (coal, gas, oil) primary energy display. history of river transport.
- Museum building keep as open as possible, flexibility in the use of spaces, make use of large spaces.

## <u>GROUP 5. - Mixed Use - Non-Residential, Sporting, Recreational, and</u> <u>Cultural.</u>

#### Facilitator:

#### Visions:

- Cycle/pedestrian strip/access along river.
- New access points to sites )T.M. Ave and Ortive Street).
- Access to and from railway stations.
- Put in a ferry terminal (public transport).
- Put in a boat ramp (recreational use).

Landscaping around substation.

Mixed use - Non Residential -

- Indoor pool.
- Amateur sports (inside and outside the building meeting rooms for local groups).
- Hockey and fields.
- Indoor cricket.
- Volley ball.
- Badminton.
- Visual arts group use intimate scale, storage.
- Kiosk/outdoor eating area in north/west corner of site (on river) in existing building.
- Rest nodes/dispersed throughout the site casual seating.
- Landscaping/screening (tall trees).
- Sails from near building for a softening affect.
- Recreational/exercise equipment throughout site.
- Building refurbishment to enhance visual amenity, though maintain existing fabric of building.

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+ SHEET 2 DAMION/ILYSE THEATRE USES ART/STUDIOS (RENTED) GROUP. RESIDENTIAL/PENTHOUSE HOTEL/RESORT/REOF GARDEN PHOTOCRATH/ FILM TV 









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5: MIXED USE - Non Kesid(1)11 (Sparting/Kac. julian 414+1 new vehicular childrens alless playground lasy access /automitional television to/from A station ticids lovals: + (amateur) 121 11 -indoor cricket orts facilit (intimate to from badminten scale) - Poots (diving incl.)-(gind floor Station Elliez ..... 0 3. clese existing ticst A BO BO BO <sup>3</sup> Ferry termina/ cycle/pedestrigh new vehicular Boat ramp car/trailer access A: recreational exercise equip't through " site Parking LEGEND : 24.9.96 X - Cal scating frest nodes. + )ATKY ( COD D Fr., Par. 20, 2



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# SUBMISSION SUMMARIES

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## TENNYSON POWER HOUSE SITE LAND USE PLANNING STUDY

## SUMMARY OF SUBMISSIONS RECEIVED FROM THE COMMUNITY

## (From the period between September to December 1996)

#### Introduction:

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The Tennyson Power House Site Land Use Planning Study contains a community consultation component. This has provided an avenue for the community's views to be put forward and to be recorded. To date, hotline enquiries and submissions have been received among other components of the consultation process

A community newsletter distributed in August informed local residents about the study and that submissions could lodged to Connell Wagner by 30 September, 1996. To date, seven submissions have been received either through the newsletter or via the Community Advisory Group. These submissions have been viewed and recorded by Connell Wagner. A summary of each of these submissions is provided below.

Please note submissions that have been summarised below have been paraphrased in order to avoid misinterpretation.

## Submission 1: 11 September, 1996. (Property Owner):

This submission suggests the following:

Shifting of the railway line between Tennyson Memorial Avenue and the power station to the north by some 10 or 20 metres so that the road can be reconstructed so that it is less of a traffic hazard. Presently the road has bends that create blind spots. These blind spots, together with an increasing amount of heavy vehicle traffic may cause serious accidents.

Access to Softstone Street could be realigned because of the danger to traffic that it creates.

## Submission 2: 21 September, 1996. (Yeronga Resident):

This submission suggests the following:

- A suggestion for the reuse of the power house building could be for a multi-purpose sport facility, for example: courts for basketball, squash, cricket, badminton, netball, etc.
- Along the river, a public boat ramp and park with picnic facilities and car parking would be desirable.
- An outdoor half size basketball court and a tennis court would be ideal on the Animal Research Institute site.

#### Submission 3: 23 September, 1996. (Annerley Resident):

A summary of this submission is as follows:

- Parcels of the land, particularly bordering the river could be retained as public parkland which would provide an opportunity to link the current bikeways which runs beside the river.
- <u>Note</u> that a bikeway runs through parks in Fairfield and could be connected via a designated bike route and then subsequently connected to the bikeway in Graceville via a bike route along King Arthur Terrace. Such infrastructure would also provide access to Tennyson Railway Station. A proposed bikeway is shown on early BCC bike maps. The Bicycle Institute of Queensland could provide assistance if required.

#### Submission 4: 25 September, 1996. (Moorooka Resident):

Two submissions have been lodged by this resident. They have been summarised as (a) and (b).

#### Submission (a):

This submission addresses three sites in the suburbs of Moorooka, Yeerongpilly and Tennyson, namely:

- 1. Tennyson Power House Site and "property on Tennyson Drive Yeerongpilly".
- 2. "Animal Facility and property on Fairfield Road, Yeerongpilly".
- 3. Clapham Railway Junction, behind the Moorooka railway station.
- Property 1 could be used as an Engineering type museum;
- Property 2 could be developed into a social/cultural museum;
- Property 3 could be used as a multi storey car par and ride, with a rail and transport museum below on the existing railway shunting yards; and
- A 'park and ride' on the Moorooka site with another one in the Indooroopilly area could alleviate existing traffic congestion on Ipswich Road and Coronation Drive by encouraging drivers to utilise public transport. For example, a daily \$3.00 return 'park and ride' fee. This could better utilise an existing ring rail route (ie: from Roma Street, via Southbank, Yeerongpilly, Corinda, Indooroopilly, back to Roma Street) which could turn it into a commuter route service to these facilities and the South Bank area.

#### Submission (b):

This submission presents a detailed use for a large site or building for the concept of *Walk* through, living history of Brisbane. The site/building would be divided into a series of spaces depicting different historical elements of Brisbane. These 'spaces' are summarised as follows.

... 1. Entry: the entry space would resemble a bush setting which would depict the native . human and animal habitat of pre-white Australia.

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- 2. Area 2 would represent various scenes from Caption Cook's ship the Endeavour.
- 3. Area 3 would represent scenes from Matthew Flinder's Norfolk including the discovery of Moreton Bay, Glasshouse mountains, etc.
- 4. Area 4: this area would provide a summary of Thomas Pamphlet. Finnegan, and Parson's story and their relevance to the area.
- 5. Area 5 would provide a summary of the arrival of John Oxley.
- 6. Area 6 would provide a summary of the arrival of convicts (ie: the Moreton Bay Penal Settlement, the discoveries of Allan Cunningham, etc.).
- 7. Area 7 would indicate the historical nature of the first free settlers.
- 8. Area 8 would provide a historical summary of Brisbane between 1918 and 1939.
- 9. Area 9 would concentrate on a panoramic view of Brisbane as it is today considering social, commercial and historical perspective.
- 10. Area 10 would provide a perspective of Brisbane and Queensland and their roles in the future.

# Submission 5: 30 September 1996 (Yeerongpilly Resident):

This submission suggests the following:

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- A concerned that the site should not be developed either of a commercial or residential nature.
- A recreational use would be appropriate because of the site's proximity to water and rail transport.
- The study could possibly look at the transfer of whole or part of the existing Railway Museum site at Redbank. Because of nearby railway infrastructure to the power house building, it could be a 'living museum'. The existing steam train route could be changed to run the ring route from Roma Street station to Corinda, via Tennyson, Yeerongpilly stations and back to the city (Roma Street) again. This could attract visitors with the steam train as a mode of transport.
- A ferry terminal with an extension of the new super cat ferry service to Tennyson would enhance visitor options as well as extend river low cost cruising.
- The adjoining Animal Research Institute site could be utilised as a City Farm, providing an attraction for families.
- Introducing these recreational activities could retrieve the environmental degradation of past years.

# Submission 6: 25 October. 1996 (Moorooka Resident):

This submission begins with a brief summary of the history of land use in the area until approximately the 1960's. The submission then makes a number of suggestions which are

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summarised as follows:

- suggests demolition of the power house building and the remaining building materials to be recycled.
- Low density residential development of the area which could be set back from the river is desirable. High rise (tower) development should be avoided. Transport infrastructure services and facilities should be developed to cope with the increase in services usage. Coordination with the Brisbane City Council is also considered desirable.
- Any housing development should take into account design standards that ensure that the character of development is in keeping with that of the neighbouring suburbs.
- The riverbank should be protected and rejuvenated. A large park area should be established back from the river for at least 250 metres and hopefully a nature reserve established along the riverbank itself.
- Redevelopment of the Tennyson Power House building may present a number of difficulties in terms of:
  - cost;
  - community perception of asbestos usage on the site; and
  - residential 'warehouse renovation' type development seems inappropriate owing to the proximity of the power house building from the city.
  - A summary of the conclusion is as follows:
    - some of the ARI buildings could be retained for educational and museum purposes as they are of heritage value;
    - low density housing development around the present buildings and road network would be suitable and not overly disruptive to the surrounding area;
    - the submission views that the community would like the site to be a mixture of nature reserve/parks and low-density residential development;
    - the submission views that the community wants the power station building demolished;
    - the community wants to be involved in the future of the site; and
    - redevelopment could embody 'environmentally sensible development' that embodies 'best practice' standards in terms of town planning and design.

#### Submission 7: 13 November, 1996 (Graceville Resident):

Two submissions have been lodged by this resident. The first component of the submission suggests the following:

• In the event of a railway museum or working museum of technology be deemed suitable for the site, the inclusion of a rail loop either into/through or around the

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. ₽°a grounds might be a viable proposition either as a tourist attraction or practical application.

This submission involved consultation with a former railway engineer who confirmed to this resident that the laying of a permanent line would be in the realms of possibility as would the placement of a temporary one for location of displays.

The second component of the submission provides the following suggestion for the Tennyson Power House:

Ensure space be reserved or excised for the future installation of an Emergency Power Source.

Reference is made to an article published within the that suggests power shortages could occur in 1998. Advantages and disadvantages of the are provided for this use and are summarised below.

Advantages are as follows:

- quick start-up to reach required speed in one minute (depending on design).
- a larger more economical "Combined Cycle" plant could back up railway supply for South Brisbane which would take much longer to start up and come to maximum power, but be handy for peak loads.
- buildings and switch yards already exist.
- burning methane results in exhaust consisting of carbon dioxide and water only. There is no ash or soot.
- existing natural gas line is located close by.

Disadvantages are as follows:

- heat pollution.
  - noise: some levels (although "Combined Cycle" method is probably quieter than "Open Cycle" however, the unit would only operate in an emergency. Any noise would be temporary and should cause minimal disturbance.

Other support exists for Gas Turbines. Consideration is currently being made through all levels of government for a gas turbine station to be built for Queensland supply at Gibson Island or Darling Downs.

Energy Equity Limited of Perth is using gas turbines at its power house at Barcaldine sourced by output from the Gilmore Field at Adavale which is now selling power to QTSC for distribution. The gas company is also installing gas turbines in Indonesia commencing with "Open Cycle" and developing to "Combined Cycle".

## Submission 8: 5 December, 1996 (Indooroopilly Resident):

This submission suggests use of the Tennyson power house building for use as a centre for diverse interest groups in Brisbane.

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The submission lists a minimum number of characteristics of a venue to serve diverse community groups. These include:

- public transport access
- parking
- large auditorium capable of seating 300 people
- small meeting room for up to 50 people
- large supper/reception area
- small supper room
- separate small ares which can be allocated to groups for use as a library/equipment storage, areas which can be accessed on "club nights" (as the community is enhanced by the easy access to specialist information in group libraries)

Such a venue would require permanent management personal to regulate allocation of usage and space and would fail if it was too expensive for community groups to access it.

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# APPENDIX J

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Offices: Australia



TENNYSON POWER STATION STUDY

In accordance with our commission we have prepared preliminary financial evaluations for the six re-use options as detailed on the indicative schematic design documents prepared by Cox Rayner Architects. We have also utilised within these evaluations, where applicable, details and estimates of required site infrastructure and land valuations for the various options prepared by or provided through Connell Wagner Pty. Ltd.

We draw your attention to the Introduction to our report which details the basis upon which the enclosed preliminary financial assessments were prepared and the various assumptions made. We re-iterate that these evaluations must be read in conjunction with all other material contained within your report and utilised solely as an aid to assist in the determination of the most appropriate re-use option(s) for the site. They must not be adopted as definitive estimates of the likely capital cost and return on investment for all or any individual option.

With reference to individual options we wish to highlight factors which should be taken into consideration during the process of selecting the preferred redevelopment option(s) as follows:

#### Option 1

This option provides approximately 23,500 m2 of office space which is the equivalent of 24 floors in a typical CBD high rise office building. Prior to any developer considering this option as a viable use for the building they would need to secure a long term commitment from a tenant for the majority of the available space in what would effectively become a purpose built facility. Input from appropriately qualified property professionals on the potential market demand for a facility of this should be obtained prior to selecting this option as a preferred use

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# TENNYSON POWER HOUSE STUDY LONG TERM STRATEGIC USE

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# PRELIMINARY FINANCIAL EVALUATION SUMMARY

|                                                                                                                                                                                          | OPTION 1<br>CORPORATE<br>HEADQUATERS                                                                    | OPTION 2<br>CULTURAL<br>RECREATIONAL<br>INSTITUTIONAL                                                                  | OPTION 3A<br>WAREHOUSE                                                                                  | OPTION 3B<br>LIGHT INDUSTRY                                                                             | OPTION 4<br>RESIDENTIAL                                                                                 | OPTION 5<br>OPEN SPACE                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| LAND<br>Total Land Area<br>Public Open Space<br>Powerlink/SEQEB Use<br>Net Available For Redevelopment<br>Gross Valuation<br>Infrastructure Costs<br>Net Valuation<br>Value/Effective Ha | 11.70 ha<br>2.40 ha<br>0.90 ha<br>8.40 ha<br>\$8,400,000<br>\$1,950,000<br>\$6,450,000<br>\$768,000 /ha | 11.70 ha<br>2.40 ha<br>0.90 ha<br>8.40 ha<br>\$3,360,000<br>\$1,950,000<br>\$1,950,000<br>\$1,410,000<br>\$168,000 /ha | 11.70 ha<br>2.40 ha<br>0.90 ha<br>8.40 ha<br>\$5,040,000<br>\$2,700,000<br>\$2,340,000<br>\$279,000 /ha | 11.70 ha<br>2.40 ha<br>0.90 ha<br>8.40 ha<br>\$5,040,000<br>\$1,950,000<br>\$3,090,000<br>\$368,000 /ha | 11.70 ha<br>2.40 ha<br>0.90 ha<br>8.40 ha<br>\$4,620,000<br>\$3,200,000<br>\$1,420,000<br>\$169,000 /ha | 11.70 ha<br>10.80 ha<br>0.90 ha<br>Nil<br>\$2,160,000<br>\$1,350,000<br>\$810,000<br>\$75,000 /ha |
| REDEVELOPMENT TIME                                                                                                                                                                       | 2.00 yrs.                                                                                               | 2.00 ỳrs.                                                                                                              | 1.00 yrs.                                                                                               | 1.00 yrs.                                                                                               | 3.00 yrs.                                                                                               | 1.00 yrs.                                                                                         |
| REDEVELOPMENT COST                                                                                                                                                                       | \$45,189,000                                                                                            | \$50,271,000                                                                                                           | \$29,116,000                                                                                            | \$27,070,000                                                                                            | \$102,066,000                                                                                           | \$9,445,000                                                                                       |
| ECONOMIC ASSESSMENT                                                                                                                                                                      |                                                                                                         |                                                                                                                        |                                                                                                         |                                                                                                         |                                                                                                         |                                                                                                   |
| Net Income From Sales/Lease<br>Net Return on Redevelopment Cost<br>Target Return on Redevelopment Cost                                                                                   | \$3,669,000<br>8.12% p.a<br>9.00% p.a                                                                   | N/A<br>N/A<br>N/A                                                                                                      | \$2,097,000<br>7.20% p.a<br>12.00% p.a                                                                  | \$1,959,000<br>7.24% p.a<br>11.00% p.a                                                                  | \$118,927,000<br>16.52% total<br>20.00% total                                                           | N/A<br>N/A<br>N/A                                                                                 |

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# TENNYSON POWER HOUSE STUDY LONG TERM STRATEGIC USE

PRELIMINARY FINANCIAL EVALUATION

# **OPTION 1 - CORPORATE HEADQUARTERS**

### **INFORMATION**

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| LAND USE                                        |              |
|-------------------------------------------------|--------------|
| Commercial                                      | 8.40 ha      |
| Public Open Space                               | 2.40 ha      |
| Retained For Powerlink/SEQEB Use                | 0.90 ha      |
| TOTAL                                           | 11.70 ha     |
| FUNCTIONAL AREAS                                |              |
| Undercover Carparking/Storeage/Plant            | 11 241 m2    |
| Undercover Carpark Spaces                       | 200 No       |
| Storeage Area                                   | 1 750 m2     |
| Offices - Gross Floor Area                      | 26.097 m2    |
| Offices - Net Leasable Area                     | 23,500 m2    |
| External Site Area (Incl. Public open space)    | 9 50 bo      |
| Assumed Occupancy                               | 100%         |
|                                                 | 100%         |
| DEVELOPMENT TIME                                |              |
| Estimated Total Development Time                | 2.00 yrs.    |
| DEVELOPMENT FINANCING                           |              |
| Finance Interest Rate                           | 0.50%        |
| Finance Establishment Fee                       | 9.50%        |
|                                                 | 1.50%        |
| DEVELOPMENT EXPENSES                            |              |
| Professional Design and Project Management Fees | 11.00%       |
| Development Management Fee                      | 2 0.0%       |
| Development Contingency                         | 5.00%        |
| Target Development Return on Investment         | 0.00%        |
|                                                 | 9.00%        |
| HOLDING COSTS                                   |              |
| Brisbane City Council Rates                     |              |
| Land Tax                                        | \$56,100 p.a |
| •                                               | \$33,300 p.a |
|                                                 |              |
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| PRUJECT CAPITAL COST ASSESSMENT        |           |               | Total Cost   |
|----------------------------------------|-----------|---------------|--------------|
|                                        |           |               | \$           |
| Land at Valuation                      | 8.40 ha   | \$1,000,000   | 8,400,000    |
| Legal Fees on Land Purchase            |           |               | 36,000       |
| Stamp Duty on Land Purchase            |           |               | 312,000      |
| CAPITAL COST OF LAND                   |           | -             | \$8,748,000  |
| CONSTRUCTION                           |           |               |              |
| Demolition                             |           |               | 500,000      |
| Building                               |           |               |              |
| Carpark and Storeage                   | 11,241 m2 | \$250 /m2     | 2,810,000    |
| Office Areas                           | 26,097 m2 | \$750 /m2     | 19,573,000   |
| Site Roading, Services and Landscaping | 9.50 ha   | \$300,000 /ha | 2,850,000    |
|                                        |           |               | \$25,733,000 |
| Local Authority Permits and Approvals  |           |               | 250,000      |
| Professional Fees                      |           |               | 2,830,000    |
| CONSTRUCTION COST ESTIMATE             |           | -             | \$28,813,000 |
| OTHER COSTS                            |           |               |              |
| Land tax                               |           |               | 67,000       |
| Council Rates                          |           |               | 112,000      |
| Long Service Leave Levy                |           |               | 51,000       |
| TOTAL OTHER COSTS                      |           | -             | \$230,000    |
| FINANCE COSTS                          | · · ·     |               |              |
| Finance establishment fees             |           |               | 567,000      |
| Land Interest                          |           |               | 1,662,000    |
| Construction Interest                  |           | •             | 2,190,000    |
| Other Costs Interest                   |           |               | 22,000       |
| TOTAL FINANCE COSTS                    |           | -             | \$4,441,000  |
| DEVELOPMENT EXPENSES                   |           |               |              |
| Development Management Fee             |           |               | 845,000      |
| Development Contingency                |           |               | 2,112,000    |
| TOTAL DEVELOPMENT EXPENSES             |           |               | \$2,957,000  |
| ASSESSMENT OF TOTAL CAPITAL COST       |           |               | \$45,189,000 |



Print Date 14/01/97

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|                                                                                                                                                                                                                    |                       |                                       | Total<br>\$                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------|--------------------------------------------------------------------------------------------|
| Not Loose of Lindersoner Comprise                                                                                                                                                                                  | 000 11                | ****                                  |                                                                                            |
| Net Lease of Ondercover Carparking                                                                                                                                                                                 | 200 NO                | \$500                                 | 100,00                                                                                     |
| Net Lease of Office areas                                                                                                                                                                                          | 1,750 m2<br>23,500 m2 | ۵۷۵<br>۱۶۵                            | 3 525 00                                                                                   |
|                                                                                                                                                                                                                    | 20,000 mz             | Ψ13 <b>0</b>                          | 3,525,00                                                                                   |
| PROJECTED NET ANNUAL INCOME                                                                                                                                                                                        |                       | -                                     | \$3,669,00                                                                                 |
| ASSESSMENT OF TOTAL CAPITAL COST                                                                                                                                                                                   |                       |                                       | \$45,189,00                                                                                |
| NET INCOME as % of TOTAL CAPITAL COST                                                                                                                                                                              | ···· ·                | · · · · · · · · · · · · · · · · · · · | 8.12%                                                                                      |
|                                                                                                                                                                                                                    |                       |                                       |                                                                                            |
| RESIDUAL LAND VALUE                                                                                                                                                                                                |                       |                                       |                                                                                            |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION                                                                                                                                                                        |                       |                                       | 8,400,000                                                                                  |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE                                                                                                                                                      |                       |                                       | 8,400,000                                                                                  |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage                                                                                                                               |                       |                                       | 8,400,000                                                                                  |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage                                                                                                             |                       |                                       | <b>8,400,000</b><br>550,000<br>300,000                                                     |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks                                                       |                       |                                       | 8,400,000<br>550,000<br>300,000<br>Nil                                                     |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks<br>Land Decontamination                               |                       |                                       | 8,400,000<br>550,000<br>300,000<br>Nil<br>100,000                                          |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks<br>Land Decontamination                               |                       |                                       | <b>8,400,000</b><br>550,000<br>300,000<br>Nil<br>100,000<br>1,000,000                      |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks<br>Land Decontamination<br>TOTAL INFRASTRUCTURE COSTS |                       |                                       | 8,400,000<br>550,000<br>300,000<br>Nil<br>100,000<br>1,000,000                             |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks<br>Land Decontamination<br>TOTAL INFRASTRUCTURE COSTS |                       |                                       | 8,400,000<br>550,000<br>300,000<br>Nil<br>100,000<br>1,000,000<br>1,950,000<br>\$6,450,000 |



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# TENNYSON POWER HOUSE STUDY LONG TERM STRATEGIC USE

### PRELIMINARY FINANCIAL EVALUATION

### **OPTION 2 - CULTURAL/RECREATIONAL/INSTITUTIONAL**

### INFORMATION

| LAND USE                                             |                       |
|------------------------------------------------------|-----------------------|
| Institutional                                        | 8. <b>40</b> ha       |
| Public Open Space                                    | 2. <b>4</b> 0 ha      |
| Retained For Powerlink/SEQEB Use                     | <u> </u>              |
| TOTAL                                                | 11.70 ha              |
| FUNCTIONAL AREAS                                     |                       |
| Undercover Carparking/Storeage/Plant                 | 10.720 m2             |
| Undercover Carpark Spaces                            | 220 No                |
| Commercial Areas - Gross Floor Area                  | 3,300 m2              |
| Commercial Areas - Net Leasable Areas                | 3,000 m2              |
| Cultural/Recreational/Institutional Gross Floor Area | 25,100 m2             |
| External Site Area (Incl. Public open space)         | 9.50 ha               |
| DEVELOPMENT TIME                                     |                       |
| Estimated Total Development Time                     | 2.00 yrs.             |
| DEVELOPMENT FINANCING                                |                       |
| Finance Interest Rate                                | Funded                |
| Finance Establishment Fee                            | Funded                |
| DEVELOPMENT EXPENSES                                 |                       |
| Professional Design and Project Management Fees      | 12.50%                |
| Development Management Fee                           | 2.00%                 |
| Development Contingency                              | 5.00%                 |
|                                                      |                       |
| HOLDING COSTS                                        |                       |
| Brisbane City Council Rates                          | \$56 <b>,10</b> 0 p.a |
| Land Lax                                             | \$33, <b>30</b> 0 p.a |

RIDER HUNT QUEENSLAND PTY. LTD

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| PROJECT CAPITAL COST ASSESSMENT           |                |                           |                 |
|-------------------------------------------|----------------|---------------------------|-----------------|
|                                           |                |                           | Total Cost      |
| Land at Valuation                         | <b>•</b> • • • |                           | \$              |
| Lend at Valuation                         | 8.40 ha        | \$400,000                 | 3,360,000       |
| Stamp Duty on Land Purchase               |                |                           | 16,000          |
| eranip buty on Land Purchase              |                |                           | 123,000         |
| CAPITAL COST OF LAND                      |                |                           | \$3,499,000     |
| CONSTRUCTION                              |                |                           |                 |
| Demolition                                | 1 P            |                           | 500.000         |
| Building                                  |                | •                         | 500,000         |
| Carpark/Storeage/Plant                    | 10 720 m2      | \$250 /m2                 | 2 690 000       |
| Commercial Areas                          | 3 300 m2       | \$550 /m2                 | 2,000,000       |
| Cultural/Recreational/Institutional Areas | 25 100 m2      | \$330 /112<br>\$1.200 /m2 | 1,015,000       |
| Site Roading Services and Landscaning     | 0 50 hz        | \$1,200 /112              | 30,120,000      |
| o i sana and ana oouping                  | 5.50 Ha        | φο25,000 /na _            | 3,088,000       |
| Local Authority Permits and Approvals     |                |                           | \$38,203,000    |
| Professional Fees                         |                |                           | 250,000         |
|                                           |                |                           | 4,775,000       |
| CONSTRUCTION COST ESTIMATE                |                | -                         | \$43,228,000    |
| OTHER COSTS                               |                |                           |                 |
| Land tax                                  |                |                           | 67 000          |
| Council Rates                             |                |                           | 112,000         |
| Long Service Leave Levy                   |                |                           | 76,000          |
| TOTAL OTHER COSTS                         |                | -                         | \$255.000       |
| • • • •                                   |                | -                         | <i>4200,000</i> |
| FINANCE COSTS                             |                |                           |                 |
| Finance establishment fees                |                |                           | Example of      |
| Land Interest                             |                |                           | Funded          |
| Construction Interest                     |                |                           | Funded          |
| Other Costs Interest                      |                |                           | Funded          |
| TOTAL CHANGE AS A DEC                     |                |                           | runded          |
| TOTAL FINANCE COSTS                       |                |                           | \$0             |
| DEVELOPMENT EXPENSES                      |                |                           |                 |
| Development Management Fee                |                |                           | 940 000         |
| Development Contingency                   | •              |                           | 2 340 000       |
|                                           |                |                           | 2,349,000       |
| TOTAL DEVELOPMENT EXPENSES                |                |                           | \$3,289,000     |
| SSESSMENT OF TOTAL CAPITAL COST           |                |                           |                 |
| CONTRACTOR                                |                |                           | \$50,271,000    |



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Option 2

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| ECONOMIC ASSESSMENT                                                                                                                                                                                                                          |                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| LCONOMIC ASSESSMENT                                                                                                                                                                                                                          |                                                                                            |
| ASSESSMENT OF TOTAL CAPITAL COST                                                                                                                                                                                                             | \$50,271,000                                                                               |
| Net Annual Income Required to Repay Capital over Twenty Years                                                                                                                                                                                | \$2,514,000                                                                                |
| Vet Annual Income From Commercial Areas 3,000 m2 \$250 /m2                                                                                                                                                                                   | \$750,000                                                                                  |
| Net Income Required From Cultural/Recreational/Institutional Activities                                                                                                                                                                      | \$1,764,000                                                                                |
| Net Annual Income Required to Repay Capital over Fifteen Years                                                                                                                                                                               | \$3,351,000                                                                                |
| Vet Annual Income From Commercial Areas 3,000 m2 \$250 /m2                                                                                                                                                                                   | \$750,000                                                                                  |
| vet Income Required From Cultural/Recreational/Institutional Activities                                                                                                                                                                      | \$2,601,000                                                                                |
|                                                                                                                                                                                                                                              |                                                                                            |
|                                                                                                                                                                                                                                              |                                                                                            |
|                                                                                                                                                                                                                                              |                                                                                            |
| RESIDUAL LAND VALUE                                                                                                                                                                                                                          |                                                                                            |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION                                                                                                                                                                                                  | 3,360,000                                                                                  |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION                                                                                                                                                                                                  | 3,360,000                                                                                  |
| RESIDUAL LAND VALUE<br>BROSS LAND VALUATION<br>NFRASTRUCTURE<br>Stormwater Drainage                                                                                                                                                          | <b>3,360,000</b><br>550,000                                                                |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>NFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage                                                                                                                                        | <b>3,360,000</b><br>550,000<br>300,000                                                     |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>NFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection                                                                                                        | <b>3,360,000</b><br>550,000<br>300,000<br>Nil                                              |
| RESIDUAL LAND VALUE<br>BROSS LAND VALUATION<br>NFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks                                                                                  | <b>3,360,000</b><br>550,000<br>300,000<br>Nil<br>100,000                                   |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>NFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks<br>Land Decontamination                                                          | <b>3,360,000</b><br>550,000<br>300,000<br>Nil<br>100,000<br>1,000,000                      |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>NFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks<br>Land Decontamination<br>TOTAL INFRASTRUCTURE COSTS                            | <b>3,360,000</b><br>550,000<br>300,000<br>Nil<br>100,000<br>1,000,000<br><b>1,950,000</b>  |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>NFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks<br>Land Decontamination<br>TOTAL INFRASTRUCTURE COSTS<br>IET RESIDUAL LAND VALUE | 3,360,000<br>550,000<br>300,000<br>Nil<br>100,000<br>1,000,000<br>1,950,000<br>\$1,410,000 |



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# TENNYSON POWER HOUSE STUDY LONG TERM STRATEGIC USE

# PRELIMINARY FINANCIAL EVALUATION

### **OPTION 3A - WAREHOUSE**

### INFORMATION

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| LAND USE<br>Industrial<br>Public Open Space<br>Retained For Powerlink/SEQEB Use<br>TOTAL | 8.40 ha<br>2.40 ha<br><u>0.90 ha</u><br>11.70 ha |
|------------------------------------------------------------------------------------------|--------------------------------------------------|
| FUNCTIONAL AREAS                                                                         |                                                  |
| Warehouse Area                                                                           | 11 241 m2                                        |
| Offices/Service - Gross Floor Area                                                       | 13.028 m2                                        |
| Offices/Services - Net Leasable Area                                                     | 11.700 m2                                        |
| External Undercover Storeage                                                             | 23,500 m2                                        |
| External Site Area (Incl. Public open space)                                             | 7.15 ha                                          |
| Assumed Occupancy                                                                        | 100%                                             |
|                                                                                          |                                                  |
| Estimated Total Development Time                                                         | 1.00 yrs.                                        |
| DEVELOPMENT FINANCING                                                                    |                                                  |
| Finance Interest Rate                                                                    | 0.50%                                            |
| Finance Establishment Fee                                                                | 9.50%                                            |
|                                                                                          | 1.30%                                            |
| DEVELOPMENT EXPENSES                                                                     |                                                  |
| Professional Design and Project Management Fees                                          | 9.00%                                            |
| Development Management Fee                                                               | 2.00%                                            |
| Tarret Development Contingency                                                           | 5.00%                                            |
| raiger Development Return on Investment                                                  | 12.00%                                           |
|                                                                                          |                                                  |
| HOLDING COSTS                                                                            |                                                  |
| Brisbane City Council Rates                                                              | \$56 100 m m                                     |
| Land Tax                                                                                 | ΨΟ0,100 μ.a<br>\$33.300 p.a                      |
|                                                                                          | 200,000 p.a                                      |
|                                                                                          |                                                  |



|                                         |           |           | Total Cost             |
|-----------------------------------------|-----------|-----------|------------------------|
| LAND COST                               |           | ****      | \$                     |
| Land at Valuation                       | 8.40 ha   | \$600,000 | 5,040,000              |
| Legal Hees on Land Purchase             |           |           | 23,000<br>186,000      |
| Stamp Duty on Land Purchase             |           |           | 100,000                |
| CAPITAL COST OF LAND                    |           | -         | \$5,249,000            |
| CONSTRUCTION                            |           |           |                        |
| Demolition                              |           |           | 750,000                |
| Building                                |           |           |                        |
| Warehouse                               | 11,241 m2 | \$250 /m2 | 2,810,000              |
| Office Areas                            | 13,028 m2 | \$650 /m2 | 8,468,000              |
| External Undercover Storeage            | 23,500 m2 | \$1/5/m2  | 4,113,000              |
| Site Roading , Services and Landscaping | 7.15 na   |           | 2,145,000              |
| Local Authority Romits and Approvals    |           |           | 910,200,000<br>250 000 |
| Professional Fees                       |           |           | 1.645.000              |
|                                         |           | · _       |                        |
| CONSTRUCTION COST ESTIMATE              |           |           | \$20,181,000           |
| THER COSTS                              |           |           | <b>66 66</b> -         |
| Land tax                                |           |           | 33,000                 |
| Council Rates                           |           |           | 55,000                 |
| Long Service Leave Levy                 |           |           | 37,000                 |
| TOTAL OTHER COSTS                       |           | -         | \$126,000              |
| INANCE COSTS                            |           |           |                        |
| Finance establishment fees              |           |           | 383,000                |
| Land Interest                           |           |           | 499,000                |
| Construction Interest                   |           |           | 767,000                |
| Other Costs Interest                    |           |           | 6,000                  |
| TOTAL FINANCE COSTS                     |           |           | \$1,655,000            |
| EVELOPMENT EXPENSES                     |           |           |                        |
| Development Management Fee              |           |           | 544,000                |
| Development Contingency                 |           |           | 1,361,000              |
| TOTAL DEVELOPMENT EXPENSES              |           | -         | \$1,905,000            |
| SSESSMENT OF TOTAL CAPITAL COST         |           |           | \$29 116 000           |

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|                                                                                                                                                                                                                    |           |       | <b>T</b>                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------|----------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                    |           |       | lotal                                                                                                    |
| PRO JECTED NET ANNUAL INCOME                                                                                                                                                                                       |           |       | \$                                                                                                       |
| Net Lass of Washouse                                                                                                                                                                                               |           |       |                                                                                                          |
| Net Lease of Office ereas                                                                                                                                                                                          | 11,241 m2 | \$25  | 281,000                                                                                                  |
| Net Lease of External Lindercover Storoogo                                                                                                                                                                         | 11,700 m2 | \$125 | 1,463,000                                                                                                |
| Her zouse of External ondercover Storeage                                                                                                                                                                          | 23,500 m2 | \$15  | 353,000                                                                                                  |
| PROJECTED NET ANNUAL INCOME                                                                                                                                                                                        |           | -     | \$2,097,000                                                                                              |
| ASSESSMENT OF TOTAL CAPITAL COST                                                                                                                                                                                   |           |       | \$29,116,000                                                                                             |
| NET INCOME as % of TOTAL CAPITAL COST                                                                                                                                                                              |           |       | 7 20%                                                                                                    |
|                                                                                                                                                                                                                    |           |       |                                                                                                          |
| RESIDUAL LAND VALUE                                                                                                                                                                                                |           |       |                                                                                                          |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION                                                                                                                                                                        |           |       | 5,040,000                                                                                                |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION                                                                                                                                                                        |           |       | 5,040,000                                                                                                |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage                                                                                                                               |           |       | 5,040,000                                                                                                |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage                                                                                                             |           |       | <b>5,040,000</b><br>550,000<br>300,000                                                                   |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection                                                                             |           |       | <b>5,040,000</b><br>550,000<br>300,000<br>750,000                                                        |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks                                                       |           |       | <b>5,040,000</b><br>550,000<br>300,000<br>750,000<br>100,000                                             |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks<br>Land Decontamination                               |           |       | <b>5,040,000</b><br>550,000<br>300,000<br>750,000<br>100,000<br>1,000,000                                |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks<br>Land Decontamination<br>TOTAL INFRASTRUCTURE COSTS |           |       | <b>5,040,000</b><br>550,000<br>300,000<br>750,000<br>100,000<br>1,000,000<br><b>2,700,000</b>            |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION<br>INFRASTRUCTURE<br>Stormwater Drainage<br>Sewer Drainage<br>Filling for Flood Protection<br>External Roadworks<br>Land Decontamination<br>TOTAL INFRASTRUCTURE COSTS |           |       | <b>5,040,000</b><br>550,000<br>300,000<br>750,000<br>1,000,000<br><b>2,700,000</b><br><b>\$2,340,000</b> |



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# TENNYSON POWER HOUSE STUDY LONG TERM STRATEGIC USE

### PRELIMINARY FINANCIAL EVALUATION

### **OPTION 3B - LIGHT INDUSTRY**

### **INFORMATION**

| LAND USE                                        |                      |
|-------------------------------------------------|----------------------|
| Industrial                                      | 8.40 ha              |
| Public Open Space                               | <b>2.40 ha</b>       |
| Retained For Powerlink/SEQEB Use                | 0.90 ha              |
| TOTAL                                           | 11.70 ha             |
| FUNCTIONAL AREAS                                |                      |
| Carpark/Plant Areas                             | 11,241 m2            |
| Undercover Carparking                           | 200 No               |
| Trade Floor Area                                | 6, <b>450 m</b> 2    |
| Offices/Service - Gross Floor Area              | 11,721 m2            |
| Offices - Net Leasable Area                     | 10,500 m2            |
| External Site Area (Incl. Public open space)    | 9.50 ha              |
| Assumed Occupancy                               | 100%                 |
| DEVELOPMENT TIME                                |                      |
| Estimated Total Development Time                | 1.00 yrs.            |
| DEVELOPMENT FINANCING                           |                      |
| Finance Interest Rate                           | 9.5 <b>0%</b>        |
| Finance Establishment Fee                       | 1.5 <b>0%</b>        |
| DEVELOPMENT EXPENSES                            |                      |
| Professional Design and Project Management Fees | 9.00%                |
| Development Management Fee                      | 2.00%                |
| Development Contingency                         | 5.00%                |
| Target Development Retum on Investment          | 11.00%               |
|                                                 |                      |
| HOLDING COSTS                                   |                      |
| Brisbane City Council Rates                     | \$56 <b>,100</b> p.a |
| Land lax                                        | \$33, <b>300</b> p.a |

**RIDER HUNT QUEENSLAND PTY. LTD** 

### PROJECT CAPITAL COST ASSESSMENT

| LAND COST                             |           |                   | ⊺otal Cost<br>\$ |
|---------------------------------------|-----------|-------------------|------------------|
| Land at Valuation                     | 8,40 ha   | \$600,000         | 5,040,000        |
| Legal Fees on Land Purchase           |           |                   | 23,000           |
| Stamp Duty on Land Purchase           |           |                   | 186,000          |
| CAPITAL COST OF LAND                  |           |                   | \$5,249,000      |
| CONSTRUCTION                          |           |                   |                  |
| Demolition                            |           |                   | 500,000          |
| Building                              |           |                   |                  |
| Undercover Carpark/Plant Areas        | 11,241 m2 | <b>\$</b> 250 /m2 | 2,810,000        |
| Trade Floor Area                      | 6,450 m2  | \$350 /m2         | 2,258,000        |
| Office Areas                          | 11,721 m2 | \$700 /m2         | 8,205,000        |
| Site Roading Services and Landscaping | 9.50 ha   | \$300,000 /ha_    | 2,850,000        |
| Loool Authority Domette and Automatic |           |                   | \$16,623,000     |
| Eocal Authonity Permits and Approvals |           |                   | 250,000          |
| Professional rees                     |           |                   | 1,496,000        |
| CONSTRUCTION COST ESTIMATE            |           | -                 | \$18,369,000     |
| OTHER COSTS                           | . ·       |                   |                  |
| Land tax                              |           |                   | 33 000           |
| Council Rates                         |           |                   | 56,000           |
| Long Service Leave Levy               |           |                   | 33,000           |
| TOTAL OTHER COSTS                     | •.        | -                 | \$122,000        |
| FINANCE COSTS                         | · .       |                   |                  |
| Finance establishment fees            |           |                   | 356,000          |
| Land Interest                         |           |                   | 499,000          |
| Construction Interest                 |           |                   | 698,000          |
| Other Costs Interest                  |           |                   | 6,000            |
| TOTAL FINANCE COSTS                   | ·         | -                 | \$1,559,000      |
| DEVELOPMENT EXPENSES                  |           |                   |                  |
| Development Management Fee            |           |                   | 506.000          |
| Development Contingency               |           |                   | 1,265,000        |
| TOTAL DEVELOPMENT EXPENSES            |           |                   | \$1,771,000      |
| ASSESSMENT OF TOTAL CAPITAL COST      |           |                   | \$27,070,000     |



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|                                             |           | Total           |          |
|---------------------------------------------|-----------|-----------------|----------|
| PROJECTED NET ANNUAL INCOME                 |           | Ψ               |          |
| Net Lease of Undercover Carparks            | 200 No    | \$300 60.00     | b        |
| Net Lease of Factory Trade Floor            | 11,721 m2 | \$50 586,000    | 5        |
| Net Lease of Office areas                   | 10,500 m2 | \$125 1,313,000 | כ        |
| PROJECTED NET ANNUAL INCOME                 |           | \$1,959,000     | <u>,</u> |
| ASSESSMENT OF TOTAL CAPITAL COST            |           | \$27,070,000    | )        |
| NET INCOME as % of TOTAL CAPITAL COST       | r         | 7.24%           | 7        |
| RESIDUAL LAND VALUE<br>GROSS LAND VALUATION |           | 5,040,000       |          |
| INFRASTRUCTURE                              |           |                 |          |
| Stormwater Drainage.                        |           | 550,000         |          |
| Sewer Drainage                              |           | 300,000         |          |
| Filming for Flood Protection                | · .       | Nil             |          |
| Land Decontamination                        |           | 100,000         | ļ        |
|                                             |           | ,000,000        | -        |
| TOTAL INFRASTRUCTURE COSTS                  |           | 1,950,000       |          |
| NET RESIDUAL LAND VALUE                     |           | \$3,090,000     | (        |
|                                             |           |                 | 1        |



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# TENNYSON POWER HOUSE STUDY LONG TERM STRATEGIC USE

### PRELIMINARY FINANCIAL EVALUATION

### **OPTION 4 - RESIDENTIAL**

### INFORMATION

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| LAND USE                                           |               |
|----------------------------------------------------|---------------|
| Residential                                        | 8.40 ha       |
| Public Open Space                                  | 2.40 ha       |
| Retained For Powerlink/SEQEB Use                   | 0.90 ha       |
| TOTAL                                              | 11.70 ha      |
|                                                    | •             |
| FUNCTIONAL AREAS                                   |               |
| Undercover Carparking/Storeage                     | 21,000 m2     |
| Waterfront Commercial Gross Floor Area             | 2,500 m2      |
| Low Rise Walk Up Apartments - Gross Floor Area     | 35.000 m2     |
| Low Rise Walk Up Apartments - Net Saleable Area    | 31.500 m2     |
| Medium Rise Apartments - Gross Floor Area          | 21,000 m2     |
| Medium Rise Apartments - Net Saleable Area         | 15,000 m2     |
| Total Number of Apartments - Walk-up               | 350 No        |
| Total Number of Apartments - Low Rise              | 150 No        |
| External Site Area (Incl. Public open space)       | 8.70 ha       |
| Assumed Sales at Completion                        | 100%          |
|                                                    |               |
|                                                    |               |
| Estimated Total Development Time                   | 3.00 yrs.     |
| Estimated Development Time - Stage 1 (Assumed 50%) | 2.00 yrs.     |
| DEVELOPMENT EINANCING                              |               |
| Finance Interest Rate                              |               |
| Finance Establishment Fee                          | 9.50%         |
|                                                    | 1.50%         |
| DEVELOPMENT EXPENSES                               |               |
| Professional Design and Project Management Fees    | 11 00%        |
| Marketing Expenses - Apartment Sales               | \$2 000 /unit |
| Sales Commissions                                  | 2 50%         |
| Development Management Fee                         | 2.00%         |
| Development Contingency                            | 5.00%         |
| Target Development Profit                          | 20 00%        |
|                                                    | _3.0070       |
| HULDING COSTS                                      |               |
| Brisbane City Council Rates                        | \$56,100 p.a  |
| Lang lax                                           | \$33.300 p.a  |
|                                                    | 1 <b>P</b> M  |

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|                                         |           |               | Total Cost   |
|-----------------------------------------|-----------|---------------|--------------|
| LAND COST                               |           |               | \$           |
| Land at Valuation                       | 8.40 ha   | \$550,000     | 4,620,000    |
| Legal Fees on Land Purchase             |           |               | 21,000       |
| Stamp Duty on Land Purchase             |           |               | 170,000      |
| CAPITAL COST OF LAND                    |           | -             | \$4,811,000  |
| CONSTRUCTION                            |           |               |              |
| Demolition                              | •         |               | 3,500,000    |
| Building                                |           |               |              |
| Carpark and Storeage                    | 21.000 m2 | \$225 /m2     | 4,725,000    |
| Waterfront Commercial                   | 2,500 m2  | \$700 /m2     | 1.750.000    |
| Low Rise Walkup Apartments              | 35.000 m2 | \$950 /m2     | 33,250.000   |
| Medium Rise Apartments                  | 21,000 m2 | \$1,200 /m2   | 25,200.000   |
| Site Roading , Services and Landscaping | 8.70 ha   | \$400,000 /ha | 3,480.000    |
| -                                       |           |               | \$71,905.000 |
| Local Authority Permits and Approvals   |           | -             | 500,000      |
| Professional Fees                       |           |               | 7,909,000    |
| CONSTRUCTION COST ESTIMATE              |           | -             | \$80,314,000 |
| OTHER COSTS                             | •         |               |              |
| Land tax                                |           |               | 83.000       |
| Council Rates                           |           |               | 140,000      |
| Long Service Leave Levy                 |           |               | 144,000      |
| TOTAL OTHER COSTS                       |           | -             | \$367,000    |
| INANCE COSTS                            | •         | • •           |              |
| Finance establishment fees              |           |               | 1 282 000    |
| Land Interest                           |           |               | 1 143 000    |
| Construction Interest                   |           |               | 6 485 000    |
| Other Costs Interest                    |           |               | 52,000       |
| TOTAL FINANCE COSTS                     |           | -             | \$8,962,000  |
| EVELOPMENT EXPENSES                     |           |               |              |
| Marketing Expenses                      |           |               | 1 000 000    |
| Development Management Fee              |           |               | 1 889 000    |
| Development Contingency                 |           |               | 4,723,000    |
| TOTAL DEVELOPMENT EXPENSES              |           |               | \$7,612,000  |
| SSESSMENT OF TOTAL CAPITAL COST         |           | ~             | 102 066 000  |

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# Tennyson Power House site planning and land use study : final draft / Connell Wagner Pty. Ltd

| Author                      | Connell Wag                                | ner (Firm)                                                              |                                                    |  |  |
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| Subjects                    | Tennyson Po                                | Tennyson Power Station.; Electric power-plants - Queensland - Brisbane. |                                                    |  |  |
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| uthor                                                  | Connell Wagner (F                                                                                   | irm)                                      |                              |                               |                                  |
| ther Authors                                           | Queensland. Dept.                                                                                   | of Natura                                 | Resources.                   |                               |                                  |
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|      |               | Tennyson Power Station, Brisbane, 1<br>Unidentified                                                                                                                                                                                                                        |
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| 1.   |               | Coal train at Tennyson Power Statio                                                                                                                                                                                                                                        |
|      |               | Richardson, Rob<br>[ Photograph : 1974 ]                                                                                                                                                                                                                                   |
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| 4.   | 1             | Tennyson Power Station                                                                                                                                                                                                                                                     |
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|                                                                                                                  | Tennyson power station : official opening 26th March, 1955, at 10.15 a.m. to be performed by the Premier of Queensland Hon. V.C. Gair<br>Brisbane (Qld.). Council |  |  |  |  |
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[ Book, Audio book : 1962-1992 ]

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|                   | Tarong pipeline / AUSTA Electric<br>Royal Automobile Club of Queensland                                                                          |
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|                   | [ Map : 1998-1999 ]                                                                                                                              |
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|                   | The Tully Falls hydro-electric project : official opening ceremony, 21st Sept., 1957                                                             |
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Which Queensland town was the subject of a "Tongue Twisting Waltz Song Hit?" Where do the red gold

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Trove - Tennyson Power House site planning and land use study : final draft / Connell Wagner Pty. Ltd Page 8 of 8 oranges grow? It may be hot in Brisbane, but where is it cool?Find out here in the songs ab...

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| 3.       |  |

### **Stephens District Local Plan**

#### Introduction

This Local Plan contains specific additional local planning requirements. Where it conflicts with the requirements of the City Plan, this Local Plan prevails.

In using this Local Plan, reference should also be made to Section 1.1—Using a Local Plan at the front of this chapter.

#### 2 Development principles

- 2.1 Character housing, including the traditional Queenslander or worker's cottage on a single allotment with an established garden, is to be complemented by residential development that respects the existing streetscapes, character and amenity of the District.
- 2.2 Ipswich Road is to remain the major entry point to the District, accommodating more intensive residential and commercial/retail development, and maintaining pedestrian, cyclist and vehicle safety.
- 2.3 The District's proximity to the Brisbane River continues to provide opportunities for public access to open space along the river frontage, especially where redundant uses have changed and new parkland has been established.

- 2.4 Existing parks such as Yeronga and Leyshon Parks are to remain important multi-purpose use and conservation areas.
- 2.5 Use of redundant sites such as the Brisbane Gaol and the Tennyson Power Station for residential redevelopment is to be supported by public transport, utilising the District's close proximity to Brisbane's central business area and other services. Any redevelopment of these sites for residential purposes is to carefully consider the need for affordable housing types in this locality.

#### 3 Precinct intents

Refer to Map A-Stephens District Local Plan.

- 3.1 Commercial/retail development or other proposals contributing to ribbon development will not be supported on Ipswich Road.
- 3.2 Mixed use development reflecting existing character may be supported along Ipswich Road between Clive and Waverley Streets where site access is not from Ipswich Road.
- 3.3 General industry activities that adversely impact on the surrounding residential areas are not appropriate. Where these uses cease to operate or relocate, low intensity industrial redevelopment is preferred.
- 3.4 Any industrial redevelopment of allotments bounded by Moolabin Creek is intended to provide public access and open space along the creek corridor.



3.5 The appearance of Annerley Junction will be improved through the upgrading of buildings and streetscapes. Redevelopment should reflect existing materials, form and scale, and incorporate landscape elements to contribute positively to the character and amenity of both the business area and the District.

The two roles intended for future development or redevelopment of the eastern side of Ipswich Road are:

- the traditional role as a local service provider, because of accessibility to Ipswich Road and public transport routes
- developing a regional role in specialist retail activities such as antiques or seconds clothing.

The western side of Ipswich Road is intended to contain non-retail business or small commercial uses, such as real estate agencies, public services, professional offices or home occupations, that complement the suburban nature of Annerley Junction. Further development may require additional pedestrian safety measures, such as appropriately designed pedestrian crossings or a pedestrian overpass. Development will be contained to the existing business area.

Commercial development will not provide vehicular access from Ipswich Road or impact on surrounding residential amenity.

3.6 Proposals at Chardon's Corner will be contained to the existing business area. Retail development will be encouraged on the eastern side of Ipswich Road to reduce pedestrian movement across Ipswich Road.

Proposals should incorporate built form, scale and design elements sympathetic to existing structures, particularly shop frontages in keeping with the existing character, and landscape elements to improve the streetscape and pedestrian environment.

3.7 Expansion or redevelopment of the Fairfield Gardens business area should improve the diversity of services provided to the community and enhance the business area's viability. This should be supported by public transport access. Expansion of current light industry operations will not be supported.

Proposals should incorporate built form, scale and design elements sympathetic to existing structures, particularly shop frontages in keeping with the existing character, and landscape elements that improve the streetscape and pedestrian environment.

- 3.8 Commercial development in Yeronga Village will be contained in the existing business area and further expansion along Fairfield Road is unlikely to be supported.
- 3.9 The Brisbane Gaol site should maximise use of surrounding public transport infrastructure. It should accommodate low to medium density residential development and include sections of public parkland and 'community oriented' development. A safe and attractive pedestrianised environment should be provided to allow for easy pedestrian and cyclist access through and within the site.

The 'old gaol' building has significant heritage value and will be retained. Any new development should respect the cultural heritage significance of the old gaol building and sympathetically incorporate it into the design.

Access to the site will be provided directly from Annerley Road to avoid increased traffic volumes in residential streets. Vehicle movement and parking will be contained in the site to minimise impacts on any surrounding residential areas. There should be convenient and separate pedestrian access to Annerley Road bus stops. Provision of bus stops, shelters and seating compatible with the development will be encouraged.

3.10 Non-residential development that impacts adversely on the Princess Alexandra Hospital or residential areas will not be supported.

Development must be within the capacity of existing social and physical infrastructure to support increases in population. The built form and appearance of any redevelopment should contribute positively to the character of the surrounding suburbs and improve the visual amenity of the Annerley Road streetscape.

3.11 Residential development that maximises use of the existing rail access from Tennyson Railway Station and provides community parkland will be preferred on the Tennyson Powerstation site. Any proposal will address impacts of large increases in population on social and physical infrastructure.

Due to the site's considerable physical constraints, non-residential uses with minimal impact on residential areas may be supported. Development may not adversely affect water quality of the Brisbane River and must provide public access to the waterfront and a cycle way through the site. Use of the site may be optimised by the relocation of the substation.



Any redevelopment that generates large volumes of traffic will provide vehicular access from Tennyson Memorial Drive adjacent to the Brisbane Golf Club, crossing the railway line, to prevent the impacts of increased traffic volumes on surrounding residential areas. Adequate parking is to be provided within the site and must not impact on surrounding land uses or residential streets.

There should be convenient and separate pedestrian access over/under the railway line to bus stops on Tennyson Memorial Avenue. Provision of bus stops, shelters and seating compatible with the development should be encouraged.

- 3.12 Any organised sport and recreation areas of Yeronga Park should be contained to existing leased areas and preferably only serve local and district sporting needs. Club facilities are to have minimal impacts on surrounding residential areas.
- 3.13 Large scale activities that serve a regional function may be allowed in Goodwin Park and Leyshon Park, subject to appropriate design standards and minimising impacts on surrounding residential areas. Smaller scale activities serving a local or district function will be allowed in Fehlberg Park.

Any future works in these parks should provide further opportunities for passive recreation for local communities.





www.tennisqueensland.com.au

Level 1, 349 Caronation Drive Milton, 4064 Postal Address: PO Box 1145 Milton, 4064 Queensland, Australia

2 September 2002

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### PRIVATE AND CONFIDENTIAL

The Chief Executive Mirvac Queensland PU DUN JIZI WESTEND QLD 4101

### Dear Sir

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#### **TENNYSON PRECINCT PROJECT - STATE TENNIS CENTRE** RE:

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 + Egarsy 1735 + Henre Gov Fridows



### COMMERCIAL-IN-CONFIDENCE

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۰.

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Tennis Queensland Tennis Australia

- \*

STREET, State B. Band Cale Street Barry Street Barry

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### COMMERCIAL-IN-CONFIDENCE

### 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 unserviced 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

# Tennvson



### B. The StrateOy 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:

- 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.
- Access to world class coaching and training expertise and facilities to enable the potential of young Queensland elite level players to be realized.
- 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 coachinu 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.





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### 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


#### COMMERCIAL-IN-CONFIDENCE

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:

- ADDITION C SPORE for Komp The establishment of a 22 court facility that consists of
  - A centre court with 4000 seat show court
    - o 6 clay courts suitable for national standard events
    - $\circ$  sufficient car parking to meet the needs of the tennis facility (#?)
    - fully equipped clubhouse
    - o tennis proshop
    - o a tennis hall of fame
    - o 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.

#### Ε. 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.

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#### 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 capably 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:
  - o Brisbane residents who either play tennis (some 200,000 people) or are tennis fans.



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# COMMERCIAL-IN-CONFIDENCE

- 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.
- 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 or 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.

### COMMERCIAL-IN-CONFIDENCE

APPENDIX

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# **Tennyson Riverside Development**

Building a future for Queensland tennis



**Competitive Bid Process – Stage 1** *Invitation for Expressions of Interest* 

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# TENNYSON RIVERSIDE DEVELOPMENT Invitation for Expressions of Interest

# **1** Project Overview

The Queensland Government (Government) is seeking proposals from the private sector for the development of an international-standard State Tennis Centre and associated development on prime riverfront land in Brisbane. The project, which is situated on the site of the former Tennyson Power Station, is referred to as the Tennyson Riverside Development. The Government aims for the project to be a landmark development for tennis in Queensland.

As a key component of the Tennyson Riverside Development, the State Tennis Centre is to be a state-of-the-art facility capable of successfully promoting the development of tennis in Queensland and attracting and hosting state, national and international tennis titles and tournaments such as Davis Cup and Fed Cup ties. The centre will be a headquarters for tennis in Queensland and will be instrumental to the ongoing development of the sport within the state.

The Government expects that proposals may include a wide mix of associated developments that complement the efficient and effective operation of the State Tennis Centre and integrate with the surrounding areas and infrastructure, such as:

- residential accommodation;
- commercial facilities;
- food and beverage facilities;
- recreational and sporting facilities;
- sporting club facilities;
- transport facilities (for example, a ferry terminal); and
- supporting retail facilities.

In making the site available for the project, the Government recognises the Tennyson Riverside Development represents a unique opportunity for the private sector to deliver an outstanding landmark project for both the Brisbane River and for tennis in Queensland.

The Government is undertaking a competitive bid process, as outlined in Section 6, to facilitate the project. In Stage 1 of this process, proponents are invited to submit an Expression of Interest (EOI) Proposal for the design, construction and financing of the Tennyson Riverside Development and the operation of the associated development. EOI Proposals are to be prepared in accordance with the requirements and timeframes outlined in Sections 6, 7 and 9.

Proponents will need to demonstrate in their EOI Proposals that they possess the requisite skills and experience in development projects of this scale and complexity.



### BACKGROUND

Tennis in Queensland has experienced significant increases in participation and interest in recent years. The success of leading Australian players and the hosting of three Davis Cup ties in Queensland over the past four years has ensured tennis remains one of the state's most popular sport and recreation activities.

Tennyson Riverside Development - Building a future for Queensland tennis Competitive Bid Process - Stage 1

This interest has been tempered by a reduction in the number and quality of tennis facilities throughout the state. Tennis Queensland estimates 300 tennis courts that were used for fixtures, tournament play and social purposes have been lost in Queensland over the past 20 years. This decline in tennis facilities includes the significant loss of the long-time "home" of Queensland tennis, Frew Park, at Milton.

The Department of Innovation and Information Economy, Sport and Recreation Queensland, in conjunction with Tennis Queensland, has identified a number of potential sites to establish a new State Tennis Centre. A state-owned site of approximately 12 hectares at Tennyson has been identified as Tennis Queensland's preferred location for a State Tennis Centre.

# **PROJECT OBJECTIVES**

The Government requires the State Tennis Centre to be a state-of-the-art stand-alone tennis facility. The facility is to be of sufficient size, quality, and functionality to successfully promote the development of tennis in Queensland and attract and host state, national and internationalstandard tennis events.

In pursuing the Tennyson Riverside Development, the Government is seeking innovative private sector proposals to:

- ensure the redevelopment of the Tennyson Power Station site integrates with the surrounding areas and infrastructure:
- provide a stand-alone State Tennis Centre, with the capability of hosting international-standard events;
- provide and operate associated development on the site compatible with the efficient and effective operation of the State Tennis Centre;
- develop the site in a manner which maximises the state's financial returns while minimising the risks to the state; and
- ensure the State Tennis Centre is developed either before or in conjunction with the associated development.



# **GOVERNMENT** POSITION

The Government requires the Tennyson Riverside Development to be delivered fully at the successful proponent's cost. This includes all costs associated with the design, construction and financing of the project, and the operation of the associated development.

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The successful proponent will be responsible for the establishment of all contracts relating to the implementation of the transport strategy and plan, and the provision and financing of all infrastructure necessary for the Tennyson Riverside Development.

The Government's contribution to this project is limited to facilitating the competitive bid process and making the land available for the associated development under appropriate tenure arrangements. It is not intended that the Government will provide any upfront funding contribution to the project.

# 2 Project Outline

### **PROJECT SCOPE**

The Government requires:

- a stand-alone state-of-the-art State Tennis Centre capable of successfully promoting the development of tennis in Queensland and attracting and hosting state, national and international tennis titles and tournaments such as Davis Cup and Fed Cup ties, hardcourt championships and age group championships; and
- the development and operation of the balance of the site to integrate with surrounding areas and infrastructure, and in a manner which is compatible with the efficient and effective operation of the State Tennis Centre.

The design should consider such factors as the movement of large numbers of people, including visitors and tennis players with disabilities, around and through the State Tennis Centre and its associated development.

The quality of finishes for the State Tennis Centre should be at least equivalent to those of an international-standard tennis facility such as the Melbourne Park Tennis Centre or Sydney International Tennis Centre. The quality of finishes for the associated development should be at least equivalent to recent Brisbane riverfront developments.

The facility mix and scope described in the remaining pages of this section represent the Government's minimum requirements for the Tennyson Riverside Development.

# STATE TENNIS CENTRE

The State Tennis Centre is to be capable of hosting state, national and international tennis events on a scale similar in nature to Davis Cup and Fed Cup ties, hardcourt championships and age group championships.

Tennis Queensland is seeking to use the State Tennis Centre for coaching and training of state, national and international elite players and squads. The State Tennis Centre will also provide a centre for the development of tennis at both a local and state level and an administrative headquarters for Tennis Queensland.

#### Centre Court

A centre court is to be provided with 3000 permanent covered seats, and the capability of accommodating an additional 4000 temporary seats and corporate facilities for major events. The centre court should be of Davis Cup standard and dimensions, with an International Tennis Federation standard hardcourt surface. The centre court should have the capability to accommodate the temporary installation of natural grass or clay playing surfaces.

#### Match and Training Courts

Twenty-two match and training courts are to be provided, with a mix of International Tennis Federation standard surfaces, namely:

- at least 16 match courts with the same hardcourt surface as the centre court; and
- at least four and up to six training courts with an alternative surface/s (for example, natural grass and/or clay).

Two of the match courts are to be of Davis Cup standard and dimensions with the capability to accommodate the temporary installation of natural grass or clay playing surfaces.

#### **Equipment and Facilities**

All courts are to have lighting that meets the relevant standards. Scoreboards, umpire stands and other equipment are to be provided for the day-to-day operation and maintenance of the State Tennis Centre. Provision of a public address system to service the entire State Tennis Centre and/or individual courts is required. Provision is to be made for the installation of temporary seating to six of the match courts.

#### Tennis Queensland State Office

An administrative centre is to be provided to accommodate Tennis Queensland's administrative staff and development officers. Detailed information regarding Tennis Queensland's requirements will be made available to shortlisted proponents in Stage 2 of the competitive bid process. An administrative centre is to be provided to accommodate the facilities and staff required for the administration and commercial operation of the State Tennis Centre.

#### Support Facilities for the State Tennis Centre

These facilities are to include, but are not limited to:

- medical rooms;
- change rooms;
- officials rooms;
- players/team rooms;
- multi-purpose covered training area;
- gymnasium;
- toilets;
- media facilities;
- professional tennis shop;
- café;
- catering and merchandise outlets;
- storage facilities; and
- function rooms.

#### **Transport and Access Arrangements**

The State Tennis Centre is to include:

- appropriate on-site parking with set-down/pick-up areas for limousines, coaches and minibuses, and a taxi rank that is readily accessible and highly visible;
- covered access for coaches and taxis;
- appropriate on-site parking for private vehicles; and
- dedicated road access.

Shortlisted proponents will be required in Stage 2 of the competitive bid process to provide a comprehensive transport strategy and plan for major events that encompass issues such as pedestrian movements, traffic movements and off-site parking for coaches and cars. The successful proponent will be responsible for all contracts and the provision and financing of all infrastructure necessary for implementation of the transport strategy and plan.

### ASSOCIATED DEVELOPMENT

Proponents are required to augment the State Tennis Centre through the provision of associated development.

In providing the associated development, proponents must comply with all applicable Commonwealth, state and Brisbane City Council requirements regarding the development of the site, ensuring that any associated development integrates with land uses in the surrounding area. Such development is to be compatible with the efficient and effective operation of the State Tennis Centre and may include, but is not limited to:

- residential accommodation;
- commercial facilities;
- food and beverage facilities;
- recreational and sporting facilities;
- sporting club facilities;
- transport facilities (for example, a ferry terminal); and
- supporting retail facilities.

### **OTHER REQUIREMENTS**

The successful proponent will be required to:

- obtain all required approvals for the project;
- remediate any site contamination to required standards;
- provide and install all furniture, equipment and fit-out required to commission and operate the State Tennis Centre (with the exception of Tennis Queensland's State Office);
- provide good accessibility for cars, coaches and service vehicles, adequate bus/coach set-down
  areas and traffic queuing facilities at entrances;
- provide buffers to residential areas against break-out noise from events and traffic movements;
- provide public access to the Brisbane River frontage;
- resolve any native title and cultural heritage requirements; and
- satisfy all environmental issues.



# 3 The Site

The site for the Tennyson Riverside Development is situated on prime riverfront land in Brisbane, approximately seven kilometres from the Central Business District. The site borders the suburb of Yeerongpilly and adjoins the Department of Primary Industries Animal Research Institute. A site map is provided at Attachment 1.

The site is dominated by the former Tennyson Power Station, which was built in the 1950s and decommissioned in 1986. The power station building is intact and all major plant including the turbines, boilers and associated equipment and pipe work have been removed from the building, with the coal hoppers remaining.

The Tennyson Riverside Development may involve the demolition of the Tennyson Power Station building. However, the existing power station structure may also provide the opportunity for proponents to develop an innovative and creative architectural and engineering landmark along the Brisbane River that complements the State Tennis Centre.

The Tennyson site represents an outstanding development opportunity for the private sector given its attractive riverfront location and proximity to public transport and road infrastructure.

### LAND TENURE

The site for the Tennyson Riverside Development is currently owned by Enertrade, a Queensland Government Owned Corporation.

The real property descriptions for the site are:

- Lot 1 on RP 100860, Parish of Yeerongpilly, County of Stanley;
- Lot 2 on RP 100860, Parish of Yeerongpilly, County of Stanley;
- Lot 1 on RP 37962, Parish of Yeerongpilly, County of Stanley;
- Lot 663 on Plan SL 2532, Parish of Yeerongpilly, County of Stanley; and
- a road reserve.

The site contains certain electricity network infrastructure owned by Powerlink Queensland and Energex that will need to be considered in developing the project. This infrastructure includes an electrical substation, comprising both transmission and distribution assets, and underground electrical cables connecting the substation to the surrounding electricity network.

High voltage electrical cable runs, 20 metres wide and with cables one metre deep, bound the site on the three sides excluding the riverbank. The electrical substation exists on the southern perimeter of the site, adjacent to the rail line.

A process is currently underway to excise the electrical substation from the site and establish easements to accommodate the electrical cables. The boundaries of the easements and the area to be excised for the substation are yet to be agreed, surveyed and registered. An indication of the land to be allocated for these purposes is provided on the site map at Attachment 1.

Further information regarding the subdivision and easements will be provided in Stage 2 of the competitive bid process.

Detailed information about the site will be made available to shortlisted proponents in Stage 2 of the competitive bid process including any available information about:

- native title issues or claims;
- cultural heritage issues;
- site contamination; and
- environmental issues.

The Government accepts no responsibility with respect to site-related issues, including those identified above. Proponents must satisfy themselves in regard to these issues.

### PLANNING ISSUES

The successful proponent will be required to obtain all requisite planning approvals for the project. Further information on planning issues will be made available in Stage 2 of the competitive bid process.

# 4 Ownership and Operational Arrangements

The Government intends to retain ownership of the land for the State Tennis Centre while making the land for the associated development available under appropriate tenure arrangements to the successful proponent.

The Government requires the development of the State Tennis Centre and the development and operation of the associated development to be fully at the successful proponent's cost. This includes all costs associated with the design, construction and financing of the development.



# **5** Stakeholders

#### TENNIS QUEENSLAND

Tennis Queensland is seeking to use the State Tennis Centre for the development of tennis in Queensland, including the coaching and training of state, national and international elite players and squads.

The State Tennis Centre is to include an administrative centre to accommodate Tennis Queensland's administrative staff and development officers.

All requests for information from Tennis Queensland are to be directed to the Project Director of the Tennyson Riverside Development Project Office (see Section 10).

No information is to be requested from or contact made with Tennis Queensland about this project during the competitive bid process.



### DEPARTMENT OF PRIMARY INDUSTRIES ANIMAL RESEARCH INSTITUTE

The site is adjacent to the Animal Research Institute site, which is owned by the Department of Primary Industries.

There may be opportunities for linkages between the project and the Animal Research Institute site on matters relating to car parking, site access, security and access to public transport services.

All requests for information from the Department of Primary Industries regarding the Animal Research Institute site are to be directed to the Project Director of the Tennyson Riverside Development Project Office (see Section 10).

No information is to be requested from or contact made with the Department of Primary Industries about this project during the competitive bid process.

### OTHER STAKEHOLDERS

Enertrade currently owns the site, and Energex and Powerlink Queensland will both have registered easements on the site.

All requests for information from Enertrade, Energex or Powerlink Queensland are to be directed to the Project Director of the Tennyson Riverside Development Project Office (see Section 10).

No information is to be requested from or contact made with these parties about this project during the competitive bid process.

# **6** Competitive Bid Process

# STAGE 1 - EXPRESSIONS OF INTEREST

Proponents are invited to submit an EOI Proposal for the design, construction and financing of the Tennyson Riverside Development and operation of the associated development, incorporating as a minimum the facility mix and scope identified in Section 2.

In responding to this invitation, proponents should submit an EOI Proposal that fully addresses the Evaluation Criteria set out in Section 7, providing sufficient information to enable the proponent's development concept, corporate structure, management and technical expertise, financial capacity, and track record to be clearly understood and properly assessed.

Proponents will be shortlisted for inclusion in Stage 2 based on their responses to the information sought in Section 7. Consideration will be given to the relative merits of each proponent and its prospective capacity and commitment to satisfy the Government's stated objectives as assessed through the Evaluation Criteria outlined in Section 7 and any other matters the Government considers relevant. Shortlisting will be at the absolute discretion of the Government.

During Stage 1 of the competitive bid process, proponents will be provided with the opportunity to visit the site.

The Government reserves the right, in its absolute discretion, to provide details of proponents' EOI Proposals to relevant Government officers, agencies and advisors.

The Government reserves the right, in its absolute discretion, to request clarification from any proponent on its EOI Proposal. Any such clarifications will be sought in writing.

# STAGE 2 - DETAILED DEVELOPMENT PROPOSAL (DDP)

Proponents selected for inclusion in Stage 2 will be issued with a Request for DDP document outlining the terms and procedures governing this stage of the process. Further, shortlisted proponents will have access to additional information on the site and the project. The document will include:

- all mandatory technical specifications for the State Tennis Centre;
- · timeframes for completion of the State Tennis Centre;
- arrangements for access to information such as site information, previous studies and other reference material;
- details of the question and answer process;
- draft Development Agreements;
- · details of generic Conditions Precedent; and
- details of the evaluation criteria and evaluation process for determination of the preferred proponent.





In Stage 2, shortlisted proponents will be requested to provide a DDP covering, among other things:

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- design and development documentation;
- development structure, including proposed tenure arrangements;
- corporate and commercial aspects of the proposal;
- · evidence of funding;
- proposed risk allocations;
- details regarding the support sought from Government having regard to the objectives for the project;
- details regarding the financial returns to the Government from the project;
- marketing, communication and promotional strategies;
- a detailed program for the development that fits within the Government's required timeframes;
- financial models; and
- a detailed transport strategy and plan for major events.

The Government reserves the right not to select a preferred proponent following its evaluation of DDPs, but to require certain shortlisted proponents whose DDPs have not met the Government's objectives, to submit revised DDPs for evaluation.

The Government's intention is to finalise and execute the Development Agreement/s between the state and the preferred proponent as soon as possible following the lodgement and review of DDPs. Accordingly, the Government will be seeking maximum certainty, clarity and unconditionality in the DDPs lodged.

The Government reserves the right to proceed with an alternative proponent if the Development Agreement/s cannot be finalised to the Government's satisfaction with the preferred proponent within the timeframe to be specified upon announcement of the preferred proponent.

#### TIMEFRAMES

The Government envisages Stage 1 of the competitive bid process will follow the timeframes set out below.

| Stage 1 – Expressions of Interest                                                 | Completion/timing           |
|-----------------------------------------------------------------------------------|-----------------------------|
| Invitation for EOIs                                                               | On release of this document |
| Submission of EOI Proposals                                                       | 14 November 2003            |
| Review and evaluation of EOI Proposals and shortlisting of proponents for Stage 2 | December 2003               |

The Government is firmly committed to achieving the proposed timeframes. Notwithstanding this, the Government reserves the right to change the timeframes and the key dates mentioned above due to unavoidable delays or should circumstances otherwise require.



The competitive bid process will be overseen by a Probity Auditor appointed to the process. At each stage, particular rules of conduct will apply, covering such areas as:

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- conflicts of interest;
- confidentiality;
- document procedures and security;
- meetings protocols; and
- media releases, promotional resources and public presentations.

Proponents who have any concerns about the conduct or probity of the competitive bid process can contact the Probity Auditor at the following address:

#### Executive Director



Argyle Corporate Advisers Pty Limited The Mansions Ground Level 40 George Street Brisbane Qld 4000

Telephone: +61 7 3003 0600 Facsimile: +61 7 3003 0144

#### PROTOCOLS

For Stage 1, it is intended that any further information transmitted by the Government will be for clarification only. All inquiries from proponents are to be made in writing to the Project Director at the Tennyson Riverside Development Project Office (see Section 10).

Government responses generally affecting the project or the conduct of the competitive bid process, or bearing on Government policy, will be forwarded to all proponents. Responses to questions that are claimed by a proponent to be confidential to that proponent, and accepted by the Government as such, will not be broadcast.



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# 7 EOI Requirements and Evaluation Criteria

In Stage 1, proponents will be evaluated against the following criteria (in no particular preferential order):

- total development and operational concept;
- development experience and expertise;
- operator experience and expertise;
- financial capacity; and
- project management structure and resources.

# FORMAT OF EOI PROPOSALS

The following matters should be taken into account:

- EOI Proposals should contain all information and details requested in this document. The information should be prepared having regard to the project objectives; and
- EOI Proposals should be formatted in accordance with the EOI Requirements and Evaluation Criteria set out in this section.

# **EVALUATION CRITERIA**

#### **Total Development and Operational Concept**

Demonstration of a development and operational concept that has the potential to satisfy the project objectives.

Proponents are required to indicate, at a high level:

- their vision for the site;
- the proposed elements and quality of the State Tennis Centre;
- the proposed elements and quality of the associated development;
- how both developments would be integrated with each other and the surrounding area; and
- how the development and operational concept would limit the state's contribution to the project to the provision of the land while maximising the state's financial returns and minimising the risks to the state.

EOI Proposals should include a preliminary concept plan.



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### **Development Experience and Expertise**

Demonstration of capability and experience in undertaking projects of a similar type and scale, including design and construction.

Proponents are to provide evidence of their capability and experience to undertake all aspects of large, mixed-use development projects. In particular, proponents must provide evidence of their capability and experience in relation to the:

- development of sporting facilities of a similar type and scale, with an emphasis on functionality and operational efficiency;
- supervision of projects of a similar type and scale, including urban and land use planning and structured titling arrangements;
- design and construction of comparable infrastructure projects to program, budget and defined quality standards with particular emphasis on the construction, planning and contamination issues that are likely to arise with the project;
- management of any approvals required by the proponent in order to progress the State Tennis Centre and associated development; and

 management of effective internal and external stakeholder consultation processes throughout the design, construction and operational phases.

#### **Operator Capability and Experience**

Demonstration of capability and experience in operating facilities of a similar type and scale to those proposed for the associated development.

Proponents are to provide evidence of their capability and experience on:

- the operation and management of facilities of similar size, structure and function to those proposed as part of the associated development;
- the marketing and promotion of such facilities;
- the development, growth and retention of a sound client base;
- revenue generation; and
- resource and asset management.

### **Financial Capacity**

#### Demonstration of:

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- the financial capacity of the proponent and consortium members to deliver the project;
- the experience of the proponent and consortium members in raising funding for projects of a magnitude commensurate with the size and scope of this project;
- a financial approach that has the potential to deliver the project in accordance with the project objectives; and

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an appropriate financial structure for undertaking the project.

In particular, proponents should address the following criteria, and where relevant refer to the experience and delivery record gained by the proponent and consortium members on similar projects:

- the demonstrated financial capacity of the proponent and consortium members, including:
  - a statement confirming the solvency of the proponent and consortium members and if any party is a subsidiary, the relevant parent company;
  - annual (and where applicable, interim) reports and full audited financial statements for the past three years (or other equivalent financial information) for the proponent and consortium members;
  - a description of the level and type of any parent company support expected to be provided to the proponent and consortium members including a confirmation letter from any parent companies; and
  - copies of any announcements made to the authorities of the Stock Exchange, market or bourse on which the stocks or shares in relation to any of the proponent and consortium members, are publicly traded since the date of the latest set of accounts which:
    - materially influence or impact, or have the potential to materially influence or impact upon the financial performance or financial position of the proponent and consortium members as represented in those accounts; or
    - (2) details any circumstances which may affect the ability of the proponent and consortium members to meet their contractual obligations in relation to the project;
- the indicative funding structure for the project (including indicative proportion of debt, equity and hybrid financing) and details of how the financing is likely to be secured;
- the indicative strategies for procuring and underwriting equity funding for the project, including sources of equity for the project that the proponent has identified;
- the indicative strategies for procuring and underwriting debt funding for the project, including any proposals or financier's letter of support obtained; and
- the proponent and consortium members experience and delivery record in developing effective financing structures for undertaking projects of this nature.

Proponents are requested to provide financial information for each member of its consortium.

Note: While proponents are not required to lock in funding arrangements or financiers as part of the EOI process, they are to demonstrate a capability to provide funding for the project. Demonstration of a project management structure and resources that have the potential to satisfy the project objectives.

Proponents are requested to provide:

- a description and diagram/chart identifying the proponent's indicative corporate and management structure including an outline of proposed roles and responsibilities of consortium members and other relevant parties for the project;
- evidence of the proponent and consortium members' experience and delivery record in developing effective management and structural arrangements for undertaking projects of this nature, including details of the proposed structure of the legal entity that the proponent proposes would enter into contractual arrangements with the state for the project;
- curricula vitae of key nominated personnel setting out their relevant experience in comparable or other major projects; and
- confirmation of resource availability for the project.

Also, proponents should address their ability to form and maintain a consortium that:

- over an extended period of time, is able to undertake a significant infrastructure project of the type anticipated for the project; and
- is able to work in partnership with Government clients on large and complex infrastructure projects and in the delivery and management of facilities and associated services.

# **OTHER EOI REQUIREMENTS**

#### Proponent and Consortium Members' Details

Where the proponent or any consortium member is a publicly listed company, the EOI Proposal does not need to include shareholder information in relation to that entity.

The EOI Proposal is to include:

(a) For the proponent, the following information:

- (i) full name, nature of the entity, address, telephone numbers, email, facsimile numbers and ABN numbers and the principal contacts (including, where the proponent is a company, details of its current directors, shareholders, place of incorporation, registered office and company number);
- (ii) where the proponent has a holding company, its position in the relevant group structure, together with (if not provided above) the name, registered office (or equivalent), head office address, current directors, principal shareholders, beneficial owners (if different from principal shareholders) and the most recent audited accounts of the ultimate holding company/parent entity (or equivalent legal body);
- (iii) a certification that the proponent is not aware of any conflicts of interest and has not engaged in any anti-competitive conduct or any other similar conduct in relation to the preparation or lodgement of the EOI Proposal; and





- (iv) a statement that the proponent is not aware of any application to place the proponent or any of its shareholders or consortium members (or any relevant holding company) in liquidation, administration or equivalent.
- (b) For each consortium member, the following information:
  - the information specified in paragraphs (a) (i) to (iii) as if references to the proponent were a reference to the consortium member;
  - (ii) the role of the consortium member;
  - (iii) contact details for the person nominated by the proponent as the point of contact for the purposes of Stage 1;
  - (iv) description of its relationship with the proponent and other consortium members, together with summary details of any agreements or other documents evidencing these relationships; and
  - (v) summary details of any shareholder agreements (or other relationship documents) with other consortium members.

#### **Board Support**

A statement of support signed by the Chairman, Chief Executive Officer or an authorised Director of the board (or equivalent entity) of the proponent, and the boards (or equivalent entity) of each of the consortium members, confirming support for the lodgement of the proponent's EOI Proposal.

#### **Confirmation of Resources**

Evidence the proponent has the necessary resources (or a reasonable expectation of obtaining access to such resources) to ultimately prepare and lodge a DDP.

#### Confirmation of Capacity to Meet Contractual Obligations

Confirmation the proponent and consortium members have the legal capacity to undertake the proposal for the project and that there is no restriction under any relevant law to prevent them from proposing.



Details of any circumstance that may affect the ability of the proponent and consortium members to meet their contractual obligations in relation to the project are to be clearly stated. Examples of circumstances, which should be detailed, are:

- regulatory or law enforcement agency investigations of the proponent and consortium members, related organisations or principals;
- contract termination for cause against the proponent and consortium members;
- significant disputes or current or pending litigation or arbitration in which the proponent, consortium members, related organisations or principals have been or are currently involved;
- details of any event between the date on which the latest set of accounts were authorised for issue and the date of the submission of the EOI Proposal that, had the accounts not been authorised for issue until the EOI Proposal submission date, would have required to be adjusted for, or disclosed;

- material contingent liabilities of the proponent and consortium members;
- mergers/acquisitions, as can be notified, either occurring in the last three months or which are imminent; and

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 any application to place the proponent and consortium members or any of their shareholders or participants (or any relevant holding company) in liquidation, administration or equivalent (whether voluntary or involuntary).

#### **Certification of EOI Proposals**

EOI Proposals are to be accompanied by a certification as to the accuracy and completeness of the information provided in the EOI Proposal. The certification is to be made by an authorised Director (or equivalent officer) of the proponent and each consortium member.

# 8 General Terms and Conditions

# **COSTS BORNE BY PROPONENTS**

All costs and expenses incurred by proponents in any way associated with the development, preparation and submission of EOI Proposals and DDPs, including, but not limited to attendance at meetings, discussions, etc, and providing any additional information required by the Government, will be borne entirely and exclusively by proponents.

# **OWNERSHIP OF PROPOSAL DOCUMENTS**

All documents submitted by proponents in the competitive bid process become the property of the Government on lodgement.

Such intellectual property rights of the proponent or other parties, as may be clearly demonstrated by the proponent to exist in the information contained in materials submitted by the proponent, will remain the property of the proponent or those other relevant parties.

The proponent licenses and authorises the Government, its officers, employees, advisors, consultants and agents to copy, adapt, disclose or do anything else necessary (in the Government's opinion) to all material (including that which contains intellectual property rights of the proponent or other parties) contained in the documents or materials submitted, for the purposes of the competitive bid process including, without limitation, for use in:

- its evaluation of EOI Proposals;
- negotiation of the Development Agreements;
- other related matters; and
- complying with applicable laws.



The Government may make such copies of documents or materials submitted, as it requires for its purposes.

### STATE AND LOCAL GOVERNMENT TAXES

All state taxes and charges will apply, including without limitation, stamp duty, payroll tax, land tax, and local government charges and taxes.

### **COLLUSIVE TENDERING**

Proponents and their respective officers, employees, agents and advisors must not engage in any collusive tendering, anti-competitive conduct or any other similar conduct with any other proponent or any other person in relation to the preparation or lodgement of EOI Proposals and DDPs.

### **CONFLICT OF INTEREST**

Proponents and their respective officers, employees, agents and advisors must not place themselves in a position that may, or does, give rise to a conflict of interest (or a potential conflict of interest) between the interests of the Government (on the one hand), and any other interests (on the other hand), during the competitive bid process.

## **RETURN OR DESTRUCTION OF INFORMATION**

The Government reserves the right, in its absolute discretion, at any stage following termination of the proponent's participation in the competitive bid process or the termination of the competitive bid process, to require that material and other information provided to proponents (and copies or reproductions of such information) be either destroyed by the proponent or returned to the Government at any stage. The Government may require that the proponent provide evidence (in a form satisfactory to the Government) that any Government requirements in this respect have been fully complied with.

#### DISCLAIMER

Proponents must make and rely on their own investigations and satisfy themselves in relation to all aspects of the project. The State will not be liable for any incorrect or misleading information or omission to disclose information whether provided in this document or otherwise.



### **RIGHT TO AMEND PROCESS**

The Government reserves the right to amend the process set out in this document by notice in writing to proponents who have not withdrawn or been excluded from the process. Such amendment may include cancellation, variation or supplementation of the process.

### NO OBLIGATION

No legal or other obligation other than those associated with this section shall arise between a proponent and the state unless and until formal project documentation has been signed. The Government is not obliged to proceed with any EOI Proposals or proponents, and no compensation will be payable.

#### CONFIDENTIALITY

The names of those registered to receive this Invitation for EOI document will not be made available to other parties.

All information submitted by proponents will be examined and assessed by the evaluation team, its specialist consultant advisors and any other party from whom the evaluation team may seek advice.

The confidentiality of any information submitted by proponents, which is not available to the public, will be respected except where disclosure is permitted or required by law.

All proponents will be required to maintain confidentiality with respect to their own EOI Proposals, and should not seek details of competing proposals.

Proponents must not make any public statements whatsoever in relation to the project.

#### ADDENDA

Written addenda issued by the Tennyson Riverside Development Project Office are the only explanations of, or amendments to, the Invitation for EOI document that will be accepted.

All proponents should check they are registered with the Tennyson Riverside Development Project Office (see Section 10) to ensure they are provided with addenda information.

Proponents are to satisfy themselves that they have received, acknowledged and addressed all addenda that may have been issued up to the closing date for lodgement of EOI Proposals. Updates of addenda issued will be available on the Sport and Recreation Queensland website at www.sportrec.qld.gov.au/trd.

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Without limiting its rights, the Government reserves the right, in its absolute discretion and at any time during the competitive bid process, to:

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- alter its approach during any negotiations;
- allow new proponents to participate in the competitive bid process;
- · allow the withdrawal or addition of consortium members to a proponent;
- · vary or amend its evaluation criteria without notification;
- take into account any information from its own and other sources in evaluating EOI Proposals;
- give preference to any one or more of the Evaluation Criteria over other criteria and consider the relative trade-offs between criteria;
- question any proponent in order to clarify any matter relating to the proponent's EOI Proposal;
- conduct due diligence investigations;
- draw on outside expertise as required;
- invite presentations from proponents if considered necessary;
- require additional information from any proponent;
- vary its requirements for EOI Proposals;
- accept an EOI Proposal that does not comply with the requirements of this document;
- terminate further participation in the competitive bid process by any proponent;
- invite further EOI Proposals;
- change the structure, procedures and timing of the competitive bid process;
- reject any EOI Proposal or all EOI Proposals at any time for any reason;
- negotiate with one or more proponents and to enter into the Development Agreements without prior notice to any other proponent;
- accept an EOI Proposal notwithstanding that the net proceeds or other benefits derived from that EOI Proposal will be less than those which may be derived from another EOI Proposal;
- terminate or reinstate the competitive bid process;
- vary the transaction and sale structure and take into consideration different transaction and sale structures submitted by proponents;
- not provide proponents any reasons for any actions or decisions it may take, including in respect
  of the exercise by the Government of any or all of the abovementioned rights; and
- take such other action as it considers, in its absolute discretion, appropriate in relation to the competitive bid process.

# 9 Lodgement of EOI Proposals

EOI Proposals comprising an original loose-leaf copy (maximum 40 pages) and 10 bound copies shall be submitted in a sealed envelope, clearly labelled Tennyson Riverside Development, Expression of Interest Proposal. EOI Proposals are to be deposited in the tender box at, or sent by prepaid post to:

Tennyson Riverside Development Sport and Recreation Queensland Level 5 Forestry House 160 Mary Street Brisbane QLD 4000

by the date and time stated below for closing of submissions. Supplementary material that is not specific to the EOI Proposal may be included as appendices and may be considered as part of the proposal documentation.

Facsimile and emailed EOI Proposals will not be accepted and the Government reserves the right to reject late submissions.

EOI Proposals are to be received by 2pm AEST on 14 November 2003.

# **10 Further Information**

Contact the Tennyson Riverside Development Project Director

Sport and Recreation Queensland PO Box 187 Brisbane Albert Street Qld 4002

Telephone: +61 7 3235 9582 Facsimile: +61 7 3235 9487

Email:

Internet: www.sportrec.qld.gov.au/trd



# **Further information**

Contact the Tennyson Riverside Development Project Director Sport and Recreation Queensland ' PO Box 187 Brisbane Albert Street Qld 4002 Telephone: +61 7 3235 9582 Facsimile: +61 7 3235 9487 Email:

Internet: www.sportrec.qld.gov.au/trd







www.sportrec.qld.gov.au

### Queensland Government Sport and Recreation Queensland

# TENNYSON RIVERSIDE DEVELOPMENT

#### COMPETITIVE BID PROCESS - STAGE 1

#### REQUEST FOR DOCUMENTATION

(this form may be completed electronically or printed and completed by hand)

#### **Contact details**

| Name:           |  |
|-----------------|--|
| Position:       |  |
| Company:        |  |
| Postal address: |  |
| Telephone:      |  |
| Facsimile:      |  |
| Email:          |  |

#### Document delivery method

Please tick your preferred method of receiving the *Invitation for Expressions of Interest* document. Any further documentation will be forwarded to the above postal address.



] Post

Email

Collection:

ion: Tennyson Riverside Development Project Office Sport and Recreation Queensland Level 5 Forestry House 160 Mary Street Brisbane

Email completed form to <u>trd.project@srq.qld.gov.au</u> or print and return via facsimile to +61 7 3235 9487







#### TENNYSON RIVERSIDE DEVELOPMENT

#### Site Inspection 10 November 2003

The Invitation for Expressions of Interest document provided for a visit to the site of the former Tennyson Power Station. The aim was to allow interested parties to familiarise themselves with the site and its physical characteristics. An initial site visit was held on Monday 20 October 2003.

A second tour of the site was organised for the benefit of certain registered proponents who were unavailable to attend the first site visit or registered their interest after 20 October 2003. This site inspection was held on Monday 10 November 2003 at 9.00am.

Representatives of Sport and Recreation Queensland (Tim Peisker and And And Enertrade (Methods and met on site at 8.45am to discuss the protocols and registration arrangements for the site inspection. The same protocols that were adopted during the first site inspection were applied. Proponent representatives were required to sign an Enertrade form to acknowledge they would abide by the directions of Enertrade during the tour.

The group assembled at 9.00am and the TRD Project Director, Mr Tim Peisker provided a brief overview of the tour including information on site hazards. It was explicitly stated that the tour would not include any briefing with regard to the project or the Government's competitive bid process.

The inspection consisted of a circuit of the power station building, inspection of the wharf and a tour through the power station building including the roof. The inspection concluded at approximately 10:20am.

The following people participated in the site inspection.

#### Site Visit 10 November 2003 – Attendees

| Company                          | Name  |
|----------------------------------|-------|
| Brannock & Associates            | · · · |
| Babcock & Brown                  |       |
| PTW                              |       |
| Citta                            |       |
| Thiess                           |       |
| Abigroup Contractors Pty Limited |       |
| University of Queensland         |       |

Chris Nadarajah 11 November 2003



COPY

# **Tennyson Riverside Development**

# **Evaluation of Expressions of Interest Proposals**

# 25 November 2003

A Report to the Tennyson Riverside Development Steering Committee

Strictly Confidential

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#### **Executive Summary**

On 3 October 2003, the Queensland Government announced the Tennyson Riverside Development (TRD) project comprising a State Tennis Centre and associated development on the former Tennyson Power Station site. Proponents were invited to submit an Expression of Interest (EOI) proposal for the design, construction and financing of the TRD and the operation of the associated development.

The due date for the submission of EOI proposals was 2.00 pm, Friday 14 November 2003. Seven (7) EOI proposals were received from the following proponents:

- Walker Corporation Pty Ltd;
- Citta Property Group, Babcock & Brown Pty Ltd and Abigroup Limited;
- Stockland Development Pty Ltd, Barclay Mowlem, Next Generation Clubs Australia Pty Ltd and Pat Rafter (Project Champion);
- Lend Lease Development Pty Ltd;
- Ariadne Australia Ltd, Watpac Limited and Abacus Property Group;
- Devine Limited, ABN AMRO and Multiplex; and
- Mirvac.

A broad summary of the EOI proposals which outlines the key project components is provided at Attachment 1.

The TRD Evaluation Committee evaluated the EOI proposals using the evaluation criteria and weightings previously endorsed by the TRD Steering Committee to determine the proponents' capability and experience to deliver the project. The Evaluation Committee also received specialist advice from two sub-committees, Technical Issues (Department of Public Works, Project Services) and Financial Analysis (Queensland Treasury Corporation).

The EOI proposals were generally of a high quality with proposed concepts for the associated development component of the project complementing the State Tennis Centre using a mix of residential and commercial facilities. Two EOI proposals, submitted by Walker Corporation Pty Ltd and Lend Lease Development Pty Ltd, were considered non-conforming and were not subject to further evaluation.

The Stockland and Mirvac proposals were considered the leading proposals with the Stockland proposal being marginally superior to that submitted by Mirvac. The next ranked proponent was Devine. All conforming proposals, with the exception of Ariadne, met the requirements of each evaluation criteria. Ariadne did not fully satisfy the operator experience and expertise criterion.

The Stockland development and operational concept exceeded the Government's minimum scope and facility requirements for the State Tennis Centre by including the opportunity for a multi-sport and entertainment venue as the home of Queensland tennis and potentially the Brisbane Bullets. While the additional development may have commercial benefits, Project Services noted this concept raised issues about shared use of facilities, the capacity of the site to host regular basketball games and acceptability to the local community.



The Stockland and Citta Property Group proposals involve private sector operation of the State Tennis Centre, while taking into account Tennis Queensland's interests and requirements. As the EOI document was silent on the operation of the State Tennis Centre, the Evaluation Committee noted these proponents may elect to alter their proposals or withdraw from the competitive bid process in the event the Queensland Government confirmed it will own the State Tennis Centre and appoint Tennis Queensland as the operator.

A number of the proposals also indicated access to the site may be required through the adjoining Animal Research Institute (ARI) site, either at the commencement of the project or in the future.

In light of these additional elements in some of the proposals, the Evaluation Committee recommends the Cabinet Budget Review Committee clarify the Government's position on the following issues prior to announcing the shortlisted proponents for Stage 2 of the project:

- the opportunity for access through the ARI site;
- ownership and operational arrangements for the State Tennis Centre; and
- the scope and functional activities of the State Tennis Centre, particularly whether multisport and entertainment activities could be conducted on a regular basis.

Following assessment of the EOI proposals, the Evaluation Committee recommends the following three (3) proponents be shortlisted:

- 1. Stockland Development Pty Ltd, Barclay Mowlem, Next Generation Clubs Australia Pty Ltd and Pat Rafter (Project Champion);
- 2. Mirvac; and
- 3. Devine Limited, ABN AMRO and Multiplex.

In the event that the Steering Committee wishes to shortlist more than three proposals, the Evaluation Committee recommends the following proponent be added:

4. Citta Property Group, Babcock & Brown Pty Ltd and Abigroup Limited.

However, as outlined in the report, the Evaluation Committee believes the disadvantages of a larger shortlist outweigh the advantages.

Subject to Steering Committee and Cabinet Budget Review Committee approval, these shortlisted proponents would be invited to further develop their concept for the TRD project and submit a more detailed proposal in accordance with the requirements set out in the Government's Stage 2 *Request for Detailed Development Proposals*.

The evaluation of the EOI proposals and the preparation of this report have been subject to independent probity oversight. The probity auditor will deliver a probity report on Stage 1 of the competitive bid process by early December 2003.



#### **1** Introduction

On 3 October 2003, the Queensland Government initiated a competitive bid process to facilitate the Tennyson Riverside Development (TRD) project, comprising a State Tennis Centre and associated development on the former Tennyson Power Station site. Proponents were invited to submit an Expression of Interest (EOI) proposal for the design, construction and financing of the TRD and the operation of the associated development.

The purpose of this report is to detail the process for the evaluation of the EOI proposals and provide the TRD Steering Committee with recommendations for the shortlisting of proponents for the TRD project.

Section 2 describes the evaluation process including the methodology adopted for the evaluation. Section 3 discusses the analysis of the EOI proposals and the shortlisting strategy. The recommendations of the Evaluation Committee including shortlisted proponents are provided in Section 4.

#### **2** Evaluation Process

#### 2.1 Composition of the Evaluation Committee

In accordance with the project's Probity Plan, an Evaluation Committee was established to evaluate the EOI proposals. The composition and operation of the Evaluation Committee were considered and endorsed by the TRD Steering Committee at its meeting of 12 November 2003. The Evaluation Committee comprises:

- Tim Peisker (Chair, SRQ);
- (SRQ), and
- (SRQ).

#### 2.2 Specialist Advisors

The Evaluation Committee was provided with specialist advice from the following two subcommittees on relevant evaluation criteria:

- Technical Issues (Department of Public Works, Project Services); and
- Financial Analysis (Queensland Treasury Corporation).

Specific terms of reference for each sub-committee were developed.

### 2.3 Evaluation Methodology

The evaluation of EOI proposals was undertaken using a weighted score assigned to each of the five (5) evaluation criteria listed in the *Invitation for Expressions of Interest* document. While the evaluation criteria were detailed in the *Invitation for Expressions of Interest* document, the weightings for each criterion were not disclosed to proponents.

The evaluation methodology including the evaluation weighting and scoring system was considered and endorsed by the TRD Steering Committee at its meeting of 12 November 2003.

| Criteria                                   | Weighting (%) |
|--------------------------------------------|---------------|
| Total development and operational concept  | 25            |
| Development experience and expertise       | 25            |
| Operator experience and expertise          | 15            |
| Financial capability                       | 25            |
| Project management structure and resources | 10            |
| Total                                      | 100           |

The evaluation criteria and their respective weightings are as follows:

The scoring system for each criterion, which reflects the quality of responses and the level of compliance, is:



| Score                                             | Description                                 |
|---------------------------------------------------|---------------------------------------------|
| 5                                                 | Exceeds requirements                        |
| 4                                                 | Meets requirements                          |
| 3                                                 | Meets requirements except for minor aspects |
| 2 Does not meet requirements but may be adaptable |                                             |
| 1 Major non-compliance with requirements          |                                             |

For each EOI proposal, scores from each Evaluation Committee member were considered and a moderation process was undertaken to determine a single collective 'raw' score for each criterion. Weighted scores were then calculated for each criterion and totalled for each EOI proposal. Proposals were ranked according to their total weighted scores (scored out of a possible 100).

No additional information was requested by the Evaluation Committee or specialist advisors to clarify specific issues with any EOI proposal.

The probity auditor attended all key meetings of the Evaluation Committee.

#### 3 Analysis of EOI Proposals

The due date for the submission of EOI proposals was 2.00 pm, Friday 14 November 2003. Seven (7) EOI proposals were received from the following parties:

- Walker Corporation Pty Ltd;
- Citta Property Group, Babcock & Brown Pty Ltd and Abigroup Limited;
- Stockland Development Pty Ltd, Barclay Mowlem, Next Generation Clubs Australia Pty Ltd and Pat Rafter (Project Champion);
- Lend Lease Development Pty Ltd;
- Ariadne Australia Ltd, Watpac Limited and Abacus Property Group;
- Devine Limited, ABN AMRO and Multiplex; and
- Mirvac.

No late EOI proposals were received. The opening of EOI proposals was witnessed by Tim Peisker, (probity auditor) as the Opening Committee.

A broad summary of the EOI proposals which outlines the key project components is provided at Attachment I.

#### 3.1 Conformance

The EOI proposals were assessed for compliance with the requirements specified within Section 7 of the *Invitation for Expressions of Interest* document. The majority of proposals demonstrated a high degree of conformance with only minor departures from the requirements. Two proposals did not adequately address the requirements and were assessed as non-conforming and subsequently disqualified from further evaluation. These were:

- Walker Corporation Pty Ltd: The proposal did not address any of the EOI requirements and provided no project information.
- Lend Lease Development Pty Ltd: The proposal was inconsistent with the Government's objectives for the TRD project. It proposed the State Tennis Centre be developed at an alternative location and the total site, including the adjoining ARI site, be redeveloped for a residential precinct.

#### 3.2 Specialist Advisors

The Evaluation Committee took account of the specialist technical and financial reports provided by the sub-committees.

Queensland Treasury Corporation provided a high level report on the strengths and weaknesses of each EOI Proposal in respect of the financial capacity of proponents and their corporate and management structure.

Project Services provided a high level technical report on the strengths and weaknesses of each EOI Proposal in respect of the proposed development and operational concept and proponents' relevant development and project management experience.

#### 3.3 Assessment of EOI Proposals

The Evaluation Committee made the following conclusions with respect to each evaluation criterion for the five (5) complying proposals.

#### Total Development and Operational Concept

While there was a significant variation in the development and operational concepts presented by proponents, all EOI proposals met or exceeded the requirements for this criterion. All EOI proposals relied predominately on residential development as the associated development component. The form and density of the residential development, however, varied significantly between proposals. The residential development ranged from low density properties aimed at the high end owner-occupier market to high density properties aimed at the investor market. The majority of the proposals were low to medium rise with one proponent, Devine, including a high rise residential tower. Project Services noted the height and bulk of the former power station is considered as a precedent for medium rise development.

Other than the requirements outlined in the *Invitation for Expressions of Interest* document, the Evaluation Committee does not recommend the Government provide any further guidance to proponents in Stage 2 on the form or scale of the associated development. The appropriateness of any proposed residential development will be addressed as part of the Brisbane City Council's development application processes. Further, the extent to which the proposed associated development complements the operation of the State Tennis Centre and integrates with surrounding areas and infrastructure will be considered in the evaluation of the Stage 2 proposals.

A number of alternative concepts for the associated residential development were also offered based on retention, partial retention or total demolition of the power station structure. These options were, in some cases, markedly different and involved varying levels of development density, parkland areas and river access. Several of the proposals also included the adjacent ARI site in their concept for road access, parking and open space.

The Stockland and Mirvac development concepts demonstrated a greater level of appreciation for the integration of the associated development and State Tennis Centre components of the project as well as the needs of the local area.

The Stockland development and operational concept exceeded the Government's minimum scope and facility requirements for the State Tennis Centre by including the opportunity for a multi-sport and entertainment venue, featuring a retractable roof, as the home of Queensland tennis and potentially the Brisbane Bullets. While this may have commercial benefits, Project Services noted this concept raised issues about shared use of facilities, the capacity of the site to host regular (fortnightly) basketball games and acceptability to the local community. The Stockland proposal also featured a range of leisure facilities including a child care centre and provided considerable open space that could be used for temporary overlay facilities during major tennis events.

The Mirvac proposal also demonstrated an understanding of the Government's and other stakeholders' requirements for the project, evidenced by the inclusion of significant areas for the overlay of facilities for tennis events.

The Stockland and Citta Property Group proposals involve private sector operation of the State Tennis Centre, while taking into account Tennis Queensland's interests and requirements. As the *Invitation for Expressions of Interest* document was silent on the operation of the State Tennis Centre, the Evaluation Committee noted these proponents may elect to alter their proposals or withdraw from the competitive bid process in the event the Queensland Government confirmed it will own the State Tennis Centre and appoint Tennis Queensland as the operator.

The Evaluation Committee recommends the Cabinet Budget Review Committee clarify the Government's position on ARI site access, ownership and operation of the State Tennis Centre and the scope and functionality of activities to be undertaken at the State Tennis Centre prior to announcing the shortlisted proponents for Stage 2 of the project.

The level of detail provided by proponents reflected the high level requirements of the *Invitation for Expressions of Interest* document and the limited ability of proponents to fully develop their project concepts in Stage 1. It was noted, therefore, that proposals would require considerable concept development and due diligence, especially in relation to issues such as utilisation of the power station structure, transport, use of the ARI site and public access to the river.

#### Development Experience and Expertise

All proponents demonstrated adequate development experience in large infrastructure projects. The Stockland, Devine and Mirvac proposals rated highly in terms of this criterion as they were able to demonstrate their consortium members had substantial experience in projects of a similar scale as the State Tennis Centre and associated development.

Citta Property Group is a recently formed property company and while its key staff have considerable experienced in property and infrastructure projects, the company's development experience and expertise was more limited than these other three proponents.

#### **Operator Experience and Expertise**

The proposals showed considerable variance in their responses to this criterion. In some proposals, this criterion was not addressed in a discrete manner and was not sufficiently differentiated from the development experience and expertise criterion.

Stockland rated particularly well for this criterion as it demonstrated a high level commercial awareness of the residential and ancillary leisure and child care components of the project. Ariadne did not satisfy this criterion as it provided limited evidence of its ability to operate the associated development.

#### Financial Capability

There was a high level of consistency among proponents in terms of their demonstrated financial capabilities. It was considered that all proponents possessed appropriate levels of experience in financing similar infrastructure projects. The lack of variation between proponents' scores reflects the early stage of the project. It was recognised that further development would be required to confirm project teams and supporting resources and to undertake more detailed financial analysis. This is supported by Queensland Treasury Corporation's advice that the proponents provided no project-specific financial information and little detail regarding the proposed financial structures.

In terms of proponents' indicative financing structures, the Evaluation Committee noted that Stockland and Mirvac stated they would fund the project internally.

#### Project Management Structure and Resources

There was little variation amongst proponents for this criterion with most parties demonstrating adequate project management structures.

Ariadne, however, provided a limited outline of its project management framework, particularly the details of its resources and key personnel. Ariadne's experience with the development of sporting infrastructure was also considered more limited than some of the other proponents.

#### Assessment Summary and Ranking

The Evaluation Committee's overall assessment of the EOI proposals is summarised in the table below. A more detailed table which presents the 'raw' scores allocated to each EOI proposal for each evaluation criteria is provided at **Attachment 2**.

|                               | <b>Evaluation Criteria (Weighted Scores)</b> |                                  |                        |                              |                       |                |
|-------------------------------|----------------------------------------------|----------------------------------|------------------------|------------------------------|-----------------------|----------------|
| Ranked<br>Proponent           | Development<br>Concept<br>25%                | Development<br>Experience<br>25% | Operator<br>Experience | Financial<br>Capacity<br>25% | Project<br>Management | Total<br>Score |
|                               |                                              |                                  | 1070                   |                              | 10 /0                 | 100            |
| 1. Stockland                  | 25                                           | 20                               | 12                     | 20                           | 8                     | 85             |
| 2. Mirvac                     | 25                                           | 20                               | 9                      | 20                           | 8                     | 82             |
| 3. Devine<br>Limited          | 15                                           | 20                               | 9                      | 20                           | 8                     | 72             |
| 4. Citta<br>Property<br>Group | 15                                           | 15                               | 9                      | 20                           | 8                     | 67             |
| 5. Ariadne<br>Australia       | 15                                           | 15                               | 6                      | 20                           | 6                     | 62             |

#### **3.4** Shortlisting Strategy

As shown in the table above, Stockland and Mirvac were the two outstanding proposals obtaining scores of 85 and 82 respectively. There was a clear gap between these proposals and the next ranked proposals, Devine (72), Citta Property Group (67) and Ariadne (62), which were each separated by 5 points. The lowest ranked proposal, Ariadne, was not considered to be sufficiently developed and the proponent did not adequately demonstrate its capabilities to undertake the TRD project.

While both the Stockland and Mirvac proposals were superior to the other proponents, the Evaluation Committee considers that three parties should be shortlisted for Stage 2 as this would ensure optimal competitive tension throughout the competitive process. According to the evaluation ranking, this shortlist would comprise Stockland, Mirvac and Devine.

Shortlisting three parties is considered an effective strategy given the risk that a party may withdraw from the process. This could occur if a proponent chose not to participate in Stage 2 (for instance, due to other project commitments or if its concept for the project was not commercially viable once the Government stated its position on certain key aspects of the project such as the ownership and operational arrangements for the State Tennis Centre).

A shortlisting strategy comprising a field of four proponents was also considered. This would include Stockland, Mirvac, Devine and Citta Property Group. Such a strategy would reflect the relative ranking of proponents in which there was only marginal separation between the third and fourth ranked proponents, Devine and Citta Property Group (on the basis that Citta Property Group had more limited development experience and expertise than Devine). Shortlisting four parties would also address the potential reduction in competitive tension which could result if a party withdrew from the process during Stage 2.

The Evaluation Committee noted a number of issues in relation to shortlisting four rather than three proponents. A larger field may be viewed unfavourably by the market given the reduced opportunity for success under the competitive bid process and the significant time and costs for developing Stage 2 proposals. Further, each proponent would have a reduced ability to secure the services of specialised industry professionals. These factors may result in shortlisted proponents not fully developing quality proposals during Stage 2.

#### 4 **Recommendations**

The Evaluation Committee has undertaken a thorough assessment of the EOI proposals against all criteria, taking into account reports from the specialist advisors. These reports outlined the relative strengths and weaknesses of EOI proposals with respect to the relevant criteria.

Following assessment of the EOI proposals, the Evaluation Committee recommends the following three proponents be shortlisted and invited to further develop their concept for the TRD project and submit a more detailed proposal in accordance with the requirements set out in the Government's *Request for Detailed Development Proposals*:

- 1. Stockland Development Pty Ltd, Barclay Mowlem, Next Generation Clubs Australia Pty Ltd and Pat Rafter (Project Champion);
- 2. Mirvac; and
- 3. Devine Limited, ABN AMRO and Multiplex.

The Evaluation Committee also submits to the Steering Committee for its consideration an alternative shortlist of four proponents subject to the issues raised in Section 3.4. This shortlist would account for the relative ranking of proponents in which there was marginal separation between the third and fourth ranked proponents. Such a shortlist would comprise the following proponents:

- 1. Stockland Development Pty Ltd, Barclay Mowlem, Next Generation Clubs Australia Pty Ltd and Pat Rafter (Project Champion);
- 2. Mirvac;
- 3. Devine Limited, ABN AMRO and Multiplex; and
- 4. Citta Property Group, Babcock & Brown Pty Ltd and Abigroup Limited.

The EOI proposals contained a number of innovative project concepts which included, amongst others, options for the commercial operation of the State Tennis Centre and partial use of the ARI site. Given the central nature of these options to proponents' overall concepts for the site, the Evaluation Committee recommends the Cabinet Budget Review Committee clarify the Government's position on certain aspects of the TRD project before the commencement of Stage 2 and any announcement of shortlisted proponents. Specific project matters are:

- the opportunity for access through the adjoining ARI site;
- the ownership and operational arrangements for the State Tennis Centre; and
- the scope and functional activities of the State Tennis Centre, particularly whether multisport and entertainment activities could be conducted on a regular basis.

The evaluation of EOI proposals and the preparation of this report have been subject to independent probity oversight. The probity auditor will deliver a probity report on Stage 1 of the competitive bid process by early December 2003.

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Tim Peisker (Chair) Acting Director Sport and Recreation Business Development Division

Manager Major Projects

Manager Business Development Advisory Unit

Date: .....

Date: .....

Date: .....

Reviewed by:

Executive Director Argyle Corporate Advisers Pty Limited

Date: .....





Attachment 1: Summary – Expressions of Interest Proposals

| EOI<br>No. | Proponent/Consortium                                                   | Key Consultants                                                                                                                                                                                                                                                                          | State Tennis Centre (STC)<br>Features                                                                                                                                                                                                                                                                                                                                                                                    | Associated Development<br>Features                                                                                                                                                                                                                                                                                                                                | Additional Features                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A          | Walker Corporation Pty<br>Ltd                                          |                                                                                                                                                                                                                                                                                          | No details provided.                                                                                                                                                                                                                                                                                                                                                                                                     | No details provided.                                                                                                                                                                                                                                                                                                                                              | Non-conforming proposal.                                                                                                                                                                                                                                                                                                                                                                                                    |
| В          | Citta Property Group<br>Babcock & Brown Pty<br>Ltd<br>Abigroup Limited | PTW Architects – master<br>planning and associated<br>development<br>PDT Architects – design of the<br>State Tennis Centre (STC)<br>SKM - town planning, traffic<br>and environment consulting<br>services<br>John Alexander Clubs -<br>specialist expertise in the<br>design of the STC | STC concept includes a<br>fitness/leisure club to adjoin the<br>centre court.<br>The proposal envisages a<br>formal partnership with Tennis<br>Queensland for managing the<br>STC. It is not envisaged that<br>large-scale non-tennis events<br>will be held regularly at the<br>facility.<br>The proposal also involves the<br>establishment of a tennis club<br>to maximise the operational<br>return of the facility. | <ul> <li>Alternative concepts for the associated development are proposed involving full and partial demolition of the powerhouse structure.</li> <li>These options involve a mix of associated development:</li> <li>small scale leisure and commercial retail; and</li> <li>single family small lot housing and low rise and medium rise apartments.</li> </ul> | <ul> <li>A Special Purpose Vehicle<br/>would be established for the<br/>project.</li> <li>For project financing: <ul> <li>Babcock &amp; Brown will<br/>underwrite the consortium<br/>equity requirement; and</li> <li>Suncorp will be the senior<br/>debt provider.</li> </ul> </li> <li>The proposal envisages that a<br/>parcel of the adjacent DPI site<br/>could be used for overflow event<br/>car parking.</li> </ul> |





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| EOI<br>No. | Proponent/Consortium                                                                                                                                                                  | Key Consultants                                                                                                                                                                        | State Tennis Centre (STC)<br>Features                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Associated Development<br>Features                                                                                                                                                                                                                                                                                                                                                                                                                                    | Additional Features                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| C          | Stockland Development<br>Pty Ltd (Project Leader)<br>Barclay Mowlem<br>(Constructors)<br>Next Generation Clubs<br>Australia Pty Ltd<br>(Operator)<br>Pat Rafter (Project<br>Champion) | Bligh Voller Nield - project<br>architect<br>Epell Ollsen – traffic and<br>transport<br>Robert Bird and Partners –<br>engineering services<br>Pike Mirls McNaulty - master<br>planning | Centre court stadium features a<br>retractable roof system which<br>will allow basketball and other<br>major events to be staged at the<br>centre.<br>Eddie Groves, the owner of the<br>Brisbane Bullets, has been<br>involved in developing the<br>submission and it is proposed<br>the centre could operate as a<br>commercial basketball centre in<br>addition to tennis (as the home<br>for the Brisbane Bullets).<br>The STC contains ancillary<br>health and leisure facilities and,<br>in addition to 16 hard courts,<br>also features:<br>4 natural grass courts; and<br>2 clay courts. | <ul> <li>Two options for the associated development are provided:</li> <li>refurbishment of the powerhouse; and</li> <li>demolition of the power station and construction of new residential accommodation.</li> <li>A mix of associated development is proposed:</li> <li>small scale leisure and commercial retail development; and</li> <li>mixed use residential property development comprising prestige riverfront homes, apartments and penthouses.</li> </ul> | <ul> <li>The proposal envisages the development of:</li> <li>a leisure and lifestyle club (Next Generation Lifestyle Club) which would include facilities such as swimming pool, gym, climbing walls and café; and</li> <li>a commercial child care centre (ABC Learning Centres).</li> <li>Stockland intends to fund the capital contributions for the project internally and avoid the need for specific project financing.</li> </ul> |
| D          | Lend Lease<br>Development Pty Ltd                                                                                                                                                     |                                                                                                                                                                                        | No specific features of the STC<br>were provided.<br>It is proposed the STC would<br>not be located at the power<br>station site.                                                                                                                                                                                                                                                                                                                                                                                                                                                               | No details were provided.                                                                                                                                                                                                                                                                                                                                                                                                                                             | Non-conforming proposal.<br>It is proposed both the power<br>station site and adjacent DPI site<br>would be combined to create a<br>larger residential precinct. The<br>development would not feature a<br>STC, which would be located at<br>an alternative site.                                                                                                                                                                        |

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| EOI<br>No. | Proponent/Consortium                                                                        | Key Consultants                               | State Tennis Centre (STC)<br>Features                                                                                                                                                                                                                                                                                                                                                                                                            | Associated Development<br>Features                                                                                                                                      | Additional Features                                                                                                                                                                            |
|------------|---------------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| E          | Ariadne Australia Ltd<br>Watpac Limited<br>Abacus Property Group                            | Daryl Jackson Pty Ltd –<br>project architects | The submission included a<br>broad conceptual site plan<br>showing the configuration of<br>the STC. However, no specific<br>features of the STC were<br>provided.                                                                                                                                                                                                                                                                                | The associated development<br>involves refurbishment of the<br>powerhouse, including partial<br>demolition of the northern<br>most part of the powerhouse<br>structure. | A formal Joint Venture (JV)<br>between the proponents would<br>be established.<br>It is envisaged the JV would<br>enter into a PPP type<br>arrangement with the<br>Government for the project. |
| F          | Devine Limited<br>ABN AMRO (Project<br>Financier)<br>Multiplex (Design and<br>Construction) | Cox Rayner – project architects               | <ul> <li>Two options for the project are provided which both involve different configurations for the STC and the associated development components:</li> <li>refurbishment of the powerhouse for use as an all weather centre court and sports institute; and</li> <li>demolition of the power station with greenfield development of the STC and residential accommodation.</li> <li>The STC includes a recreation and health club.</li> </ul> | The associated development<br>component features a mix of<br>high and low-medium rise<br>residential accommodation.                                                     | A SPV would be established for<br>the project.<br>Devine stated the appropriate<br>funding type would depend on<br>the final structure and legal<br>relationship with the<br>Government.       |



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| EOI<br>No. | Proponent/Consortium | Key Consultants                                                      | State Tennis Centre (STC)<br>Features                                                                                            | Associated Development<br>Features                                                                                                                                                      | Additional Features                                                                                                                                                        |
|------------|----------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| G          | Mirvac               | HOK – sports architect<br>Young Consulting Engineers –<br>STC design | The centre court and its support<br>facilities feature a sunken<br>design to increase the visible<br>amenity of the development. | Two options are proposed for<br>the associated development<br>component which both<br>involve the same design and<br>configuration for the STC:                                         | Mirvac intends to undertake all<br>aspects of the project internally,<br>including financing, project<br>management, construction and<br>architecture.                     |
| -          |                      |                                                                      | ·                                                                                                                                | <ul> <li>refurbishment of the<br/>powerhouse (involving<br/>partial demolition) for low<br/>and medium rise<br/>residential<br/>accommodation; and</li> </ul>                           | The proposal envisages that a<br>parcel of the adjacent DPI site<br>could be used for a recreational<br>park and wetland area to<br>improve the amenity of the<br>project. |
|            |                      |                                                                      |                                                                                                                                  | <ul> <li>demolition of the power<br/>station for development of<br/>lower density residential<br/>accommodation and<br/>capacity for greater public<br/>riverfront parkland.</li> </ul> | The proposal also features the<br>ability to integrate the adjacent<br>DPI site at some future time to<br>enhance landscaping and<br>transport options.                    |
|            |                      |                                                                      |                                                                                                                                  | The associated development<br>also features a health and<br>leisure club.                                                                                                               |                                                                                                                                                                            |

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# Attachment 2: Summary – Assessment of EOIs

|                         |                        |                           |                     |                          | CRI          | TERIA                    |             |                          |                           |                          |                   |         |
|-------------------------|------------------------|---------------------------|---------------------|--------------------------|--------------|--------------------------|-------------|--------------------------|---------------------------|--------------------------|-------------------|---------|
| PROPONENT               | Total dev<br>operation | clopment &<br>nal concept | Devel<br>experience | opment<br>& expertise    | Operator exp | experience &<br>ertise   | Financial o | capability               | Project ma<br>structure & | anagement<br>& resources | TOTAL             | RANKING |
|                         | Raw<br>Score           | Weighted<br>Score<br>25%  | Raw<br>Score        | Weighted<br>Score<br>25% | Raw<br>Score | Weighted<br>Score<br>15% | Raw Score   | Weighted<br>Score<br>25% | Raw Score                 | Weighted<br>Score<br>10% | Weighted<br>Score |         |
| -                       | 1-5                    | x / 100                   | 1 - 5               | x / 100                  | 1 - 5        | x / 100                  | 1 - 5       | x / 100                  | 1-5                       | x / 100                  | 100               |         |
| Citta Property<br>Group | .3                     | 15                        | 3                   | 15                       | 3            | 9                        | 4           | 20                       | 4                         | 8                        | 67                | 4       |
| Stockland               | 5                      | 25                        | 4                   | 20                       | 4            | 12                       | 4           | 20                       | 4                         | 8                        | 85                | 1       |
| Ariadne                 | 3                      | 15                        | 3                   | 15                       | 2            | 6                        | 4           | 20                       | 3                         | 6                        | 62                | 5       |
| Devine                  | 3                      | 15                        | 4                   | 20                       | 3            | 9                        | 4           | 20                       | 4                         | 8                        | 72                | 3       |
| Mirvac                  | 5.                     | 25                        | 4                   | 20                       | 3            | 9                        | 4           | 20                       | 4                         | 8                        | 82                | 2       |

#### Key:

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| 5 | Exceeds requirements                            |
|---|-------------------------------------------------|
| 4 | Meets requirements                              |
| 3 | Meets requirements except for minor aspects     |
| 2 | Does not meet requirements but may be adaptable |
| 1 | Major non-compliance with requirements          |



Queensland Government Sport and Recreation Queensland

Competitive Bid Process – Stage 2 Request for Detailed Development Proposals

# Preface

The Queensland Government (Government) has prepared three documents to assist shortlisted proponents (proponents) in the preparation of Detailed Development Proposals for Stage 2 of the competitive bid process for the Tennyson Riverside Development project. These documents are as follows.

### Request for Detailed Development Proposals (This Document)

This document provides an overview of the project including the Government's project objectives. The document also details the information to be provided by proponents in their Detailed Development Proposals, the process and timeframes for selection of a preferred developer, the evaluation criteria and the terms and conditions for Stage 2 of the competitive bid process.

#### **Development Agreement**

Once selected, the preferred developer will be required to execute a development agreement with the State. The Development Agreement provides a contractual framework under which the project will be undertaken and specifies the rights and obligations of the State and the developer.

#### State Tennis Centre Project Brief

This document details the Government's requirements for the State Tennis Centre and covers aspects such as site planning, transport and access arrangements, facilities, fit-out and handover. The State Tennis Centre Project Brief forms a schedule to the Development Agreement.





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Attachment 1 - Room/Area Data Sheet

Attachment 2 – Life Cycle Costs: State Tennis Centre Attachment 3 – Departure Schedule: Development Agreement

# TENNYSON RIVERSIDE DEVELOPMENT Request for Detailed Development Proposals

# **1** Project Overview

# **1.1 BACKGROUND**

The Government is facilitating a two-stage competitive bid process for the Tennyson Riverside Development which comprises an international-standard State Tennis Centre and associated development on the site of the former Tennyson Power Station.

Following Stage 1 of the competitive bid process, three proponents have been shortlisted and invited to submit Detailed Development Proposals for the project.

# **1.2 PROJECT OBJECTIVES**

The Government requires the State Tennis Centre to be a state-of-the-art tennis facility 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.

In pursuing the Tennyson Riverside Development, the Government is seeking innovative private sector proposals to:

- provide a stand-alone State Tennis Centre, focused primarily on tennis, that has the capability of hosting international-standard events;
- provide and operate associated development on the site compatible with the efficient and effective operation of the State Tennis Centre;
- ensure the redevelopment of the site integrates with the surrounding areas and infrastructure;
- develop the site in a manner which maximises the State's financial returns while minimising the risks to the State; and
- ensure the State Tennis Centre and the supporting transport and access infrastructure are developed either before or in conjunction with the associated development.

# **1.3 GOVERNMENT POSITION**

The Government requires the Tennyson Riverside Development to be delivered fully at the developer's cost. This includes all costs associated with the design, construction and financing of the project. The developer will be responsible for the development of a transport strategy and plan for the State Tennis Centre and the provision and financing of all infrastructure, including the transport and access infrastructure, necessary for the Tennyson Riverside Development. It is not intended that the Government will provide any upfront funding contribution to the project.

The State intends to own the infrastructure and land for the State Tennis Centre. Land for the associated development will be made available under appropriate tenure arrangements to the developer. Details of the tenure arrangements are provided in the Development Agreement.



The State intends to appoint Tennis Queensland to operate the State Tennis Centre. The scope of activities at the State Tennis Centre (including the centre court) is to be focused primarily on tennis. While it is anticipated that non-tennis activities may occur at the State Tennis Centre on an infrequent basis to enhance the utilisation of the facility, such activities are not to adversely impact on the amenity of the local community or Tennis Queensland's activities.

The Government has approved that vehicular, pedestrian and bicycle access to the Tennyson Riverside Development site can occur through the adjoining Animal Research Institute site which is controlled by the Department of Primary Industries and Fisheries. This decision was made to minimise traffic impacts of the development on local residents and allow connectivity of the Tennyson Riverside Development site with transport services and facilities on Fairfield Road including Yeerongpilly rail station.

An access corridor and bicycle corridor are identified in Schedule 7 of the Development Agreement. Proponents are required to provide a transport solution for the Tennyson Riverside Development that uses 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 the corridors required by the State.

# **1.4 AUTHORITY REQUIREMENTS**

The Tennyson Riverside Development will be subject to environmental, planning, building and regulatory requirements of the Commonwealth, the State and the Brisbane City Council. The preferred developer will be required to obtain all necessary approvals for the project.

Proponents are required to arrange for a pre-lodgement assessment meeting with the Brisbane City Council on their development concept. Preliminary advice provided by the Brisbane City Council is to be submitted as part of the Detailed Development Proposal.

# **1.5 OTHER REQUIREMENTS**

In undertaking the Tennyson Riverside Development, the developer will be required to:

- remediate any site contamination to standards required by the appropriate authorities;
- provide and install all furniture, equipment and fit-out required to commission and operate the State Tennis Centre (with the exception of the Tennis Queensland State Office);
- provide good accessibility for emergency and private vehicles, coaches and service vehicles, adequate bus/coach set-down areas and traffic queuing facilities at entrances;
- provide buffers to residential areas against break-out noise from events and traffic movements;
- provide public access to the Brisbane River frontage;
- resolve any native title and cultural heritage requirements; and
- satisfy all environmental issues.



# **2** Competitive Bid Process

# 2.1 STAGE 2 - DETAILED DEVELOPMENT PROPOSALS

Proponents are invited to submit a Detailed Development Proposal that fully meets the requirements set out in Section 6.

The preferred developer will be selected based on its responses to the information sought in Section 6. Consideration will be given to the relative merits of each Detailed Development Proposal and the capacity of proponents to satisfy the Government's stated objectives as assessed using the evaluation criteria outlined in Section 6 and any other matters the Government considers relevant.

# 2.2 TIMEFRAMES

The Government envisages the project will follow the timeframes set out below.

| Milestones                                                                      | Completion/timing                                                                 |
|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Stage 2 of the competitive bid process                                          |                                                                                   |
| <ul> <li>Submission of Detailed Development<br/>Proposals</li> </ul>            | 23 August 2004                                                                    |
| <ul> <li>Review and evaluation of Detailed<br/>Development Proposals</li> </ul> | October 2004                                                                      |
| <ul> <li>Selection of preferred developer</li> </ul>                            | November 2004                                                                     |
| Execution of Development Agreement<br>and public announcement                   | December 2004                                                                     |
| Satisfaction of conditions precedent<br>to the Development Agreement            | Contingent upon the processes reasonably required to satisfy conditions precedent |
| Completion and handover of the<br>State Tennis Centre                           | 24 months following satisfaction<br>of conditions precedent                       |

The State reserves the right at its absolute discretion to change the timeframes above due to unavoidable delays or should circumstances otherwise require.

# 2.3 INFORMATION ACCESS

Proponents have executed a Process Deed in favour of the State that prescribed the conditions under which the State will make site access and information available to proponents. The Deed also addresses confidentiality and insurance arrangements.

In accordance with the Deed, the State will make available information on the site and its infrastructure through a data room and in an electronic format. Arrangements have been made with Enertrade, current owner of the site, for proponents to have controlled access to the site during Stage 2.

There are a number of stakeholders with an interest in the development of the site. These include Tennis Australia, Tennis Queensland, the Department of Primary Industries and Fisheries, Queensland Rail, Enertrade, Energex and Powerlink Queensland. All requests for information from, and consultation with, these parties are to be directed in writing to the Project Director of the Tennyson Riverside Development Project Office (see Section 9).

For Stage 2, it is intended that any further information transmitted by the Government will be for clarification only.

Government responses generally affecting the project or the conduct of the competitive bid process, or bearing on Government policy, will be forwarded to all proponents. Responses to questions that are claimed by a proponent to be commercial-in-confidence to that proponent, and accepted by the Government as such, will not be broadcast to other proponents.

## 2.4 PROBITY

Stage 2 of the competitive bid process is being overseen by a Probity Auditor.

Particular rules of conduct apply throughout the competitive bid process, covering such areas as:

- conflicts of interest;
- confidentiality;
- document procedures and security;
- evaluation procedures and methodology;
- meetings protocols; and
- media releases, promotional resources and public presentations.

Proponents who have any concerns about the conduct or probity of the competitive bid process are able to directly contact the Probity Auditor. The contact details are:

#### Executive Director

Argyle Corporate Advisers Pty Limited The Mansions Ground Level 40 George Street Brisbane QLD 4000





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# 3 The Tennyson Riverside Development Site

The Tennyson Riverside Development site is generally bounded by Softstone Street, the Brisbane River, the Animal Research Institute site, the Queensland Rail Tennyson spur line and Tennyson Memorial Drive. The boundaries of the site are shown on the site map, which is located inside the back cover of this document.

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## INFRASTRUCTURE

Existing infrastructure on the site includes the former Tennyson Power Station, associated buildings and structures, a wharf facility, fences and gates, roads and electrical infrastructure.

## TENURE

As a condition precedent to the Development Agreement, the State will acquire the site. The tenure arrangements and tenure program are provided in Schedule 4 of the Development Agreement.

## EASEMENTS

Easements will be granted to Energex, Powerlink Queensland and Queensland Rail as part of the tenure program. The boundaries for these easements are shown in Schedule 3 of the Development Agreement. In addition, a drainage easement is required to be granted to the Brisbane City Council over part of the site. The arrangements for registering these easements are detailed in the Development Agreement.

## CONTAMINATION

As a consequence of its former industrial use, part of the site is currently on the Environmental Management Register. Enertrade has undertaken significant remediation activities and the Government does not intend to further remediate the site. The developer will be required to remediate any contamination on the site to required standards at its cost.



# **4 The Animal Research Institute Site**

The Animal Research Institute site is adjacent to the Tennyson Riverside Development site. As discussed in Section 1.3, the Government has approved vehicle, bicycle and pedestrian access to the Tennyson Riverside Development site through the Animal Research Institute site.

The access and bicycle corridors and a works zone are shown on the site map, which is located inside the back cover of this document.

# Access Licence

The Government will grant an Access Licence (Schedule 7 to the Development Agreement) to the developer for the construction of infrastructure required for this access. The Access Licence identifies two corridors:

- an access corridor for vehicular, pedestrian and bicycle access that follows a route bordering 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.

The Access Licence also identifies a works zone to enable the developer to undertake any demolition, removal and other works that may be required to construct the required infrastructure within the access corridor.

In undertaking the works, the State requires the developer to minimise the impact upon the Animal Research Institute site whilst maintaining appropriate continuity of site activities. The developer will be required to negotiate with the Department of Primary Industries and Fisheries the specific requirements that may result from the provision of the infrastructure and meet the costs of any works.





# **5 Project Outline**

# 5.1 PROJECT SCOPE

The Government requires:

- the development of a stand-alone State Tennis Centre on the Tennyson Riverside Development site capable of successfully promoting the development of tennis in Queensland and attracting and hosting state, national and international tennis titles and tournaments such as Davis Cup and Fed Cup ties, hardcourt championships and age group championships;
- the development and operation of the balance of the site to integrate with surrounding areas and infrastructure, and in a manner which is compatible with the efficient and effective operation of the State Tennis Centre; and
- the provision of transport and access infrastructure to support the Tennyson Riverside Development.

# **5.2 STATE TENNIS CENTRE**

#### Introduction

The State Tennis Centre is to be a tennis centre of excellence.

As an international-standard facility synonymous with tennis excellence, the State Tennis Centre is to feature a contemporary state-of-the-art design that complements the sub-tropical character of Brisbane. The Centre will be the first purpose-built State Tennis Centre in Australia to include all three 'Grand Slam' surfaces and will feature facilities of a quality at least equivalent to Melbourne Park.

As the home of tennis in Queensland, the State Tennis Centre is to be capable of providing a broad range of tennis functions and activities. It will operate in two modes.

Normal mode involves the day-to-day operations in which the State Tennis Centre will operate predominantly as a community tennis centre and provide functions and activities associated with the hiring of courts, administration of the sport, coaching and development programs and training of state, national and international elite players and squads. Smaller scale tennis events and functions will also be staged in this mode, including satellite, challenger and futures events, state and age championships and corporate events.

Major event mode involves the staging of major tennis titles and tournaments. These events are usually promoted and conducted by Tennis Australia and include national and international tennis tournaments and events similar to Davis Cup and Fed Cup ties. Such events would be staged on a less frequent basis.

Non-tennis events may be held at the State Tennis Centre, including the centre court, on an infrequent basis, as long as they do not adversely impact on the amenity of the local community or Tennis Queensland's activities.

Full details of the Government's requirements for the State Tennis Centre and the range of functions for the facility are provided in the State Tennis Centre Project Brief. A brief overview of the users and facilities required is as follows.



### Main Users

The main users will include players and spectators, as well as staff and supporting personnel needed to operate the State Tennis Centre and undertake specialist training, management and support functions.

The Queensland Academy of Sport will also use the State Tennis Centre as its primary facility for the training and development of its tennis athletes and to undertake specialised tennis-related training activities and programs.

In major event mode, the State Tennis Centre will attract significant attendances of up to 7,000 spectators as well as catering, media, corporate, security and administrative personnel.

#### Facilities

The State Tennis Centre will include a variety of facilities and supporting infrastructure to cater for the intended range of tennis related functions and activities.

#### **Tennis Courts**

#### **Centre** Court

A centre court is required to host major events. The centre court is to feature 3,000 permanent covered seats with the capability of accommodating an additional 4,000 temporary seats and associated infrastructure for major events.

The centre court is to be of Davis Cup standard and dimensions, with an International Tennis Federation standard cushioned acrylic hardcourt surface, with the capability of accommodating the temporary installation of natural grass or clay playing surfaces.

#### Match and Show Courts

Sixteen match courts are required, of an International Tennis Federation standard with surfaces identical to the cushioned acrylic hardcourt surface at centre court.

Two of the match courts are also to have the capability of temporary conversion into show courts. These are to be configured to allow for the installation of temporary seating adjacent to the courts for at least 300 spectators each. The show courts are to be of Davis Cup dimensions.

#### Training Courts

Six training courts of an International Tennis Federation standard are required with the following mix of surfaces:

- four clay courts; and
- two natural grass courts.



## **Tennis Queensland State Office**

The State Tennis Centre is to accommodate the Tennis Queensland State Office. The State Office is to allow Tennis Queensland to perform its administrative activities associated with the development of tennis and is to include a number of offices, meeting rooms and ancillary facilities, including dedicated car parking. The office is to operate separately from the other State Tennis Centre facilities.

During major events, part of the State Office will be available to external parties on a temporary basis.

#### State Tennis Centre Facilities

The State Tennis Centre is to include facilities for the administration and commercial operation of the Centre on a day-to-day basis, separate from the State Office of Tennis Queensland. The facilities are to accommodate three distinct functions:

 Venue management – offices and facilities are required for the operation and management of the State Tennis Centre. The facilities are to include offices, function rooms and ancillary facilities, including dedicated car parking.

During major events, part of the venue management facilities will be available to external parties related to event management on a temporary basis.

- Tennis professional shop a pro shop is required to complement the commercial operation of the State Tennis Centre.
- Commercial tenant a café is required for the State Tennis Centre. This service is to be provided by an autonomous commercial tenant and, as such, it is expected that a suitable space allocation be provided. Fit-out for this commercial operation will be the responsibility of the developer.

#### **Support Facilities**

A range of support facilities are required for the State Tennis Centre. These are to include, but are not limited to:

- players change rooms;
- multipurpose covered training area;
- · gymnasium; and
- storage facilities.

#### **Facility Accommodation Arrangements**

The permanent facilities described above are required to allow the State Tennis Centre to function effectively in normal mode. However, to operate in major event mode, the State Tennis Centre requires additional facilities that use a mix of the following:

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

Further details of the facilities required for the State Tennis Centre to operate major events are provided in the State Tennis Centre Project Brief.



# 5.3 Associated Development

The developer is required to augment the State Tennis Centre through the provision of associated development. Such development is to be compatible with the efficient and effective operation of the State Tennis Centre.

The quality of finishes for the associated development should be at least equivalent to recent Brisbane riverfront developments.

In providing the associated development, the developer must comply with all applicable Commonwealth, State and Brisbane City Council requirements and ensure that any associated development integrates with the surrounding area.

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# 6 Detailed Development Proposals – Requirements and Evaluation Criteria

In Stage 2, proponents will be evaluated against the following criteria (in no particular preferential order):

- · total development and operational concept;
- · transport and access arrangements;
- project management and resources;
- · financial capability and project feasibility; and
- · impacts on the State.

### **6.1 GENERAL MATTERS**

The following matters should be taken into account when preparing Detailed Development Proposals:

- Detailed Development Proposals should contain all information and details requested in this document. This information should be prepared having regard to the project objectives and the State Tennis Centre Project Brief;
- Detailed Development Proposals should be formatted in accordance with the requirements set out in this section; and
- specific information from the successful proponent's Detailed Development Proposal will be included as schedules to the Development Agreement (see Section 6.3).

# **6.2 EVALUATION CRITERIA**

### Total Development and Operational Concept

Proponents are required to demonstrate a development and operational concept for the Tennyson Riverside Development.

#### State Tennis Centre

Factors that will be considered include:

- the scope and quality of the State Tennis Centre facilities;
- the design and concept for the State Tennis Centre, including the centre court facility and seating arrangements; and
- flexibility of the State Tennis Centre to operate effectively and efficiently in normal and major event modes.





#### Associated Development

Factors that will be considered include:

- the scope and quality of the associated development facilities;
- the design and operational concept for the associated development; and
- the compatibility of the associated development with the State Tennis Centre.

#### General

Factors that will be considered include:

- the allocation of the site for the State Tennis Centre and associated development components of the project;
- public access to the Brisbane River frontage; and
- the integration between the project components and the surrounding area and infrastructure.

#### **Transport and Access Arrangements**

Proponents are required to demonstrate the proposed transport and access arrangements for the Tennyson Riverside Development, including a transport strategy and plan for both modes of operation for the State Tennis Centre.

#### State Tennis Centre

Factors that will be considered include:

- the effectiveness of the transport strategy and plan for the State Tennis Centre, including the public transport arrangements for both modes of operation; and
- public access/circulation, including provision for disability access.

#### Animal Research Institute

Factors that will be considered include:

- utilisation of the Animal Research Institute site access corridor as the primary access route for the Tennyson Riverside Development;
- the effectiveness of the design solution for vehicular, pedestrian and bicycle infrastructure through the Animal Research Institute site, including connections with external infrastructure; and
- the impact upon the Animal Research Institute, including existing infrastructure and site activities.

#### Total Development

Factors that will be considered include:

- scope and quality of the proposed transport and access infrastructure;
- ownership, control and maintenance arrangements for the proposed transport and access infrastructure;
- external impacts, including upon the local community;
- · preliminary transport development impact assessment; and
- compliance with Brisbane City Council requirements.





### Project Management and Resources

Proponents are required to demonstrate their project management arrangements and resources allocated to undertake the project. Factors that will be considered include:

- corporate and management structure, including the experience, expertise and availability of key
  personnel;
- third party commitments consultants and suppliers;
- allocation of responsibilities;
- implementation and approvals programs;
- methodology for the design, testing and construction of the tennis courts, including surfaces and base structure; and
- community consultation and marketing strategies.

#### Financial Capability and Project Feasibility

Proponents are required to demonstrate their financial capacity to undertake the project and the financial feasibility of the project as a whole. Factors that will be considered include:

- financial soundness of the proponent and consortium members and sustainability of the corporate structure;
- · financial feasibility of the development; and
- funding confirmation:
  - debt financing commitment; and
  - equity financing commitment and level of equity participation by key consortium members.

#### Impacts on the State

Proponents are required to demonstrate how their proposed concept for the Tennyson Riverside Development will impact upon the State. Factors that will be considered include:

- requirements of the State;
- · financial implications for the State;
- non-financial benefits for the State;
- proposed risk allocation;
- · risk management and mitigation strategies; and
- · any proposed amendments to the Development Agreement.

# 6.3 DETAILED DEVELOPMENT PROPOSAL REQUIREMENTS

Proponents are invited to prepare Detailed Development Proposals for the Tennyson Riverside Development subject to the terms and conditions set out in this document. Detailed Development Proposals are to conform to the requirements set out in this section.



Discrete sections of the successful proponent's Detailed Development Proposal will be included as schedules to the Development Agreement. To enable this to occur, each proponent must provide, as part of its proposal, the documents specified below in the required format:

- Certification Statement;
- Executive Summary;
- Schedule 9 State Tennis Centre Concept;
- Schedule 10 Associated Development Concept;
- Schedule 11 Transport and Access Works Concept;
- Schedule 12 Site Plan and Plan of Land Re-allocation;
- Schedule 13 Plans, Drawings and Diagrams;
- Schedule 14 Schedules and Data Sheets;
- Schedule 15 Method Statements, Analyses and Reports;
- Schedule 16 Methodology for the Geotechnical Investigations and Design and Construction of the Tennis Courts;
- Schedule 17 Implementation Program;
- Schedule 18 Approvals Program;
- Schedule 19 Testing and Commissioning Program;
- Schedule 20 Details of Key Personnel;
- Schedule 21 Community Consultation Strategy;
- Response statement to Transport and Access Arrangements criteria;
- Response statement to Project Management and Resources criteria;
- Response statement to Financial Capability and Project Feasibility criteria; and
- Response statement to Impacts on the State criteria.

# **6.4 FORMAT OF DETAILED DEVELOPMENT PROPOSALS**

This section identifies the material that proponents are required to provide within each of the schedules and response statements that form their Detailed Development Proposal.

Proponents must provide a copy of all supporting schedules and documents, including drawings and reports, as part of each copy of the Detailed Development Proposal submitted. Each Detailed Development Proposal is to include a table of contents, identifying volumes, schedules, sections, pages, appendices, attachments and other components of the documentation.

A compliance check will be undertaken initially to assess whether proponents have submitted the required material in response to the requirements detailed below. Failure to meet all requirements may adversely affect a proponent in the evaluation, and could, depending on the materiality of the omission, preclude the proponent from further consideration.





## **Certification Statement**

Detailed Development Proposals are to be accompanied by a statement certifying the accuracy and completeness of the information provided in the Detailed Development Proposal. The certification is to be made by an authorised Director (or equivalent officer) of the proponent.

#### **Executive Summary**

The Executive Summary is to provide a summary of the Detailed Development Proposal for use by the Government. Material from the Executive Summary may be made available to the media, the general public and others. The Executive Summary should not contain any commercial-in-confidence material.

### Schedule 9 - State Tennis Centre Concept

Proponents are required to submit such documentation as is necessary to fully explain their total development concept for the State Tennis Centre. This schedule should include as a minimum a statement detailing for the State Tennis Centre and its components:

- the design and planning philosophy;
- the scope and quality; and
- how the State Tennis Centre will function, including the flexibility to operate in both modes of operation.

#### Schedule 10 – Associated Development Concept

Proponents are required to submit such documentation as is necessary to fully explain their total development and operational concept for the associated development. This schedule should include as a minimum the following information:

- a statement that details the design and planning philosophy and the scope and quality for the associated development; and
- details of the proposed operational concept for the associated development, highlighting its benefits. In describing the operational concept, any facilities and services that may benefit the State Tennis Centre and community are to be identified, as well as public access to the Brisbane River frontage.

#### Schedule 11 – Transport and Access Works Concept

Proponents are required to submit such documentation as is necessary to fully explain their total concept for the transport and access arrangements for the Tennyson Riverside Development. This schedule should include as a minimum the following information.

#### Design and Planning Philosophy

A statement that details the design and planning philosophy for the transport and access infrastructure, including disability access provisions.



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#### Animal Research Institute Site

A statement that details the design solution for the vehicular, pedestrian and bicycle infrastructure through the Animal Research Institute site, including connections with the Ten nyson Riverside Development site and external infrastructure and compliance with Brisbane City Council requirements.

A statement detailing the impacts of the vehicular, pedestrian and bicycle infrastructure and how these impacts will be managed.

#### Drop-Off and Pick-Up Arrangements

The proposed drop-off and pick-up arrangements for traffic movements associated with the State Tennis Centre in normal and major event modes including all physical requirements (e.g. number of bays and location particularly in relation to vehicular and pedestrian traffic paths). The arrangements for private vehicles, buses, coaches and taxis should be clearly defined including the degree of physical separation/overlap of these activities.

#### Shared Facilities

The degree to which any vehicular access, on-site parking, traffic circulation, and pedestrian/bicycle facilities are to be shared between the State Tennis Centre and the associated development should be clearly defined, including the up-front and ongoing traffic management measures necessary to ensure the satisfactory operation of these facilities.

#### External Transport and Access Infrastructure Upgrades

Details of all upgrades to external transport and access infrastructure required to support the transport strategy and plan. These details should include:

- any rail station and bus stop improvements;
- any road configuration changes specifically required to facilitate the transport strategy and plan for the State Tennis Centre;
- any enhancements to existing pedestrian routes to key public transport nodes;
- Information on how the infrastructure upgrades are to be provided by the developer, including land tenure, infrastructure construction and ownership and maintenance responsibilities; and
- the transport and access infrastructure to be constructed on the Animal Research Institute site.

### Schedule 12 - Site Plan and Plan of Land Re-allocation

Plans submitted should include as a minimum the following.

A site plan at a scale of 1:500 that includes:

- retained structures, site development and planning including external works, landscaped and recreational areas, car parking and service areas, access and egress roads and paths;
- boundaries of the sites for the State Tennis Centre and associated development;
- all easements;
- transport and access infrastructure and linkages to external infrastructure; and
- any future expansion capability of the State Tennis Centre and associated development.



# Schedule 13 - Plans, Drawings and Diagrams

Plans submitted should be to a schematic design standard, and include as a minimum the following.

Site analysis diagrams that address:

- site constraints and opportunities;
- flood paths;
- noise and light intrusion and breakout;
- major views into and out of the site;
- areas of contamination;
- climatic influences;
- accessibility to the State Tennis Centre and associated development;
- the relationship of the site to public transport and arterial road systems, the Brisbane River, infrastructure services and residential and recreational areas;
- · traffic and servicing movements for the State Tennis Centre and associated development; and
- pedestrian circulation routes for the State Tennis Centre and external connections including the Brisbane River frontage.

Drawings of the State Tennis Centre, the associated development and transport and access infrastructure, that include:

- floor plans of all levels to a scale of 1:200. The floor plans are to include plant and equipment and major services and indicate any future expansion capability for the State Tennis Centre and transport and access infrastructure;
- all major elevations and a selection of major cross sections to a scale of 1:200; and

architectural external and internal perspective views of major facilities.

- Drawings of the State Tennis Centre and transport and access infrastructure, that include:
- roof plan(s) including plant and access provisions at a scale of 1:200;
- landscape concept plans at 1:500 with perspective views of significant landscape initiatives; and
- schematic structural drawings.

Drawings at a scale of 1:500 that identify the facilities required for the State Tennis Centre in normal and major event modes to demonstrate an understanding of the Government's requirements for the State Tennis Centre functions in both modes. The drawings are to indicate if the facilities for major events are provided by:

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

The drawings are to be accompanied by an outline that explains the means of servicing the facilities and the operational arrangements involved in any proposed space sharing in major event mode.

## Schedule 14 - Schedules and Data Sheets

Documentation to fully explain the scope and quality of the Tennyson Riverside Development. This should include as a minimum the following information:

- An accommodation schedule for the State Tennis Centre that:
  - indicates the floor area of each facility or area and the totals for both net floor area and gross floor area;
  - indicates which facilities or areas are permanent facilities;
  - nominates the extent of space sharing for major events and the proposed operational arrangements; and
  - nominates the extent of usage of existing facilities for major events.
- Room/area data sheets for all rooms and areas in the State Tennis Centre, both temporary and permanent. The data sheets are to be referenced to drawings that show all rooms and areas. A pro forma room/area data sheet is provided at Attachment 1.
- A narrative or schedule of the finishes proposed for the State Tennis Centre and transport and access infrastructure, including the type and quality of each finish and any associated warranty.
- A comprehensive list of all building services infrastructure and equipment for the State Tennis Centre. The schedule is to cover all building services requirements as described in the State Tennis Centre Project Brief. The schedule is to clearly indicate the size, number, extent, capacity, quality, type and proprietary name as appropriate for each service and equipment item.
- A comprehensive cost schedule of all loose furniture fittings and equipment for the State Tennis Centre, including the number, type and quality of each item of furniture and equipment.
- A budget amount for the gymnasium equipment is to be nominated.
- An accommodation schedule for the associated development.

### Schedule 15 - Method Statements, Analyses and Reports

Method statements, analyses and reports that clearly define the method and scope of work proposed for the State Tennis Centre and transport and access infrastructure. The statements are to include narratives, line diagrams and other relevant information as appropriate on the following issues as a minimum:

#### Civil Work

Proposed flood protection and contamination treatment measures.

#### Life Cycle Management

Details of the proposed maintenance regime over the full life cycle for the State Tennis Centre, including the tennis courts, administrative facilities and any transport and access infrastructure within the State Tennis Centre site. A life cycle cost pro forma is provided at Attachment 2.

#### Shadowing

Analysis to include:

- preliminary shadowing studies on the centre court and adjacent courts; and
- shadow impacts on the State Tennis Centre by the associated development and vice versa.
### Seating Strategy

Layouts and details of the proposed centre court seating, including corporate seating and access and seating arrangements for people with a disability and their carers. Appropriate sight line drawings and calculations are also to be provided to demonstrate the seating configuration, including relevant 'C' values.

Details of the method of providing, accommodating and servicing temporary seating to the centre court and show courts.

#### **Conflicting Elements**

Proposed design and operational strategies to mitigate the negative effects of conflicting elements.

# Schedule 16 – Methodology for the Geotechnical Investigations and Design and Construction of the Tennis Courts

Documentation to fully explain the geotechnical investigations and design and construction of the tennis courts at the State Tennis Centre. This schedule should include as a minimum the following information:

- advice on the geotechnical investigations already undertaken;
- the extent and nature of the proposed geotechnical investigations;
- a detailed methodology for the proposed geotechnical design process;
- details of the proposed analytical models to be used to inform the design process;
- the proposed scope and consultant's brief for the geotechnical modelling; and
- the proposed modelling consultant.

Details of the proposed grass and clay court surfaces and a demonstration of their performance and suitability for the Brisbane climate, the State Tennis Centre environment and the intended use of the courts.

### Schedule 17 – Implementation Program

Documentation to fully explain the implementation and delivery of the Tennyson Riverside Development. This schedule should include as a minimum the following information.

An implementation program and a supporting narrative. The implementation program shall address all design, manufacturing, procurement, construction and other activities considered necessary for project implementation. Key milestones and target timeframes should be highlighted.

A program that identifies the key components of the project, including the critical path network, and demonstrates that the project can be delivered within the time specified. The program should provide a clear understanding of the timeframes associated with the following items:

- execution of the Development Agreement;
- detailed design;
- securing necessary development approvals;
- project construction including key construction activities and stages; and
- · commissioning of the State Tennis Centre and associated development.

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# Schedule 18 – Approvals Program

Documentation to fully explain the approval process for the implementation and delivery of the Tennyson Riverside Development. This schedule should include a draft approvals program and a supporting narrative. The approvals program shall address all key approvals required to deliver the project and highlight key milestones and target timeframes.

# Schedule 19 - Testing and Commissioning Program

Documentation to fully explain the testing and commissioning process for the State Tennis Centre. This schedule should include a testing and commissioning program and a supporting narrative and include all key tests and events required to commission the State Tennis Centre.

## Schedule 20 - Details of Key Personnel

Details of nominated key personnel, including the roles and responsibilities of each individual and the duration for which these people will be available to the project in the nominated role.

# Schedule 21 – Community Consultation Strategy

The proposed approach to community consultation including:

- · activities proposed prior to the commencement, during and after completion of the works;
- key milestones and target timeframes; and
- parties that will be responsible for implementation and delivery of the community consultation strategy.

# **Response Statement to Transport and Access Arrangements Criteria**

### Proposed Development Transport Characteristics

Details of the traffic and transport related characteristics of the State Tennis Centre and associated development including expected daily and peak period traffic generation and distribution, modal share to public transport and walk/bicycle, vehicular and pedestrian/bicycle access, car parking and on-site servicing requirements.

# Preliminary Transport Development Impact Assessment

Sufficient analysis of the proposed development to show the following:

- how the access corridor through the Animal Research Institute site will service the demands for the Tennyson Riverside Development and Animal Research Institute;
- expected traffic movements through all site access points and external to the development;
- expected impacts including identification of any external road infrastructure upgrades required on the existing road network (including access intersections) to cater for the expected traffic movements associated with the development during both peak and off-peak periods;
- the implications for adjacent properties and existing road reserves (e.g. any additional road widening); and





 any improvements to the current level of public transport and non-motorised access to the site to cater for the demands generated by the State Tennis Centre in normal mode and the associated development. The effectiveness of these improvements in helping to achieve the Government's Integrated Regional Transport Plan for South East Queensland objectives for more sustainable transport should be clearly demonstrated.

### Transport Strategy and Plan

A comprehensive transport arrangements and plan for the State Tennis Centre (refer to Section 3 of the State Tennis Centre Project Brief for a breakdown of usage).

### Public Transport Services

Details of the public transport arrangements proposed for the State Tennis Centre in both modes of operation. These details should include as a minimum:

- rail timetabled and special services;
- bus timetabled and special services including any shuttle services to rail; and
- any special services/provisions for people with disabilities.

#### Associated Strategy Measures

Details of all associated strategy measures required to support the transport strategy and plan for major events. These details should include:

- nature and extent of any parking area controls (implemented by the Brisbane City Council);
- bus priority measures including police control requirements;
- general traffic and pedestrian management measures including road closures;
- bus shuttles to remote (off-site) car parks for officials, staff and VIPs if required;
- use of travel management information tools (e.g. variable message signing);
- public transport communication strategy including advance marketing and parking restrictions awareness campaigns; and
- specific traffic management measures required to control the interaction between the State Tennis Centre and associated development transport movements.

#### Internal On-Site Arrangements

Details of the proposed on-site arrangements during major events at the State Tennis Centre as outlined below.

### **Pedestrian Movements**

Details of the:

- location and width of major pedestrian dedicated corridors including any corridors between tennis courts, corridors to rail, bus and external pedestrian infrastructure; and
- pedestrian restricted areas for vehicle movements.

### Bus, Coach and Taxi Movements

Details of the:

- separation of bus, coach, taxi and pedestrian movements;
- bus, coach and taxi movements within the site. Note public transport bus movements are to be external to fenced area of the State Tennis Centre;
- bus, coach and taxi set-down and pick-up areas required on the internal road carriageway. The internal road carriageway is to be sufficient for bus and coach set-down; and
- standing area requirements adjacent to bus, coach and taxi set-down and pick-up areas.

#### **Private Vehicle Movements**

Details of the:

- nature and location of staff, officials and VIP on-site parking including management and control measures and numbers; and
- access and parking requirements (number, location and configuration) for people with disabilities.

# Service Vehicle Movements (Caterers, Merchandising and Media)

Details of the:

- proposed locations for these various activities including any temporary use of permanent car park areas for outside broadcast vans, temporary catering, beverage and merchandising outlets; and
- proposed traffic management measures and access arrangements to the State Tennis Centre for vehicles associated with these activities.

### Animal Research Institute Site Impacts

Details of how the design solution for vehicular, pedestrian and bicycle access minimises the impact on the Animal Research Institute site.

A letter of support from the Department of Primary Industries and Fisheries for the infrastructure works and associated strategy for maintaining continuity of existing services undertaken on the Animal Research Institute site.

#### External Impacts

A broad review of the likely impact upon the local transport network identifying:

- the potential impact on the existing external transport operations; and
- the potential impact of event transport operations.

### Response Statement to Project Management Structure and Resources Criteria

#### **Corporate Structure**

Details and confirmation of the corporate structure and the relationships between all parties undertaking the development.

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#### Proponent

The following information and documents:

- name and corporate address of the proponent;
- name of an official representative of the proponent with authority to bind the proponent;
- nominated contact officers and contact details for liaison during the Detailed Development Proposal and development stages;
- resumés of the official representative and the contact officers;
- · details of the proponent's corporate structure, including legal aspects, date of incorporation; and
- the corporate governance arrangements by a board (or an executive committee).

#### **Consortium Members**

The following information and documents:

- names and address of proponent, consortium members and details of their nominated contact officers, including resumés; and
- details of the consortium structure and the relationship of each consortium member to the
  proponent. Details of all entities with a significant interest in consortium members, including the
  legal interrelationship between the proponent, the consortium members and entities with a
  significant interest in the consortium members.

#### Third Party Commitments – Consultants and Specialist Advisers

The following information and documents:

- names, corporate addresses and nominated contact officers for all consultants and specialist advisers;
- each consultant and specialist adviser's project responsibilities;
- · resumés of the contact officers; and
- letters of commitment for those consultants and specialist advisers whose commitment is
  essential for the ability of the proponent to undertake the project.

### Third Party Commitments - Nominated Suppliers

The following information and documents:

- names, corporate addresses and nominated contact officers for third party suppliers;
- the goods or services proposed to be supplied to the project; and
- letters of commitment confirming that the supplier is able to supply contracts crucial to the ability
  of the proponent to undertake the project.

#### **Contractual Arrangements**

The following information and documents:

- agreements with bid founders for a percentage payment or other incentive for sponsoring the project;
- · agreements with suppliers (e.g. reciprocal business); and
- any other agreements supporting the project that have not otherwise been identified.

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## Management Structure and Key Personnel

Details of the proposed management structure and key personnel, including the following information and documents:

- an organisational chart that details the proposed management structure below the Board and Chief Executive Officer;
- · details of the roles and responsibilities of the organisation team; and
- the names and resumés of key personnel.

#### Management Control

A description of the management controls to be used during the design, manufacture, construction, installation, testing and commissioning and start-up operations. These management controls should include an outline of the methods and procedures for the following:

- general statement about management and controls;
- work in progress schedules plus compliance checking and revisions;
- document controls;
- cost controls, including audits;
- quality controls;
- · interface controls (with the State and community groups); and
- · strategy and management of program exceptions.

#### **Responsibility Matrix**

A general responsibility matrix for each of the entities proposed to be involved in this project (e.g. founders, consortium members, consultants, specialist advisers, nominated suppliers and key personnel) including, but not limited to, the following:

- planning;
- environmental management and mitigation measures;
- geotechnical work;
- design;
- construction;
- · community consultation; and
- coordination.

If arrangements have not been finalised regarding the above functions, a statement indicating that such selection or assignment is still to be made.

#### Experience of Key Project Personnel with Large Capital Projects

A detailed description of the prior experience and role of key project personnel in the following areas of project implementation with large capital projects and projects similar to the Tennyson Riverside Development:

- planning;
- environmental management;
- engineering;
- design;
- construction;
- · community consultation; and
- coordination.

A description of the experience of key personnel in working with federal, state and local government and the private sector in planning and implementation of similar projects.

For each applicable work experience example cited, provide a relevant external contact with current address and telephone number, who can attest to the role of personnel.

In the event the proponent does not possess the expertise and competence required for this project, or elements of the project, it shall clearly indicate which group will be responsible for these functions.

#### Work in Progress and Forward Commitments

Details on work in progress and forward commitments for the proponent and consortium members, including the following:

- description and value;
- location;
- degree of progress (for work in progress only);
- year of completion;
- owner or project manager;
- major partners, consortium members and major subcontractors; and
- name and address of proponent's representative.

For each project, nominate a person to whom enquiries may be made and provide their contact details (telephone and facsimile numbers).

#### Marketing Strategy

A narrative describing the proposed approach to marketing, including details of all activities proposed, key milestones and target timeframes.





# Response Statement to Financial Capability and Project Feasibility Criteria

### **Financial Soundness**

Full details of the proponent or consortium members including details of any contractual relations between parties and full details of the corporate structure of any special purpose vehicles formed to undertake the project.

Details of the following legal and commercial relationships:

- between the proponent and equity and debt providers; and
- between the proposed project company and each of the project company's related suppliers and service providers (if any).

Annual audited financial statements for the past three years and for the six months ended 31 December 2003 for the proponent and all members of the project consortium.

#### **Financial Analysis**

A financial analysis including the full financial model in hard copy and electronic form (Microsoft Excel), supported by a guide or data book that provides the following for each assumption:

- a detailed description;
- the input details;
- rationale; and
- the location of each assumption in the financial model.

This should include all key assumptions including revenue and costs, price and cost escalation factors (including Building Price Index), interest rates, discount rates (including the method of calculating these rates) and tax treatment. The electronic form of the financial model should not contain any hard coded formulae or protected worksheets.

The financial analysis is to provide clear and separately identified details of the costs for the State Tennis Centre, the costs and revenues for each major component of the associated development and the costs of the transport and access infrastructure.

The financial analysis should include:

- full project cashflows, including the nature and timing of capital expenditures;
- a projection of revenues and costs for the associated development with assumptions clearly identified;
- debt and/or equity financing arrangements for all phases of the capital works, pre-opening and relevant associated development operational stages including details of payments to be made to debt and equity providers over the life of the project;
- a net present value calculation for the total development, the State Tennis Centre, the associated development and transport and access infrastructure;
- an estimate of the ongoing maintenance costs and the nature, timing and cost of any capital refurbishment for the State Tennis Centre (itemised for the tennis courts, administrative facilities and any transport and access infrastructure within the State Tennis Centre site);
- a sensitivity analysis for each significant variable, such as Building Price Index, discount rates, interest rates, capital costs and timing delays;





- the taxation assumptions underlying the project and full details of any taxation issues that may
  materially impact upon the project, including any requirement to secure a private tax ruling from
  the Australian Taxation Office; and
- market assessment for the basis of determining revenue.

In support of the financial analysis, an elemental capital cost plan using National Public Works Conference or Australian Institute of Quantity Surveyor's format. The cost plan is to separately identify all works associated with the State Tennis Centre, associated development and transport and access infrastructure components of the development.

#### Funding Confirmation

Details of the proposed financial structure, including a diagram showing the ownership, contractual relationships or other linkages and quanta of all key financial elements of the project.

#### Project Delivery Phase

Details of the proposed funding for the project from both debt and equity providers, including:

- details of full underwriting commitments that are to cover any and all shortfalls in funding and in project cost overruns that may arise in the construction phase through to practical completion, and to the completion of the first day of operation of the associated development;
- relevant term sheets including security arrangements, base interest rates, interest rate management during construction, margins and other underlying assumptions;
- commitment letters or similar from reputable financial institutions that demonstrate that the debt for the facility is available, subject to formal documentation; and
- formal confirmation of acceptance of the financial feasibility analysis, including the financial model.

A bank guarantee on terms acceptable to the Government will be required prior to execution of the Development Agreement.

### Associated Development Operational Phase

Confirmation from debt financiers and equity providers that the operational phase will be fully funded.

Additional information on the financial capacity of the proposed operators (where applicable).

### Response Statement to Impacts on the State Criteria

The following information:

- confirmation that, over the life of the project, the proponent will not require any funding contribution from the State;
- confirmation the proponent will not require any non-financial support from the State over the life of the project;
- a 'Departure Schedule' specifying any proposed amendments the proponent would seek to the Development Agreement, including alternative drafting (a pro forma Departure Schedule is provided at Attachment 3);
- advice provided by the Brisbane City Council in response to a pre-lodgement assessment meeting;



- whether the proponent proposes that the State assume any risks associated with the project and, if so, the nature and basis;
- confirmation there are no other requirements of the State in the development and/or operation of the associated development (e.g. legislative amendments and exemptions) over the life of the project;
- any financial benefits expected to flow to the State, including any potential financial upside arising from the project and any expected incremental direct financial benefits (e.g. stamp duties); and
- ownership of or responsibilities for the associated development post construction (if any).

# 7 Lodgement of Detailed Development Proposals

Each proponent shall deliver one original hole punched loose-leaf copy and seven bound copies of their Detailed Development Proposal, plus two copies of the financial analyses in Microsoft Excel on compact disc to:

Project Director Tennyson Riverside Development Sport and Recreation Queensland Level 5 Forestry House 160 Mary Street Brisbane QLD 4000

Detailed Development Proposals must be delivered by 2pm Australian Eastern Standard Time on Monday 23 August 2004.

# 7.1 CONDITIONS OF LODGEMENT

## **Contents of Detailed Development Proposal**

The Detailed Development Proposal is to be:

- sealed in an appropriate package;
- in the manner and format specified including specifying:
  - in the case of an individual, his or her given names, surname and address;
  - in the case of a business name, the names and addresses of all proprietors and the address
    of the principal place of business; and
  - in the case of a company, the full name of the company, the Australian Business Number and the address of the registered office;
- accompanied by the proposal schedules and response statements duly completed by the proponent;
- where provision is made for the purpose, signed by the person having full authority to enter into the Development Agreement on behalf of the proponent;
- accompanied by any supporting information required by the State Tennis Centre Project Brief; and
- directed to the State at the address specified in this section.

Detailed Development Proposals should be in a form that can be readily handled and transported. Drawings should preferably be no larger than A1 size and be loose leaf or detachable.

One set of key presentation quality drawings is to be provided and may be laminated or mounted on foam board or equivalent.



# **Time for Lodgement**

le Development – Building a future for Queensland tennis

The Detailed Development Proposal is to be lodged by the closing time and date stated in this section.

# Late Lodgement

A Detailed Development Proposal not lodged by the required time for lodgement may be rejected by the State in its absolute discretion.

# No Electronic Lodgement

Detailed Development Proposals sent or transmitted to the State by facsimile or other electronic means will not be considered.

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#### Competitive Bid Process - Stope 2

# **8** Terms and Conditions

The following terms and conditions will apply.

# 8.1 PROPONENT TO INFORM ITSELF

Where the Development Agreement requires work to be performed, the proponent is deemed to have:

- visited and inspected the site;
- satisfied itself of its condition and facilities; and
- otherwise acquainted itself with all matters relating to the Request for Detailed Development Proposals, the State Tennis Centre Project Brief and Development Agreement, before submitting its Detailed Development Proposal.

# 8.2 REQUEST FOR CLARIFICATION AND INFORMATION

# **Request for Clarification**

If a proponent:

- has any doubt as to the meaning or intention of the Request for Detailed Development Proposals, the State Tennis Centre Project Brief or Development Agreement or any document incorporated in them by reference; or
- requires further information to ensure a clear and correct understanding of the nature and extent
  of a contractor's obligations under the Request for Detailed Development Proposals, the State
  Tennis Centre Project Brief or Development Agreement;

the proponent must direct inquiries in writing, by prepaid post, facsimile or email to the Project Director. Where required, the Project Director will respond to proponent inquiries in the form of an addendum that will be issued to all proponents.

Proponents are to satisfy themselves that they have received, acknowledged and addressed all addenda that may have been issued up to the date for lodgement of Detailed Development Proposals.

## Proponent's Assumptions

When submitting a Detailed Development Proposal, if the proponent still has any doubt as to the meaning of any part of the Request for Detailed Development Proposals, the State Tennis Centre Project Brief or Development Agreement, a statement of the interpretation on which the Detailed Development Proposal is based must be included in the Detailed Development Proposal.

# Addenda

The terms and conditions of this document can only be varied or clarified by the State by written addenda. It is the obligation of the proponent to satisfy itself that it has received, acknowledged and addressed any addenda issued by the State up to the date of lodgement of Detailed Development Proposals.

Competitive Bid Process -

# Information Provided by the State

The only person authorised to provide information to proponents is the Project Director. To the extent permitted by law, the State will not be bound by any advice or information furnished by any person in respect of the proponent other than written advice or information provided by the Project Director.

# 8.3 RIGHT TO AMEND PROCESS

The State reserves the right to amend, vary, cancel or supplement the process set out in this document by notice in writing to proponents who have not withdrawn or been excluded from the process.

# 8.4 REVISION OF STATE TENNIS CENTRE PROJECT BRIEF

The State may amend the State Tennis Centre Project Brief or extend the closing date for lodgement of Detailed Development Proposals at any time before the closing date for lodgement of Detailed Development Proposals by a revision issued (in the form of an addendum to all proponents) by the Project Director.

# 8.5 PROPONENT'S FURTHER ASSISTANCE

The proponent must execute all such further documents and do all acts and things required by the State for the purposes of giving effect to these conditions.

The proponent must provide such additional information or clarification as may be required by the State.

The Government reserves the right to request additional copies of a Detailed Development Proposal if required.

# **8.6 VALIDITY OF DETAILED DEVELOPMENT PROPOSAL**

The proponent agrees that its Detailed Development Proposal constitutes an irrevocable offer to the State (to perform the work described in the Development Agreement on the terms and conditions of the Development Agreement completed utilising the information submitted with the Detailed Development Proposal) that is open for acceptance for a period of 180 days from the closing date for the lodgement of Detailed Development Proposals.

# 8.7 Alternative and Non Conforming Detailed Development Proposals

# Submission of Alternative and Non Conforming Detailed Development Proposal

A proponent may submit one or more Detailed Development Proposals. While proponents are not required to submit a conforming Detailed Development Proposal, it is the State's strong preference that a proponent submits a conforming Detailed Development Proposal, but subject to the last paragraph of this clause, the State may accept a non conforming Detailed Development Proposal that was not accompanied by a conforming Detailed Development Proposal.

## Departures from the Development Agreement

The proponent should identify, in detail, the extent to which a Detailed Development Proposal differs from the Development Agreement.

# Non Conforming Detailed Development Proposals

If, in the absolute discretion of the State, a non conforming Detailed Development Proposal contains insufficient detail to enable it to be properly evaluated, the State may decline to evaluate it.

# 8.8 Post Lodgement Negotiations

### The State May Appoint

The State reserves the right to enter into post lodgement negotiations with the preferred proponent (or proponents that have been shortlisted) on the basis of their Detailed Development Proposal. The post lodgement negotiations may include negotiations to:

- refine the Detailed Development Proposal;
- refine the specifications;
- consider alternative funding methods proposed by the proponent; or
- enter into any other negotiations necessary to settle the final scope of the Development Agreement.

## Best and Final Detailed Development Proposal

The State may require proponents to submit a best and final Detailed Development Proposal as part of the post lodgement negotiation process.

# The State Not Obliged

The State is not obliged to re-issue the Request for Detailed Development Proposals, or in any other way provide an opportunity to any proponent to amend or re-submit their Detailed Development Proposal, irrespective of:



- any Detailed Development Proposal submitted by any proponent;
- any best and final proposal submitted by a preferred proponent; or
- matters arising out of the post lodgement negotiations with the preferred proponent.

# **Unsuccessful Post Lodgement Negotiations**

If any post lodgement negotiations with all or any of the preferred proponents are unsuccessful, the State is entitled to:

- appoint one or more new preferred proponents without reissuing the Request for Detailed Development Proposals; and
- enter into negotiations with any new preferred proponents relying and based on the state of negotiations with any of the previous preferred proponents.

# 8.9 ACCEPTANCE OF DETAILED DEVELOPMENT PROPOSAL

# The State Not Obliged

Notwithstanding the evaluation of Detailed Development Proposals in accordance with Section 6:

- the State is not obliged to accept any Detailed Development Proposal;
- the State reserves the right to:
  - reject any Detailed Development Proposal; or
  - accept only a part of any Detailed Development Proposal; and
- if no Detailed Development Proposal is accepted, the State may abandon the competitive bid process or proceed in such manner as the State may elect with no financial compensation payable by the State.

## Notification of Acceptance

A Detailed Development Proposal is not and may not be deemed to be accepted following the evaluation unless and until the State notifies the proponent in writing that the Detailed Development Proposal has been accepted and the requirements in the following paragraph are met.

## Formal Agreement

The State will, within 45 days of advising the proponent that its Detailed Development Proposal has been accepted, prepare the Development Agreement for signature and forward it to the preferred proponent. The preferred proponent must, within 14 days of receipt of the Development Agreement, execute it and return it to the State for execution where upon (and only then) an agreement will come into existence.

# 8.10 COSTS TO PARTICIPATE

The proponent must bear all costs incurred by it in respect of:

- preparing and submitting its Detailed Development Proposal;
- · attending any meetings and discussions; and
- compliance with any other obligations imposed by the conditions.

In addition, the State may also recover from the proponent any additional costs incurred as a result of inadequacies in the Detailed Development Proposal as lodged or requirements to issue clarification.

# 8.11 INTELLECTUAL PROPERTY RIGHTS

### **Documents Submitted**

Any Detailed Development Proposals submitted by a proponent, complete with all supporting documents, will be retained by the State for its file records.

#### Title in Intellectual Property Rights

Intellectual property rights and all materials submitted by the developer in its Detailed Development Proposal that are not the subject of pre-existing intellectual property rights of third parties are assigned to the State without any requirement for further documentation or writing, or acceptance by the State of its Detailed Development Proposal.

# 8.12 INDUCEMENTS AND REWARDS

The State may refuse to consider any Detailed Development Proposal if the proponent, or a representative of the proponent, gives or offers anything to an employee or agent of the State as an inducement or reward that could in any way tend to influence the actions of that employee or agent in relation to the proponent's Detailed Development Proposal. For the purposes of this clause, 'agent' includes the parent, spouse, child or associate of the employee or agent.

# 8.13 **ETHICS**

The proponent must not communicate (verbally or otherwise) or have any arrangement or arrive at any understanding with other proponents or with any employee of an association of which the proponent or any of the other proponents is a member about its Detailed Development Proposal or any aspect of its Detailed Development Proposal, and the proponent represents and warrants to the State that it has not done so.

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In addition, the proponent must not engage in:

- any discussion or correspondence with such persons concerning its Detailed Development Proposal;
- any collusive activities with any of the other proponents; or
- any conduct or have any arrangement or arrive at any understanding with any of the other proponents, that could have the effect of reducing the competitiveness of the competitive bid process, and the proponent represents and warrants to the State that it has not engaged in any such conduct.

# 8.14 DISCLOSURE OF INFORMATION

The State reserves the right, in its absolute discretion, to provide details of Detailed Development Proposals to relevant Government officers, agencies, advisers and key stakeholders.

Proponents are advised that any information provided in their Detailed Development Proposal may be subject to disclosure under the *Freedom of Information Act 1992 (Qld)*.

The proponents acknowledge and agree that the information the State may disclose includes the identity of the preferred proponent.

Depending on the circumstances, the identity of unsuccessful proponents and information identifying unsuccessful proponents may also be disclosed.

If disclosure of their Detailed Development Proposal would be of substantial concern to a proponent, all documents forming the Detailed Development Proposal should be stamped 'Commercial-in-Confidence'. In such case, the State will formally consult with and obtain the views of the proponent before any disclosure.

# 8.15 EXCLUSION OF CLAIMS AGAINST THE STATE

The proponent acknowledges and agrees that:

- the State's only obligations to the proponent are those expressly set out in the terms and conditions and all conditions, warranties or other obligations that would otherwise apply (by implication of law or otherwise) are excluded to the maximum extent permitted by law; and
- it releases the State and its employees, agents and contractors from all claims (whether under the law of tort, contract or otherwise) arising from or in connection with:
  - the Request for Detailed Development Proposals, the State Tennis Centre Project Brief and the Development Agreement or any information provided by or on behalf of the State (including due to incompleteness, errors, discrepancies or other inadequacy);
  - the State exercising any discretions conferred on it by the conditions;
  - any of the matters and things relevant to the work to be performed under the Development Agreement in respect of which the proponent must satisfy itself under the conditions;
  - any costs, expenses or liabilities incurred by the proponent in obtaining the Request for Detailed Development Proposals, the State Tennis Centre Project Brief and the Development Agreement (or any other related documents) from the State by email or other electronic means; and





 any costs, expenses or other liabilities incurred by the proponent in preparing a Detailed Development Proposal or otherwise in connection with the Detailed Development Proposal (whether or not a Detailed Development Proposal is lodged or accepted by the State) including any costs incurred by the proponent in providing any further information or carrying out any further work at the request of the State.

# 8.16 CHANGE TO CONSORTIUM

If there is a change in the composition of a proponent's consortium after the lodgement of their Detailed Development Proposal the proponent must immediately inform, and obtain the consent of the State to such change.

# 8.17 CODES AND STANDARDS

The design and construction of the project is to comply with all applicable codes and standards, including Local Government Planning Schemes and Local Laws.

# 8.18 DISCLAIMER

While reasonable care has been taken in compiling and furnishing information in the Request for Detailed Development Proposals, the State Tennis Centre Project Brief and Development Agreement, the State, and the Government's representatives, officers, employees, delegates and consultants, make no representation nor give any warranty, expressed or implied to any proponent or its officers, employees, agents, delegates or consultants that any information provided is complete, precise or accurate.

The State shall not be bound by or held in any way responsible for any oral advice or information given or furnished by any person in respect of the project. The proponent must satisfy itself in respect of all matters relating to this document and the project generally.

# 8.19 INDEMNITY

The proponent shall assume all liability for and shall indemnify and save harmless and agrees to indemnify and save harmless the State, and State departments and agencies against all actions or suits arising out of or in connection with the project. Such indemnity shall be at a level considered adequate and sufficient by the State, and shall be subject to the approval of the State.

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# **9** Further Information

For further information proponents should contact the Project Director of the Tennyson Riverside Development Project Office. The contact details are:

Project Director Tennyson Riverside Development Sport and Recreation Queensland PO Box 187 Brisbane Albert Street QLD 4002

Telephone: +61 7 3235 9582 Facsimile: +61 7 3235 9487 Email:

Website: www.sportrec.qld.gov.au/trd



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# ATTACHMENT 1: ROOM/AREA DATA SHEET

| Building/Location:         |  |
|----------------------------|--|
| Room/Area Name:            |  |
| Room/Area Number:          |  |
| General Planning:          |  |
| Description of use:        |  |
| Occupant:                  |  |
| Space Allocation:          |  |
| Area (m²):                 |  |
| Ceiling Height:            |  |
| Construction and Finishes: |  |
| Walls:                     |  |
| Floor/Surface Treatment:   |  |
| Ceiling:                   |  |
| Joinery:                   |  |
| Acoustic Performance:      |  |
| Openings:                  |  |
| Door Sizes:                |  |
| Door Construction:         |  |
| Door Hardware:             |  |
| Door Locks:                |  |
| Windows:                   |  |
| Services:                  |  |
| Mechanical:                |  |
| Electrical (Lighting):     |  |
| Electrical (Power):        |  |
| Security:                  |  |
| Communications:            |  |
| Hydraulics:                |  |
| Fire Protection:           |  |
| Fittings:                  |  |
| Furniture:                 |  |
| Fittings & Equipment:      |  |
| Soft Furnishings:          |  |
| Comments:                  |  |



# ATTACHMENT 2: LIFE CYCLE COSTS - STATE TENNIS CENTRE

| Cost Element                |                    | Cost<br>Interval             | (Capita<br>Cost) | il |   |   |   |   |   |   |   | Year | 5     |    |    |        |    |    |     |      |    |    |    |
|-----------------------------|--------------------|------------------------------|------------------|----|---|---|---|---|---|---|---|------|-------|----|----|--------|----|----|-----|------|----|----|----|
| 1. Capital Costs            |                    | (Time)                       | 0                | 1  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9    | 10    | 11 | 12 | 13     | 10 | 15 | 16  | 17   | 18 | 10 | 20 |
| Superstructure              | Present & Periodic | 10.110.201                   |                  |    |   |   |   |   |   |   |   |      |       |    |    |        |    | -5 | 10  | /    | 10 | 19 | 20 |
| Columns /Frame              | D                  | Provide and international of |                  |    |   |   |   |   |   |   |   |      |       |    |    |        |    |    |     |      |    |    | -  |
| Columns/Frame               | Present & Periodic |                              | -                |    |   |   |   |   | 1 |   |   |      | 10000 |    |    |        |    |    |     |      | 1  |    |    |
| Opper Floors                | Present & Periodic | 10-2-2-20                    | 2                |    |   |   |   | - |   |   |   |      | 1000  |    |    |        |    |    |     |      | -  |    |    |
| Staircases                  | Present & Periodic |                              | 8                |    |   |   |   |   |   |   |   |      |       |    |    |        |    |    |     |      |    |    |    |
| ROOT                        | Present & Periodic | mile                         | 2                | 1  |   |   |   |   |   | A |   |      |       |    |    |        |    |    |     |      |    |    |    |
| External Walls              | Present & Periodic | A CONTRACTOR                 | 3                | 1  |   |   |   |   |   |   |   |      |       |    |    |        | 1  |    |     | -    |    |    |    |
| Windows                     | Present & Periodic | and the                      |                  |    |   |   |   |   |   |   |   |      |       |    |    |        |    |    |     |      | -  | -  |    |
| External Doors              | Present & Periodic | 31 S 2 3 3 1 3               | 24               |    | - |   |   |   |   | - |   |      |       |    | -  |        |    |    | -   | -    | -  |    |    |
| Internal Walls              | Present & Periodic |                              |                  |    |   |   |   |   |   | 1 |   |      |       |    |    |        | -  |    | *   |      |    |    |    |
| Internal Screens            | Present & Periodic | 104 45 247                   | 6                |    |   | 1 |   |   |   |   | - |      |       |    |    |        | -  |    |     |      |    |    |    |
| Internal Doors              | Present & Periodic |                              |                  |    |   |   |   |   |   |   |   |      |       |    | -  | -      | -  | -  |     |      |    |    |    |
| Tennis Courts               |                    |                              |                  |    |   |   |   | - |   | - | 1 | -    |       |    |    | 1      |    |    |     |      |    | L  |    |
| Centre, Show & Match Courts | Present & Periodic | State State State            |                  |    |   |   |   | 1 |   |   |   |      | 1     |    | 1  | -      | -  | -  | -   |      |    | -  | -  |
| Grass Courts                | Present & Periodic | BOD STRUCT                   |                  |    |   | - | - |   |   |   | - | -    | -     | -  |    |        | -  |    |     | -    |    |    |    |
| Clay Courts                 | Present & Periodic | A STRUCTURE OF STRUCTURE     | 2                |    | - |   |   |   |   |   |   |      |       |    |    |        |    | -  |     | -    |    |    |    |
| Fixtures & Fittings         |                    |                              |                  |    | - |   |   | 1 |   |   |   |      | 1     | -  |    | -      |    |    |     |      |    |    |    |
| Wall Finishes               | Present & Periodic | 6121724161                   |                  | 1  |   | 1 | T | 1 | - |   |   | 1    | -     | -  | 1  |        |    | -  | -   | -    |    |    | -  |
| Floor Finishes              | Present & Periodic |                              |                  | -  |   |   |   | - |   |   |   |      |       |    | -  |        |    |    |     |      |    |    |    |
| Ceiling Finishes            | Present & Periodic |                              | 20<br>20         | -  | - | 1 | - | - | - |   |   |      |       |    |    |        |    |    |     |      | -  |    | -  |
| Fitments/Hardware           | Present & Periodic | 111.5                        |                  |    |   | - |   |   |   |   |   |      |       |    |    |        |    |    |     |      | -  |    |    |
| Services & Equipment        | ·····              |                              |                  | -  | - |   | 1 | _ |   |   |   |      |       |    |    |        |    |    |     |      |    |    |    |
| Special Equipment           | Present & Periodic | Man Contests                 |                  |    | 1 | 1 | 1 | 1 | - | - | 1 | -    | 1     |    | -  |        |    |    | _   | -    | _  |    |    |
| Sanitary Fixtures           | Present & Periodic |                              | 2                |    |   |   |   | - | - |   |   |      |       |    |    | _      |    |    |     |      |    |    |    |
| Sanitary Plumbing           | Present & Periodic |                              | 1                |    | - | - |   | - |   |   |   | -    |       |    |    |        |    |    | -   | -    |    |    |    |
| Water Supply                | Present & Periodic | 100000                       | 9                | -  |   |   | - |   |   |   | - | -    |       |    |    |        |    |    |     | 1000 |    |    |    |
| Grandstand Seating          | Present & Periodic |                              | -                |    | - |   | - | - |   |   |   |      |       |    |    |        |    |    |     |      |    |    |    |
| Kitchen Equipment           | Present & Periodic |                              | 8                | -  |   | - |   |   |   |   |   |      |       |    |    | -      |    |    |     |      |    |    |    |
| Tennis Court Lighting       | Present & Periodic |                              |                  | -  | - | - | - | - |   |   |   |      |       |    |    | -      |    |    |     | 1    |    |    |    |
| Gas Services                | Present & Periodic |                              |                  | -  | - | - |   | - |   |   |   | -    |       |    |    |        |    |    |     |      |    |    |    |
| Snace Heating               | Present & Periodic |                              | <u></u>          |    |   |   | - | - |   |   | - |      |       |    |    |        |    |    |     |      |    |    |    |
| Ventilation                 | Procent & Periodic |                              | S                | -  |   |   |   |   |   |   |   |      |       |    |    | 6-11   |    |    |     |      |    |    |    |
| Evaporative Cooling         | Present & Periodic |                              |                  |    |   |   | - |   |   |   |   |      |       |    |    |        |    |    |     | r    |    |    |    |
| Air Conditioning            | Present & Periodic |                              | -                |    |   |   | - |   |   |   |   |      |       |    |    | have a | 1  |    | 1.0 |      |    |    | -  |
| Fire Protection             | Present & Periodic | his state                    | 1                |    |   |   | - |   | - |   |   | 1    |       |    |    |        |    |    |     |      |    |    |    |
| Floctric Light & Downer     | Present & Periodic | a second for                 | 3                | -  |   |   |   |   |   |   |   |      |       |    | 5  |        |    |    |     |      |    |    |    |
| Communications              | Present & Periodic | and the second               | -                |    |   |   | 1 | 1 |   |   |   |      |       |    |    |        |    |    |     |      |    |    |    |
| Communications              | Present & Periodic | N. 1991220                   | 1                |    |   |   |   |   |   |   |   |      |       |    |    |        |    |    |     |      |    | -  |    |
| Data Cabling                | Present & Periodic | the Distant                  |                  | -  | - |   |   |   |   |   |   |      |       |    |    | 1      |    |    |     |      | -  |    |    |
| building Systems            | Present & Periodic |                              |                  |    |   |   |   | 1 |   |   |   |      |       |    |    |        |    |    |     |      |    |    |    |
| transport Services          | Present & Periodic |                              |                  |    | 1 |   |   |   |   |   |   |      |       |    |    |        |    |    |     | 1    |    |    |    |
| Special Services            | Present & Periodic | S MILLING                    | 1                |    |   |   |   |   |   |   |   |      |       |    |    |        | -  |    |     |      |    | -  | -  |

386

#### **Cost Element**

1. Capital Costs





(Time) 19 20 

|                                 |                    | (1111-)                                                                                                         | 0        | 1 | ~ |   | /1 |   | D |   | M | 0 | 10 |    |    |    |    |    |    |    |    |    |    |
|---------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------|----------|---|---|---|----|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| External Works                  |                    |                                                                                                                 |          |   |   | - | 4  | , |   | ' | 0 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Site Preparation                | Present & Periodic |                                                                                                                 |          | T | 1 |   | 1  | 1 | T | - |   | 1 | -  | 1  | 1  | -  | -  | 1  | -  |    | -  | _  | -  |
| Roads/Footpaths                 | Present & Periodic |                                                                                                                 |          |   | 1 |   |    | - | - |   | - | - | -  | -  |    |    |    | -  | -  |    |    |    |    |
| Boundary Walls                  | Present & Periodic | No. 1                                                                                                           | 22       | - |   | - | -  | - | - |   |   | - | -  | -  |    | -  | -  |    | -  |    |    |    |    |
| Outbuildings & Covered Ways     | Present & Periodic | ALL TEN                                                                                                         | 141<br>1 |   | 1 |   | -  | - | - | - |   | - | -  |    | -  | -  | -  | -  |    |    | -  |    | -  |
| Soft Landscaping                | Present & Periodic |                                                                                                                 | 1        | - |   |   | -  |   |   |   |   | - | -  | -  |    | -  | -  | -  |    |    |    |    |    |
| Hard Landscaping                | Present & Periodic | Children Color                                                                                                  | 1        | - |   |   | -  |   | - | - | - | - |    |    | -  |    | -  | -  |    |    | -  | -  | -  |
| External Stormwater             | Present & Periodic |                                                                                                                 | 1        |   | 1 | - | 1  | - |   | - |   | - | -  | -  |    |    |    | -  | -  | -  |    |    |    |
| External Sewer                  | Present & Periodic | Constant and the                                                                                                | 3        |   |   |   | -  |   |   |   |   |   | -  | -  | -  | -  | -  | -  | -  | -  | -  |    |    |
| External Water                  | Present & Periodic |                                                                                                                 | 1        |   |   |   | 1  |   |   | - |   | - | -  |    | -  |    | -  | -  |    | -  | -  |    |    |
| External Gas                    | Present & Periodic |                                                                                                                 | No.      |   |   | 1 |    | - |   | - |   | + |    | -  | -  |    | -  |    | -  |    |    |    |    |
| External Fire Protection        | Present & Periodic | in the second |          |   |   |   | -  | 1 |   |   |   | - | -  | -  | -  | -  | -  | -  | -  | -  |    |    |    |
| External Electric Light & Power | Present & Periodic | R. B. Sterrer                                                                                                   | 10       |   |   |   | -  |   |   | - |   | 1 | -  |    | -  |    | -  | -  |    |    |    | -  |    |
| External Communications         | Present & Periodic | 1.2                                                                                                             | 17       |   |   |   | -  | - |   | 1 | - | - |    |    | -  | -  | -  |    | -  | -  | -  | -  |    |
| External Special Services       | Present & Periodic | Telesaning a                                                                                                    |          |   |   |   |    | - |   | - |   |   |    | -  |    | -  |    | -  |    |    |    |    |    |
|                                 |                    |                                                                                                                 |          |   |   |   |    |   |   |   |   |   |    |    | -  |    |    |    |    |    |    |    |    |

#### 2. Maintenance Costs

| banang chergency a mino                                          | r Maintenance                             | 「子子」ため、いける        |   |      |   |       |   |   |      |   | T |   |   |
|------------------------------------------------------------------|-------------------------------------------|-------------------|---|------|---|-------|---|---|------|---|---|---|---|
| Building – Planned                                               | Maintenance                               |                   |   |      |   | <br>  |   |   |      |   |   |   |   |
| Air Conditioning/Ventilation                                     | Maintenance                               | REAL FOR THE      |   |      |   | <br>  |   |   | <br> | - |   | - |   |
| Lifts/Escalators                                                 | Maintenance                               | the second second |   | <br> | - | <br>  |   |   | <br> | - |   | - |   |
| Electrical                                                       | Maintenance                               |                   |   | <br> |   | <br>- |   |   | -    | - |   | - | - |
| Communications/Security                                          | Maintenance                               |                   |   | <br> |   |       |   |   | <br> |   |   |   |   |
| Fire Protection                                                  |                                           | L'anna serie and  |   | <br> |   |       |   | _ |      | - |   |   | - |
| (refill extinguisher, etc.)                                      | Maintenance                               |                   |   |      |   |       |   |   |      |   |   |   |   |
|                                                                  | the second second second second second    |                   |   |      |   |       |   |   |      |   |   |   |   |
| Liquid Waste Disposal                                            | Maintenance                               |                   |   |      |   |       | 1 | - | 1    | 1 | T | - | - |
| Liquid Waste Disposal<br>Tennis Courts                           | Maintenance<br>Maintenance                |                   |   |      |   |       | _ |   |      | - |   |   |   |
| Liquid Waste Disposal<br>Tennis Courts<br>Tennis Courts Lighting | Maintenance<br>Maintenance<br>Maintenance |                   | - |      |   |       |   |   |      | - |   |   |   |

#### 3. Furniture and Equipment

| Furniture        | Maintenance | A second second second                                                                                         |           |   |       |      |       | T |   |      |   |   |   | 1 | - | - |
|------------------|-------------|----------------------------------------------------------------------------------------------------------------|-----------|---|-------|------|-------|---|---|------|---|---|---|---|---|---|
|                  | Replacement |                                                                                                                | 1         |   | <br>- | <br> |       |   | - | <br> |   |   | - |   |   |   |
| Equipment Major  | Maintenance | the second s | <br>      |   | <br>  | <br> | <br>  |   |   | <br> |   |   |   |   |   | 1 |
| -q-ipinene major | Deslassi    |                                                                                                                | <br>      | - | <br>  |      |       |   |   | -    |   | - | 1 |   |   |   |
|                  | Replacement |                                                                                                                |           |   |       |      |       |   |   |      |   |   |   |   |   |   |
| Equipment Minor  | Maintenance | C. S. C. C. C.                                                                                                 |           |   |       |      |       |   |   |      | - | - |   |   |   | - |
|                  | Replacement | En antipation and the second                                                                                   |           |   |       | <br> | <br>- |   |   | <br> |   |   | - |   |   |   |
|                  |             | A ST AND A ST A S                                                                | <br>1.0.0 |   | <br>  |      | <br>  |   |   |      |   |   |   |   |   | 1 |

\*Note: Units are in Thousands of Nominal Dollars

# ATTACHMENT 3: DEPARTURE SCHEDULE - DEVELOPMENT AGREEMENT

| ltem<br>Number | Clause<br>Reference | Reason for Change | Suggested Drafting |
|----------------|---------------------|-------------------|--------------------|
|                |                     |                   |                    |
|                |                     |                   |                    |
| _              |                     |                   |                    |
|                |                     |                   |                    |
|                |                     |                   |                    |
|                |                     |                   |                    |
|                |                     | -                 |                    |
|                |                     |                   |                    |
|                |                     |                   |                    |
|                |                     |                   |                    |
|                |                     |                   |                    |



The position of any boundaries and identified areas are approximate only. () The State of Queensland (Department of Natural Resources, Mines and Energy) 2004.

# **Further information**

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Internet: www.sportrec.qld.gov.au/trd





# **Tennyson Riverside Development**

Building a future for Queensland tennis

# **State Tennis Centre Project Brief**



**Competitive Bid Process – Stage 2** 

© The State of Queensland (Department of Local Government, Planning, Sport and Recreation) 2004.

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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.



#### **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 1Normal Mode

| Focus of operations | Community tennis centre, involving the following operations:                                                            |  |  |
|---------------------|-------------------------------------------------------------------------------------------------------------------------|--|--|
|                     | Venue management                                                                                                        |  |  |
|                     | Tennis Queensland administration                                                                                        |  |  |
|                     | Commercial use of courts                                                                                                |  |  |
|                     | <ul> <li>Supporting commercial activity (e.g. café, professional tennis shop<br/>and hire of function rooms)</li> </ul> |  |  |
|                     | <ul> <li>Elite and development squad programs (including Queensland<br/>Academy of Sport)</li> </ul>                    |  |  |
|                     | 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        | 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                                                                 |  |  |
|                     | Smaller Scale Tennis Events - State and age championships and corporate events                                          |  |  |
|                     | <ul> <li>All match courts and possibly centre court (courts unavailable for<br/>public use)</li> </ul>                  |  |  |
|                     | <ul> <li>Permanent facilities (café, tennis professional shop, players'<br/>facilities) used to capacity</li> </ul>     |  |  |
|                     | Possible use of meeting or general purpose rooms                                                                        |  |  |
| Frequency/          | • Facilities available year round with the exception of some events                                                     |  |  |
| Duration            | • Smaller scale tennis events - approximately 8 per year                                                                |  |  |

| User groups and<br>indicative<br>numbers | • Venue management staff - 4-6                                                                                     |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|                                          | <ul> <li>Tennis Queensland staff during office hours - 15</li> </ul>                                               |
|                                          | <ul> <li>Tennis Queensland Board - up to 20 attendees (bi-monthly)</li> </ul>                                      |
|                                          | • Tennis Queensland committees - up to 15 attendees (monthly)                                                      |
|                                          | <ul> <li>Regional association meetings and general meetings (evenings) - up<br/>to 50 attendees monthly</li> </ul> |
|                                          | • 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                                                       |

# Table 2 Major Event Mode

| Focus of operations    | Hosting major events (e.g. Davis Cup and Fed Cup ties)                                                                                                      |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | • Suitable non-tennis events on an infrequent basis                                                                                                         |
| Facility use           | • 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                                                                                           |
|                        | <ul> <li>Parts of the venue management facility and Tennis Queensland State<br/>Office to be allocated for event purposes</li> </ul>                        |
|                        | <ul> <li>Major temporary overlay of support and commercial facilities for<br/>media, catering, toilets, broadcast, medical, catering and storage</li> </ul> |
|                        | Major event transport strategy and plan implemented                                                                                                         |
| Frequency/<br>Duration | • 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                |

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| User groups and<br>indicative<br>numbers | • 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                                                                                                                    |
|                                          | <ul> <li>Players - 16-20 for a Davis Cup or Fed Cup tie, 32+ for a national<br/>tournament or 50+ for an international tournament</li> </ul> |
|                                          | • 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                                                                                                                           |
|                                          | <ul> <li>Corporate spectators including sponsors and guests - 300+</li> </ul>                                                                |
|                                          | • 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.

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

#### **Table 3 Facility Accommodation Arrangements**

#### 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.

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

#### Table 4 State Tennis Centre Usage During a Typical Year



## 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.

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#### 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

3.7

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.

## 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.

# **GOVERNMENT POLICIES**

5.

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

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

Consistent with the smoking policy (<u>www.opsme.qld.gov.au/directives/smoking\_policy.htm</u>) 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 | Davis Cup standard and dimensions (41m x 20.5m).                                                                                                                                                                                                                                                                                                     |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | Orientation of the court is to minimise the impact of sun and associated glare.<br>The orientation of the longitudinal axis of the court is to be in the range<br>10 degrees west of magnetic north to 30 degrees east of magnetic north.                                                                                                            |
| 1                       | Playing surface of the centre court during tournament play is not to be adversely affected by shade and wind.                                                                                                                                                                                                                                        |
|                         | Wheelchair tennis to be accommodated.                                                                                                                                                                                                                                                                                                                |
| Base                    | All necessary geotechnical investigations to be undertaken.                                                                                                                                                                                                                                                                                          |
| construction            | 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. |
| Slab finish             | Helicopter trowel with a light broom finish.                                                                                                                                                                                                                                                                                                         |
| Court surface           | The quality of the playing surface is to be of a standard suitable for junior, state, national and international tennis events.                                                                                                                                                                                                                      |
|                         | Surface to be Tennis Australia approved cushioned acrylic hardcourt surface, 5mm thick, installed in accordance with the manufacturer's specification.                                                                                                                                                                                               |
|                         | The surface is to have the following International Tennis Federation play characteristics:                                                                                                                                                                                                                                                           |
|                         | <ul> <li>Surface Pace Rating - 30-40, medium (CS 01/01); and</li> <li>Energy (Shock) Absorption - 7%-15% (CS 04/01).</li> </ul>                                                                                                                                                                                                                      |
| Alternative<br>surfaces | Ability to permit temporary installation of natural grass or clay playing surfaces to Davis Cup, International Tennis Federation and Tennis Australia standards. Access to allow forklifts to deliver and install 2.4m x 2.4m pallets containing alternative surface.                                                                                |
|                         | 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.                                                                                                                                                  |
| Surface<br>tolerance    | Court surface is a single plane, tilted to drain surface water to appropriate drains/collection point.                                                                                                                                                                                                                                               |
|                         | 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.                                                                                                                                                                                                         |
|                         | Surface tolerance (deviation from plane) is 3mm (maximum deviation) under a 3m straight edge placed anywhere on the court.                                                                                                                                                                                                                           |

| 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<br>equipment | All necessary infrastructure and equipment for the successful operation of a major tennis event.                                                                                                                                                                                                                                                                                                                                               |
|                    | Net posts shall be Grand Slam Equipment TNPCSAT or equivalent and installed in court sleeves. Court sleeves for singles and doubles play.                                                                                                                                                                                                                                                                                                      |
|                    | 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.                                                                                                                                                                                                                                  |
| i                  | All required moveable seats and equipment for all umpires, officials and players.                                                                                                                                                                                                                                                                                                                                                              |
|                    | Wet weather covers for the total court surface, a suitable storage area close to centre court and all necessary handling equipment.                                                                                                                                                                                                                                                                                                            |
|                    | 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.                                                                                                                                |
| Services           | 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.                                                                                                                                                                                                                      |
|                    | Concealed conduits for television cameras and net cams.                                                                                                                                                                                                                                                                                                                                                                                        |
| Warranty<br>period | The warranty period for the court base and surface will be 12 years.                                                                                                                                                                                                                                                                                                                                                                           |

# 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).

# MATCH AND SHOW COURTS

## 7.1 Match Courts

#### **Table 6 Match Court Requirements**

| Standard and dimensions | Fourteen (14) courts of an International Tennis Federation standard and dimensions of 36.6m x 18.3m.                                                                                                                                                                                        |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | Orientation of the courts is to minimise the impact of sun and associated glare.<br>The orientation of the longitudinal axis of the courts is to be in the range<br>10 degrees west of magnetic north to 30 degrees east of magnetic north. All<br>courts are to have the same orientation. |
| · ·                     | Playing surfaces are not to be adversely affected by shade and wind.                                                                                                                                                                                                                        |
|                         | Walkways between courts are to be of suitable width and provided with some shading.                                                                                                                                                                                                         |
|                         | Wheelchair tennis to be accommodated.                                                                                                                                                                                                                                                       |
| Base                    | All necessary geotechnical investigations to be undertaken.                                                                                                                                                                                                                                 |
| construction            | 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.                  |
| Slab finish             | Helicopter trowel with a light broom finish.                                                                                                                                                                                                                                                |
| Court surface           | The quality of the playing surface is to be of a standard suitable for junior, state, national and international tennis events.                                                                                                                                                             |
|                         | Surface to be Tennis Australia approved cushioned acrylic hardcourt surface, 5mm thick, installed in accordance with the manufacturer's specification.                                                                                                                                      |
|                         | The surface is to have the following International Tennis Federation play characteristics:                                                                                                                                                                                                  |
|                         | <ul> <li>Surface Pace Rating - 30-40, medium (CS 01/01); and</li> <li>Energy (Shock) Absorption - 7%-15% (CS 04/01).</li> </ul>                                                                                                                                                             |

| Surface<br>tolerance | Court surface is a single plane, tilted to drain surface water to appropriate drains/collection point.                                                                                                                                                                                                                      |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | 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.                                                                                                                                                                               |
|                      | Surface tolerance (deviation from plane) is 3mm (maximum deviation) under a 3m straight edge placed anywhere on the court.                                                                                                                                                                                                  |
| Fencing              | 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.                                                                                                                                                                              |
|                      | Perimeter fencing to courts to accommodate wind/sight screens as required.<br>Refer also to Section 16.9.5.                                                                                                                                                                                                                 |
|                      | All courts to have access for maintenance as well as players/patrons between courts.                                                                                                                                                                                                                                        |
| Lighting             | To a standard for international play in accordance with AS 2560.2.1-2003 Sports<br>lighting - Specific applications - Lighting for outdoor tennis and Tennis<br>Australia Technical Instruction – Lighting for Outdoor Tennis. Refer also to<br>Section 16.2.9. No light poles shall be placed in front of spectator areas. |
|                      | Horizontal illuminance shall be minimum average 1,000 lux at 1.0m above the surface for total playing area.                                                                                                                                                                                                                 |
|                      | 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                | All necessary infrastructure and equipment.                                                                                                                                                                                                                                                                                 |
| Equipment            | Net posts shall be Grand Slam Equipment TNPCSAT or equivalent and installed<br>in court sleeves. Court sleeves for doubles play.                                                                                                                                                                                            |
|                      | 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.                                                                                                   |
|                      | All required moveable seats and equipment for umpires, officials and players.                                                                                                                                                                                                                                               |
|                      | Heavy duty wind/sight screens to perimeter fences where appropriate.                                                                                                                                                                                                                                                        |
|                      | Waste receptacles to each court.                                                                                                                                                                                                                                                                                            |
| Services             | 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.                                                                                                                                                         |
| Warranty period      | The warranty period for court bases and surfaces will be 12 years.                                                                                                                                                                                                                                                          |

# 7.2 Show Courts

# Table 7 Show Court Requirements

| Standard and dimensions | Two (2) courts of an International Tennis Federation standard and dimensions of $41 \text{ m} \times 20.5 \text{ m}$ .                                                                                                                                                                                                                                                                                                                         |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | 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<br>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                   | To match court requirements in Table 6.                                                                                                                                                                                                                                                                                                                                                                                                        |
| Equipment .             | 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<br>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.                                                                                                                                                                                                                                                                                                                                                                                                        |

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# 8 TRAINING COURTS

# 8.1 Court Construction, Finishes, Services and Equipment

# Table 8 Training Court Requirements

| Standard and dimensions | Four (4) clay courts of an International Tennis Federation standard and dimensions of 38m x 18.3m.                                                                                                                                                                                                                  |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | Two (2) double grass courts of an International Tennis Federation standard and dimensions of 38m x 27.9m.                                                                                                                                                                                                           |
|                         | Orientation of the courts is to minimise the impact of sun and associated glare.<br>The orientation of the longitudinal axis of the courts is to be in the range<br>10 degrees west of magnetic north to 30 degrees east of magnetic north. All<br>courts are to have the same orientation.                         |
|                         | Playing surfaces of the courts are not to be adversely affected by shade and wind.                                                                                                                                                                                                                                  |
|                         | Walkways between courts are to be of suitable width and provided with some shading.                                                                                                                                                                                                                                 |
|                         | Wheelchair tennis to be accommodated.                                                                                                                                                                                                                                                                               |
| Court usage             | <ul> <li>It is intended the training courts will be used for:</li> <li>specialist training and development of elite players and squads;</li> <li>practice during major tournaments and events such as Davis Cup ties;</li> <li>small scale 'niche' tournaments; and</li> <li>occasional commercial hire.</li> </ul> |

|  | Grass courts | All necessary geotechnical investigations to be undertaken.                                                                                                                                                                                                                                                                                                                                                                                 |
|--|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |              | Grass courts are to be prepared as detailed below.                                                                                                                                                                                                                                                                                                                                                                                          |
|  |              | 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. |
|  |              | The base profile covering the sub-base drainage system is to consist of the following layers:                                                                                                                                                                                                                                                                                                                                               |
|  |              | <ul> <li>150mm of 10mm rock;</li> <li>50mm of course washed sand; and</li> <li>200mm of a medium grade clay-loam soil of a suitable pH and clay content lightly compacted in 50mm stages.</li> </ul>                                                                                                                                                                                                                                        |
|  |              | 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.                                                                                                                                                                                                                                           |
|  |              | Turf the court surface using a 'Legend' variety turf approved by Tennis<br>Australia which is suitable for the Brisbane climate, the State Tennis Centre<br>environment and the intended use of the courts.                                                                                                                                                                                                                                 |
|  |              | Obtain specialist advice from a soil scientist on a suitable turf growing medium and submit for approval by the State.                                                                                                                                                                                                                                                                                                                      |
|  |              | Turf medium to be test certified by a National Association of Testing Authority accredited laboratory to establish compliance with the agreed requirements.                                                                                                                                                                                                                                                                                 |
|  |              | Court surface is a single plane, tilted to drain surface water to appropriate surface drains/collection point.                                                                                                                                                                                                                                                                                                                              |
|  |              | Commence topdressing and rolling the courts following establishment.                                                                                                                                                                                                                                                                                                                                                                        |
|  |              | Commence mowing, irrigation and fertilising the courts following establishment.                                                                                                                                                                                                                                                                                                                                                             |
|  | Clay courts  | All necessary geotechnical investigations to be undertaken.                                                                                                                                                                                                                                                                                                                                                                                 |
|  |              | Design and construction to be provided to Boral's NUclay Tennis Courts<br>Construction Specification available from Boral Tennis, Western Australia<br>(Ph.08 9273 5107).                                                                                                                                                                                                                                                                   |
|  |              | Court surface is a single plane, tilted to drain surface water to appropriate surface drains/collection point.                                                                                                                                                                                                                                                                                                                              |
|  |              | 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.                                                                                                                                                                                                                                                                                                |
|  |              | The surface material is to be suitable for the Brisbane climate, the State Tennis<br>Centre environment and the intended use of the courts. Consideration needs to<br>be given to the surface's fineness ratio, affinity to moisture and grading of<br>particles.                                                                                                                                                                           |
|  |              | Design and construction are to minimise maintenance and loss of clay surface.                                                                                                                                                                                                                                                                                                                                                               |

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| Fencing              | Each court to be individually fenced, with top and bottom rails, to 3m height at<br>ends and taper down from the baseline to 1.2m between courts, except for the<br>clay courts where all external fences are to be 3m high and installed with wind<br>screens to protect the court surface from wind erosion. |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                      | Perimeter fencing to courts to accommodate wind/sight screens as required.<br>Refer also to Section 16.9.5.                                                                                                                                                                                                    |
|                      | For clay courts, perimeter edging around the entire perimeter of the court area.                                                                                                                                                                                                                               |
|                      | All courts to have access for maintenance as well as players/patrons between courts.                                                                                                                                                                                                                           |
| Lighting             | To standard for international play in accordance with AS 2560.2.1-2003 Sports<br>lighting - Specific applications - Lighting for outdoor tennis and Tennis<br>Australia Technical Instruction – Lighting for Outdoor Tennis. Refer also to<br>Section 16.2.9.                                                  |
|                      | Horizontal illuminance shall be minimum average 1,000 lux at 1.0m above the surface for total playing area.                                                                                                                                                                                                    |
|                      | 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<br>equipment   | All necessary infrastructure and equipment.                                                                                                                                                                                                                                                                    |
|                      | Net posts shall be Grand Slam Equipment TNPCSAT or equivalent and installed<br>in court sleeves. Court sleeves for doubles play.                                                                                                                                                                               |
|                      | 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.                                                                                      |
|                      | All required moveable seats and equipment for umpires, officials and players.                                                                                                                                                                                                                                  |
|                      | Heavy duty wind/sight screens to perimeter fences where appropriate.                                                                                                                                                                                                                                           |
|                      | Waste receptacles to each court.                                                                                                                                                                                                                                                                               |
| Services             | 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.                                                                                                                           |
| Irrigation<br>system | A fully built-in automatic watering system, linked to the Building Management System, to the clay and grass courts.                                                                                                                                                                                            |
| Warranty period      | The warranty period for court bases will be 5 years.                                                                                                                                                                                                                                                           |

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# 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 20m<sup>2</sup> 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 fitout 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;
- I 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  $300m^2$  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 dayto-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.

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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<br>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 luminaries 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<br>Conditions | Dry Bulb<br>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  $150 \text{ m}^2$  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 - Receptable 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 Stormwa | ter Drainage | : System – Design | Parameters |
|------------------|--------------|-------------------|------------|
|------------------|--------------|-------------------|------------|

| Design Frequencies |                |                                            |
|--------------------|----------------|--------------------------------------------|
| Building Zone      | Piped drainage | 20 yr Average Recurrence<br>Interval (ARI) |
|                    | Overland flow  | 50 yr ARI                                  |
| Downstream         | Piped drainage | 10 yr ARI                                  |
| Pipe Velocities    | Maximum        | 3.6m/sec                                   |
| (at design flow)   |                | (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.

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# 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 0.4uT 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.

| Element Description              | Minimum Design Life<br>(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                             |  |

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# Table 13 Minimum Design Life Requirements

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| Element Description               | Minimum Design Life<br>(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.

## Windows

20.4

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

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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.

# 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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Email:

Internet: www.sportrec.qld.gov.au/trd



Government Sport and Recreation Queensland

# Tennyson Riverside Development

Building a future for Queensland tennis

# **Development Agreement**



**Competitive Bid Process – Stage 2** 

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# Tennyson Riverside Development

# **Development Agreement**

State of Queensland (State) [insert developer] (DEVELOPER)

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# **Tennyson Riverside Development**

Development Agreement

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Tennyson Riverside Development Development Agreement

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# Details

### Date

## Parties

Name Short form name Notice details State of Queensland State 160 Mary Street, Brisbane, Queensland, 4000 Facsimile (07) 3235 9487

Name Short form name Notice details ## DEVELOPER ## Facsimile ## Attention: ##

## Background

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- A The State requires the development of an international standard tennis centre and associated development on the Tennyson Site.
- B The State sought Expressions of Interest from the private sector for the development of the Tennyson Site.
- C Three proponents were shortlisted and requested to prepare Detailed Development Proposals (**DDPs**) which resulted in DEVELOPER being nominated as preferred developer for the Tennyson Riverside Development on *[#insert date#]*.
- D The State and DEVELOPER have completed negotiations regarding the Project and wish to enter into a formal agreement to record the agreement reached.
  - Upon satisfaction of the Conditions Precedent, DEVELOPER will be nominated developer of the Tennyson Riverside Development.

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# Agreed terms

#### 1. Defined terms

#### 1.1 Defined terms

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In this document:

Agreement means this agreement and includes all schedules and exhibits.

Animal Research Institute Access Corridors means the corridors and work zone so described on the plan in Schedule 2 of the licence in Schedule 7.

Approvals means all permissions, consents, approvals, licences, certificates, permits and administrative decisions as may be necessary to commence, carry out and complete the Project.

Approvals Program means the timetable in Schedule 18 for obtaining the Approvals.

Art Built in Policy means the Queensland Government's Art Built in Policy and Art Built in Guidelines for Public Art Planning, Delivery and Review current as at the time of this Agreement.

Associated Development means [#insert description based on DEVELOPER'S proposal#].

Associated Development Concept means the development concept for the Associated Development as described in Schedule 10.

Associated Development Lot means the lot defining the boundaries of the Associated Development Site which will be created upon registration of Plans of Subdivision of the Tennyson Site.

Associated Development Site means the land on which the Associated Development is to be constructed as shown on the Site Plan as #, until it becomes the Associated Development Lot, and thereafter shall be the Associated Development Lot.

Associated Development Works means the works required to construct the Associated Development in accordance with the Associated Development Concept.

Authority means a Government body or authority that regulates an aspect of the Project and includes the Council.

**Background Intellectual Property** means that Intellectual Property which a Party makes available in the performance of its obligations under the agreement, and which has been adequately identified by that Party before being so made available.

**Bank Guarantee** means an unconditional, irrevocable (not limited as to time) undertaking (in a form reasonably acceptable to the State) to pay a specified amount to the State on demand issued by a bank (reasonably acceptable to the State) carrying on business in Queensland.

**Builder** means the building contractor(s) engaged by DEVELOPER to undertake the State Tennis Centre Works and the Transport and Access Works or any component of it, and where more than one builder is engaged, means each of them.

Business Day means a day that is not a Saturday, Sunday or public holiday in Brisbane.

**Certificate of Classification** means a certificate of classification pursuant to the Standard Building Regulation 1993 appropriate to the intended use of the relevant part of the State Tennis Centre Works (or the Access Works if applicable).

**Commencement Date** has the meaning set out in clause 4.2.

Conditions Precedent means those conditions set out in clause 4.1.

**Conforming Approvals** in respect of the State Tennis Centre Site are Approvals that are consistent with the State Tennis Centre Concept; and in respect of the Associated Development Site, Approvals that are consistent with the Associated Development Concept.

Council means the Brisbane City Council.

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**Court Design Documentation** means the drawings, specifications and other documents developed by DEVELOPER in accordance with the provisions of this Agreement, necessary to construct the Tennis Courts as accepted by the State (whether actual or deemed) or confirmed by adjudication.

Court Design Program has the meaning given in clause 6.3.

**Critical Finish Date** means the date so described in Schedule 1 as may be varied under this Agreement.

**Cushioned Acrylic Courts** means those Tennis Courts so described in the State Tennis Centre Project Brief and includes the Centre Court, Show Courts and Match Courts.

**Date for Practical Completion** means the date specified in the Draft Program as the date for Practical Completion of the State Tennis Centre Works and the Transport and Access Works or any separable part as the context dictates.

Default means Financial Default or an Event of Default.

**Design Documentation** means the drawings, specifications and other documents (excluding the Court Design Documentation) developed by DEVELOPER in accordance with the provisions of this Agreement, which together with the Court Design Documentation are necessary to construct, the State Tennis Centre Works and the Transport and Access Works as accepted by the State (whether actual or deemed) or confirmed by adjudication.

**Design Program** means a program for the development of design documentation at a rate and to a level such as to enable execution of the State Tennis Centre Works and the Transport and Access Works in accordance with the Program including identification of times at which design documentation will be made available to the State for review, and must set out reasonable particulars of those packages so as to enable the State to appropriately resource the review process. At a minimum, design documentation must be submitted for review at:

- Developed Design Stage; and
- Construction Documentation Stage,

(as described in Schedule 8 but excluding Tennis Court specific items).

**DEVELOPER'S Representative** means the representative of the DEVELOPER authorised to serve as DEVELOPER'S interface with the State with respect to all aspects of the performance of the Works and to receive and fulfil the requirements of DEVELOPER as provided in this Agreement.

Development Approvals means those Approvals which:

- (a) are development approvals under the Integrated Development Assessment System (IDAS) of the *Integrated Planning Act 1997*; or
- (b) otherwise relate to the commencement, carrying out or completion of the Project (which are not Tenure Approvals).

**Development Lease** means the lease in the form set out in Schedule 5 to be granted in accordance with clause 9.7.

Draft Program means the draft implementation program included in Schedule 17.

Easements means the easements described in Schedule 3.

**Encumbrances** includes mortgages, leases, easements and other interests in land and caveats lodged to protect them.

**Environmental Management Register** means the register of that name maintained by the Queensland Environmental Protection Agency.

Event of Default means any event referred to in clause 26.2.

Excepted Risks means the risks referred to in subparagraphs 16.1(b)(i), (v) and (vi).

Final Completion means the later of:

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- (a) the expiration of the Warranty Period for the State Tennis Centre Works and the Transport and Access Works (excluding the Tennis Courts); and
- (b) the date all defects identified in a notice given under clause 17.4 have been repaired to the reasonable satisfaction of the State's Representative.

Final Variation Cost means the Variation Cost:

- (a) as agreed by DEVELOPER and the State under clause 11.1(d)(i); or
- (b) if not agreed under clause 11.1(d)(i), as determined following a reference under clause 11.1(d)(ii).

Financial Default means the occurrence of one of the events specified in clause 26.1.

**Force Majeure** means any circumstance that is not within the reasonable control, directly or indirectly, of DEVELOPER, but only if and to the extent that:

- (a) (despite the exercise of reasonable diligence), it cannot be (or be caused to be) prevented, avoided, or removed by DEVELOPER;
- (b) it adversely affects (in cost and/or time) the ability of DEVELOPER to perform its obligations under this Agreement;
- (c) DEVELOPER has taken all reasonable precautions, due care and reasonable alternative measures in order to avoid the effect of that event on its ability to perform its obligations under this Agreement (and to mitigate the consequences of it); and

such event is not the direct or indirect result of the failure of DEVELOPER to perform any of its obligations under this Agreement. Site specific industrial disputes (as opposed to nationwide or statewide strikes) do not constitute a Force Majeure event. A breach by the State of its obligations under this Agreement does not constitute a Force Majeure event.

**Good Engineering Practice** means those practices, methods and activities that would commonly be used by internationally recognised engineering organisations when performing testing, modelling and design roles and includes:

- (a) acting professionally;
- (b) following best practices;
- (c) acting with due care and skill in applying internationally accepted criteria and procedures; and
- (d) acting in accordance with all applicable laws, codes and standards.

**GST** means the goods and services tax (or similar tax) imposed in Australia pursuant to the *A* New Tax System (Goods and Services) Act 1999 and related legislation.

Handover means the handover of the State Tennis Centre to the State in accordance with clause 19.

Handover Date means the date which is 10 Business Days after Practical Completion of the State Tennis Centre Works and the Transport and Access Works (unless extended under this Agreement).

Information means the information disclosed to DEVELOPER under the Process Deed.

**Intellectual Property** includes all copyright, all rights in relation to inventions (including patents), registered and unregistered trade marks (including service marks) and registered designs.

Land Registry means the Titles Office of the Department of Natural Resources, Mines and Energy.

Latent Defect has the meaning in clause 17.2.

Local Industry Policy means the Queensland Government's Local Industry Policy and Guidelines at the time of this Agreement.

Models Results has the meaning given in clause 6.3.

Native Title and Cultural Heritage Requirements refers to the resolution of the rights and interests of traditional owners and associated cultural heritage issues to:

- (a) enable the Approvals to be issued;
- (b) enable the Works to occur; and
- (c) permit the Tenure Arrangements to be implemented.

**Owner** for the purposes of clause 7.3(a) and 20.1(b) has the meaning given in the *Integrated Planning Act 1997.* 

Plan of Land Configuration means the drawing so described in Schedule 3.

Plan of Land Re-Allocation means the drawing so described included in Schedule 12.

**Plans Drawings and Diagrams** means in relation to the State Tennis Centre Works and the Transport and Access Works the documents listed in Schedule 13 including all approved modifications of them.

**Plans of Subdivision** means the plans of subdivision under the *Integrated Planning Act 1997* and the *Land Title Act 1994* required under clause 20.1.

#### Practical Completion means when:

- (a) the State Tennis Centre Works and the Transport and Access Works (or any separable part of them) have been constructed substantially in accordance with the Design Documentation, commissioned in accordance with the State Tennis Centre Project Brief and are fit for their intended use;
- (b) a Certificate of Classification has been issued for the State Tennis Centre Works and the Transport and Access Works (or any separable part of them) where required; and
- (c) all service installations are completed, commissioned and in useable condition.

Unless otherwise agreed Practical Completion of the State Tennis Centre Works and the Transport and Access Works will not occur until:

(d) tests have been satisfactorily completed;

- (e) the Council or other approved certifier has issued a Certificate of Classification for the State Tennis Centre and Transport and Access Works;
- (f) all Transport and Access Works to the State Tennis Centre have been completed in accordance with the requirements of any Authority;
- (g) all Services which the DEVELOPER is obliged to supply have been supplied in accordance with the Design Documentation;
- (h) all construction equipment (other than any reasonably required for minor works) has been removed from the State Tennis Centre and Transport and Access Works;
- all water, electricity and other Services which are necessary to enable the State Tennis Centre and Transport and Access Works to operate effectively have been completed, connected and are fully operational;
- (j) all landscaping for the State Tennis Centre and Transport and Access Works has been completed in accordance with the Design Documentation and the requirements of all Authorities; and
- (k) the State Tennis Centre car park, bus and taxi parking and interchange facilities are completed and fit for their intended purpose.

However, Practical Completion may occur if the matters described above are complete, except for minor omissions and minor defects:

- (l) that do not prevent the State Tennis Centre and Transport and Access Works from being capable of being used for their intended purpose;
- (m) rectification of which will not prejudice the convenient use of the State Tennis Centre; and
- (n) that do not cause any impediment whether legal or otherwise to the use and/or occupation of and access to the State Tennis Centre.

Prescribed Court Documents has the meaning given in clause 16.3.

Prescribed Documents has the meaning given in clause 5.12.

**Process Deed** means the deed by DEVELOPER in favour of the State dated ##, which governed access to the Tennyson Site and disclosure of certain information.

**Program** has the meaning given in clause 10.3 and includes any revisions of that program pursuant to clause 10.3.

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**Project** means all the activities required to:

(a) complete the Works; and

(b) complete the Tenure Arrangements.

Project Control Group has the meaning in clause 13.1.

#### QBSAA means Queensland Building Services Authority Act 1991.

**Services** means all services ancillary to the operation of the State Tennis Centre and Transport and Access Works including electrical, mechanical, drainage (including storm water), sewerage, gas, fire and other safety or emergency systems, communication services and any like services.

Settlement Date means the date which is the later of:

- (a) 5 Business Days after separate titles issue for the State Tennis Centre Lot and the Associated Development Lot; and
- (b) 5 Business Days after Handover has occurred.

Site Plan means the plan so described in Schedule 12.

**State** means the State of Queensland represented by the Department of Local Government, Planning, Sport and Recreation.

**State's Certifier** means a certifier appointed by the State for the purposes of measuring, valuing and auditing claims made by the DEVELOPER under this Agreement. The State must advise the DEVELOPER from time to time as to the identity of the State's Certifier.

State's Delegate has the meaning in clause 12.1.

State's Representative has the meaning in clause 12.1.

**State Tennis Centre** means a tennis centre meeting the State's objectives set out in clause 3.1, and with all necessary supporting infrastructure that the State requires to be established on or proximate to the State Tennis Centre Site.

State Tennis Centre Concept means the development concept for the State Tennis Centre as described in Schedule 9.

**State Tennis Centre Lot** means the lot defining the State Tennis Centre Site which will come into existence upon registration of Plans of Subdivision of the Tennyson Site.

**State Tennis Centre Project Brief** means the functional brief, technical specification and standard of finishes set out in Schedule 2 for the required standard of workmanship and quality of the State Tennis Centre, its plant, materials, finishes and level of services.

State Tennis Centre Site means the land on which the State Tennis Centre is to be constructed as shown on the Site Plan as ## until it becomes the State Tennis Centre Lot, and thereafter shall be the State Tennis Centre Lot.

State Tennis Centre Works means all:

- (a) preliminary site works and contamination remediation of the State Tennis Centre Site; and
- (b) material and activities required to construct the State Tennis Centre,

in accordance with this Agreement.

[This definition may need to include preliminary site works eg. site clearance (including demolition of existing buildings and structures) and remediation of contamination]

**Subcontractor** means any vendor, subcontractor, or supplier of equipment, materials or services to the Builder or DEVELOPER (and any subcontractor or any person engaged or employed by any vendor, subcontractor, or supplier) in connection with the performance of the State Tennis Centre Works and the Transport and Access Works.

Tennis Courts means the tennis courts to be constructed as part of the State Tennis Centre.

Tennyson Site means all of the land above and below high water mark (including, but subject to the conditions in Schedule 7, the Animal Research Institute Access Corridors) required to implement and complete the Project, being all of the land hatched on the Site Plan. [#may need modification, depending on location of Transport and Access Works#]

**Tennyson Riverside Development** means the development of the State Tennis Centre, the Transport and Access Works and the Associated Development on the Tennyson Site.

Tenure Approvals means those Approvals (other than Development Approval):

- (a) which are required to implement the Tenure Arrangements; or
- (b) being consents of all persons (if any) having interests or rights in or over the Tennyson Site or land outside the Tennyson Site who by the lawful exercise of their rights in the absence of such consent would prevent or impede the commencement, carrying out or completion of the Project.

**Tenure Arrangements** means the tenure arrangements necessary to implement the Project, being those arrangements specified and described in clause 9 and Schedule 4, together with such arrangements as are incidental thereto.

**Tenure Program** means the timetable for implementation of the Tenure Arrangements as specified in Schedule 4.

Termination Costs has the meaning in clause 26.7.

Test Statement has the meaning given in clause 6.1.

Tests has the meaning given in clause 14.3.

Training Courts means those Tennis Courts described in the State Tennis Centre Project Brief as grass courts or clay courts.

Transfer Documents means:

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- (a) the forms of transfer under the *Land Title Act 1994* required to transfer title in the Associated Development Lot to DEVELOPER; and
- (b) any other document to be signed by the State necessary for stamping and registering the transfers.

**Transport and Access Works** means the works described in Schedule 11 describing the arrangements for providing access to the State Tennis Centre Site.

**Transport and Access Works Concept** means the development concept for the Transport and Access Works as described in Schedule 11.

**Variation** shall mean any of the following in respect of the State Tennis Centre Works or the Transport and Access Works:

- (a) a change in the State's requirements which makes necessary the alteration or modification of the design or quality including:
  - (i) increases or decreases in or omissions from the State Tennis Centre Works or the Transport and Access Works;
  - (ii) changes in the character or quality of any material or workmanship;
  - (iii) changes in the levels, lines, position or dimensions of any part of the State Tennis Centre Works or the Transport and Access Works; or
  - (iv) the execution of additional work;
- (b) the addition, alteration or omission of any obligations or restrictions imposed by the State or as stated in the Plans Drawings and Diagrams in regard to:
  - access to the State Tennis Centre Lot or use of any specific parts of the State Tennis Centre Lot; or
  - (ii) the execution or completion of the State Tennis Centre Works or the Transport and Access Works in any specific order,

but does not include:

- (c) changes required to ensure the State Tennis Centre Works or the Transport and Access Works are consistent with the Design Documentation;
- (d) changes made necessary by the requirements of any Authority in any Approval or statutory instrument;
- (e) changes made necessary by legislative or administrative changes of general application; or
- (f) any work not specifically included in the Design Documentation, which would be inferred or would be required by good building and construction practice.

**Variation Cost** means the cost (which may increase or decrease the actual cost of executing the State Tennis Centre Works or the Transport and Access Works) of effecting a Variation which does not delay Practical Completion, and includes:

- (a) specialist plant and equipment;
- (b) labour and materials including any actual costs of supervision (which will not include overhead or margin);
- (c) Subcontractors;
- (d) delays (if any) and accelerations (if any);
- (e) site allowance, design fees and statutory fees;
- (f) consultancy costs including costs of any redesign;
- (g) costs associated with preparing estimates and other material for the valuation of the Variation required under clause 11.1(c)(ii); and
- (h) DEVELOPER'S actual costs of administering the Variation.

Warranty Period has the meaning in clause 17.2.

Wharf means the wharf so described and identified on the Plan of Land Configuration.

Works means the:

- (a) Transport and Access Works;
- (b) Associated Development Works; and
- (c) State Tennis Centre Works.

Year means a calendar year.

#### 2. Understanding this Agreement

#### 2.1 References

In this Agreement, unless the context otherwise requires:

- (a) references to:
  - (i) a Party includes the Party's successors and assigns;
  - (ii) anything includes part of that thing;
  - (iii) persons include companies, associations, firms and authorities;
  - (iv) gender includes all other genders;
  - (v) documents include the document as changed or replaced from time to time;
  - (vi) currencies mean Australian currencies;
  - (vii) a Party, where the Party is more than one person, means all of them together and each of them separately;
  - (viii) a clause or schedule or recital refers to a clause or schedule or recital in this Agreement;
  - (ix) a statute or regulation includes all statutory provisions or regulations amending, consolidating or replacing the statute or regulation; and
  - (x) a day refers to the period commencing at midnight and ending 24 hours later;
- (b) the singular includes the plural and the other way around;
- (c) where a Party is more than one person, this Agreement binds all of them separately and each of them together;
- (d) headings do not affect the meaning of this Agreement;
- (e) if a word or phrase is defined, any variation of that word or phrase has the same meaning to the extent possible;
- (f) a reference to 'a Party' or 'Parties' is a reference to a Party or the Parties to this Agreement;
- (g) a reference to 'indemnify' means that the person giving the indemnity will indemnify and keep indemnified the person given the indemnity against any loss, (including consequential loss) damage, claims, actions, demands, costs or expenses suffered or sustained because of the event indemnified against except to the extent caused or contributed to by any act or omission of the person indemnified. This means that if the person indemnified suffers any loss or must pay any money (whether or not it is actually

paid) because of an indemnified event the Party giving that indemnity must pay the amount of loss or the amount of liability to the indemnified Party. If it does not, the indemnified Party can recover the amount as a liquidated claim;

- (h) if there is any inconsistency between a clause of this Agreement and a provision of a schedule, the provision of this Agreement will prevail;
- (i) if anything to be done under the Agreement falls on a day which is not a Business Day, then it must be done on the next Business Day within that area;
- (j) where examples of a general term are given (whether or not using words such as 'includes' or 'including'), the use of the examples is without limitation to the general term and the 'ejusdem generis' rule is specifically excluded;
- (k) any invoice for payment issued under this agreement must also be a tax invoice within the meaning of *A New Tax System (Goods and Services Tax) Act 1999* (Cth); and
- (1) any payments to be made under this Agreement by DEVELOPER must be by way of bank cheque issued by a bank licensed under the *Banking Act 1959* (Cth).

#### 3. Purpose of this Agreement

#### 3.1 State's objectives

The State's objectives include:

- (a) the development on the State Tennis Centre Site of 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 and to attract and host national and international standard tennis events on a scale similar to Davis Cup and Fed Cup ties, and hard court championships and age group championships and to provide a centre for the development of tennis both at a local and state level and an administrative headquarters for Tennis Queensland;
- (b) the development on the Associated Development Site of a development which compliments and is compatible with the efficient and effective operation of the State Tennis Centre;
- (c) to ensure the Tennyson Riverside Development integrates with the surrounding areas and infrastructures;
- (d) to ensure the State Tennis Centre Works and the Transport and Access Works are completed before or in conjunction with the Associated Development; and
- (e) to ensure the Tennyson Riverside Development maximises the financial return to the State while minimising the risks to the State.

#### 3.2 Project components

The State and DEVELOPER have agreed that DEVELOPER will to the extent that it is within the power of DEVELOPER (using its best endeavours) undertake the Project, and in particular:

- (a) DEVELOPER will at its cost and risk:
  - (i) obtain all necessary Approvals;
  - (ii) resolve any Native Title and Cultural Heritage Requirements; and

- (iii) complete the Works; and
- (b) the State will effect the Tenure Program.

#### 3.3 Purpose of agreement

The purpose of this Agreement is to:

- (a) provide a framework under which the Project will be undertaken; and
- (b) specify the rights and obligations of the Parties in respect of the Project.

#### 4. Conditions Precedent

#### 4.1 Conditions

The rights and obligations of the Parties (other than the rights and obligations under this clause 4 and clauses 7, 12, 13, 23, 24, 25, 26, 27, 28 and 29) are subject to satisfaction or waiver in accordance with clause 4.4 of the following Conditions Precedent:

- (a) DEVELOPER obtaining all Approvals specified in clause 7 and providing documentary evidence of this to the State;
- (b) the State entering into arrangements enabling it to acquire the necessary interests in the Tennyson Site and complying with its obligations under clause 20;
- (c) DEVELOPER obtaining on behalf of the State an exemption under the Land Sales Act
   1984 to the conditional acquisition by the State of the Tennyson Site and the conditional obligations to dispose of land in clause 20;
- (d) DEVELOPER resolving to the satisfaction of the State the Native Title and Cultural Heritage Requirements;
- (e) DEVELOPER providing the Bank Guarantee(s) in accordance with clause 15;
- (f) DEVELOPER obtaining a licence sufficient to construct the Project under the QBSAA; and
- (g) DEVELOPER providing the Deed of Release in accordance with clause 24.2,

[Note: If the proponent's proposal does not specify in detail the proposed titling arrangements for the Project, then the titling arrangements will need to be worked up by DEVELOPER and signed off by the State prior to the Commencement Date. If this is the case, a condition precedent will need to be inserted along the following lines:

'DEVELOPER and the State agreeing, in general terms, on the titling arrangements for the Project including the documents to be registered with the Plans of Subdivision. These documents may include:

- (a) community management statements (if there are one or more community title schemes);
- (b) building management statements (if the titling arrangements involve the creation of volumetric lots);
- (c) restrictive covenants under Section 97A of the Land Act 1994; and
- (d) easements (for example, easements granted to Council under Section 369 of the Land Act 1994).']

#### 4.2 Commencement date

Commencement Date means the day which is 5 Business Days after the date on which the last of the Conditions Precedent has been satisfied or waived.

#### 4.3 Satisfaction of conditions precedent

(a) Each Party must use its respective reasonable endeavours to ensure the prompt and timely satisfaction of each of the Conditions Precedent.

DEVELOPER is responsible for satisfying the Conditions Precedent in clauses 4.1(a), 4.1(c), 4.1(d), 4.1(e), 4.1(f) and 4.1(g); and the State is responsible for satisfying the Condition Precedent in clause 4.1(b).

In respect of the Condition Precedent in clause 4.1(c), DEVELOPER must lodge the application for exemption within 30 days from the date of this Agreement.

- (b) Each Party must promptly notify the other Party if it becomes aware that:
  - (i) any of the Conditions Precedent becomes incapable of being satisfied or becomes, in its opinion, likely to be incapable of being satisfied; or
  - (ii) a Condition Precedent has been satisfied.
- (c) During the period from execution of this Agreement until the Commencement Date or termination of this Agreement, each Party must ensure that it does not do or omit to do any act or thing which would put it in material breach of this Agreement as at the Commencement Date.
- (d) In addition to any notice given under sub-paragraph (b)(ii), DEVELOPER must give the State a separate notice promptly upon becoming aware that the last of the Conditions Precedent has been satisfied (or waived as the case may be), which notice must be accompanied by a certificate signed by at least 2 directors of DEVELOPER stating that the warranties in clause 23 are correct as at the date on which the last of all other Conditions Precedent has been satisfied.

#### 4.4 Waiver

The Conditions Precedent in clause 4.1(b), (c), (f) and (g) cannot be waived. The other Conditions Precedent may only be waived in writing by both Parties.

#### 4.5 Effect of Non-Fulfilment

- (a) If the Conditions Precedent in clauses 4.1(c), (e) and (g) are not satisfied within 60 days from the date of this Agreement then the State may by giving notice to DEVELOPER terminate this Agreement.
- (b) If the Condition Precedent in clause 4.1(f) is not satisfied on or before 90 days from the date of this Agreement then either Party may by giving notice to the other terminate this Agreement.

If this Agreement is terminated under this clause 4.5 then:

- (c) this Agreement is of no further force and effect and no Party will have any further obligations under this Agreement (except to observe clause 29 which clause will continue to apply despite termination of this Agreement); and
- (d) termination will not affect any right or claim of either Party under this Agreement which has arisen before termination.

#### 4.6 Approvals

- (a) In addition to a Party's rights under clause 4.5 either Party may terminate this Agreement by notice to the other if:
  - (i) an Approval specified in clause 7 has not been issued or an associated activity has not been completed within 3 months of the time provided in the Approvals Program; or
  - (ii) an Approval specified in clause 7 has been issued on conditions that are materially prejudicial to the Party and the Party is unable to negotiate or otherwise achieve changed conditions correcting the material prejudice within 3 months of receipt of the Approval.
- (b) A notice terminating this Agreement under clause 4.6(a)(i) must be given within 20 Business Days after the period referred to in clause 4.6(a)(i).
- (c) A notice terminating this Agreement under clause 4.6(a)(ii) must:
  - be given within 20 Business Days of the expiry of the time period specified in clause 4.6(a)(ii); and
  - (ii) identify the particular conditions that are materially prejudicial to the terminating Party.
- (d) For the purpose of clause 4.6(a)(ii) and (c), a condition of an Approval specified in clause 7 is not materially prejudicial to a Party unless:
  - because of the condition (taking into consideration the net effect of all conditions) and the purposes of this Agreement (as set out in clause 3), Practical Completion of the Works cannot reasonably be achieved by the Critical Finish Date without the commitment of additional resources by DEVELOPER or the absorption of any delay in any float allowances in the Program; or
  - (ii) the State or DEVELOPER acting reasonably and in good faith would not have executed this Agreement had the condition been required prior to the execution of this Agreement.

#### 4.7 Pre-Condition to construction

DEVELOPER must not commence the Works until after the Commencement Date.

#### 4.8 Effect of satisfaction of conditions precedent

If all of the Conditions Precedent are either waived or fulfilled in accordance with this clause this Agreement shall become unconditional when notice is given under either clause 4.3 or 4.4 that the last of the Conditions Precedent has been satisfied or waived.

#### 5. Design

#### 5.1 Submission of Plans Drawings and Diagrams

DEVELOPER has prepared the Plans Drawings and Diagrams consistent with the State Tennis Centre Concept and the State Tennis Centre Project Brief.

Subject to clause 11.2, if DEVELOPER wishes to amend the Plans Drawings and Diagrams DEVELOPER must submit the amended Plans Drawings and Diagrams to the State for its approval, which will not unreasonably be withheld or delayed if the proposed changes do not:

- (a) materially delay the Program;
- (b) increase the cost to the State or decrease the return to the State of operating the State Tennis Centre;
- (c) decrease the functionality of the State Tennis Centre; or
- (d) decrease the value of the State Tennis Centre.

#### 5.2 Design Program

- (a) DEVELOPER must as soon as practicable after the Commencement Date submit to the State's Representative the Design Program for acceptance by the State's Representative.
- (b) The State's Representative shall accept or comment on the Design Program within 10 Business Days of receiving it. If the State's Representative does not reject or comment upon the Design Program within the 10 Business Days, it will be deemed to be accepted.
- (c) If the State's Representative rejects the Design Program, the State's Representative must provide reasons.
- (d) If the State's Representative rejects or comments upon the Design Program DEVELOPER must either amend the Design Program to address the reasons or comments and resubmit it under paragraph (a) of this clause, or issue a dispute notice in which case clause 28 will apply to resolve the dispute as if all the procedures in clauses 28.1 to 28.5 inclusive had been followed and the Parties agreeing they will not give a notice under clause 28.9.
- Notwithstanding the formal process for acceptance set out in this clause, the Parties acknowledge that their mutual intention is to work cooperatively during design development to minimise the time taken for acceptance.

#### 5.3 Design documentation

DEVELOPER must progressively cause design documentation to be prepared generally in conformity with the Design Program and the Prescribed Documents (as defined in clause 5.12).

DEVELOPER must ensure that design documentation is in a form consistent with Good Engineering Practice and submitted in hard copy and in an electronic form as agreed with or directed by the State.

The design documentation as submitted for review must contain the following information:

- (a) identification of the design stage to which it relates; and
- (b) a statement signed by DEVELOPER's Representative that the design documentation complies with the State Tennis Centre Project Brief; or
- (c) a schedule of departure from the State Tennis Centre Project Brief; and
- (d) all necessary drawings and specification required for the relevant design stage; and
- (e) an updated register of Design Documentation; and
- (f) any other information required under this Agreement.

#### 5.4 Submission of design documentation

DEVELOPER must submit the design documentation to the State's Representative in accordance with the Design Program.

#### 5.5 State's response to documentation

In respect of the State Tennis Centre Works and the Transport and Access Works, within 10 Business Days after receiving the design documentation the State may either:

- (a) accept the design documentation (in which case once developed to 100% and certified by DEVELOPER to be developed from the design documentation as submitted consistent with the Prescribed Documents it becomes 'Design Documentation'); or
- (b) notify DEVELOPER of inconsistencies between the design documentation and the Prescribed Documents.

#### 5.6 Allowable changes to design documentation

In respect of the State Tennis Centre Works and the Transport and Access Works, the State may only require changes to the design documentation to the extent the design documentation is inconsistent with any of the Prescribed Documents. If the State does not respond within the time specified in clause 5.5 (or any extended period under clause 5.9) then it is deemed to have accepted the design documentation (which then subject to the provisions of clause 5.5(a) becomes 'Design Documentation').

#### 5.7 DEVELOPER'S response to State's changes

In respect of the State Tennis Centre Works and the Transport and Access Works, if the State notifies DEVELOPER of required changes to the design documentation then DEVELOPER must, within 10 Business Days of the notification or as mutually agreed, either:

- (a) change the design documentation to comply with the Prescribed Documents and then give new design documentation to the State; or
- (b) issue a dispute notice on the grounds the design documentation is consistent with the Prescribed Documents (in which event clause 28 will apply to resolve the dispute as if all procedures in clauses 28.1 to 28.5 inclusive had been followed, and the Parties agreeing that they will not give a notice under clause 28.9).

#### 5.8 Acceptance process

This procedure will continue until the design documentation is accepted by the State or a dispute about whether the State is entitled to require changes to the design documentation has been resolved. The State must respond to changes to design documentation within 10 Business Days of notification.

#### 5.9 Extension of response time

The State may by written notice extend the time by which it must respond under clause 5.5 or 5.8 if the State reasonably requires additional time to consider the design documentation and frame its response. The State's notice must be given within the original time for the response and the extension must not be for more than 10 Business Days.

#### 5.10 Design warranties

DEVELOPER warrants that:

 (a) the Design Documentation will be prepared with due skill and care and with attention to the 'whole of life' costs of the State Tennis Centre Works and the Transport and Access Works; (b) the State Tennis Centre Works and the Transport and Access Works when constructed in accordance with the Design Documentation will be fit for the purposes identified in or necessarily inferred from the State's objectives set out in clause 3.1.

#### 5.11 State's liability

DEVELOPER acknowledges that the State by its involvement in the process of design development (including consultation and acceptance) does not incur any responsibility or liability for the design of the State Tennis Centre Works and the Transport and Access Works, which responsibility and liability remains solely with DEVELOPER.

#### 5.12 Prescribed documents

Prescribed Documents means:

- (a) the State Tennis Centre Project Brief;
- (b) the State Tennis Centre Concept;
- (c) the Transport and Access Works Concept;
- (d) Site Plan;
- (e) the Plans Drawings and Diagrams;
- (f) the Schedules and Data Sheets;
- (g) the Method Statements, Analyses and Reports;
- (h) the Implementation Program; and
- (i) the State's objectives set out in clause 3.1.

To the extent there is any inconsistency or ambiguity in any of these documents, the order of precedence for interpretation will be (in descending order) from (a) to (i), with documents higher in the list taking precedence over documents lower in the list.

#### 6. Tennis Court Design

#### 6.1 Geotechnical testing

DEVELOPER must carry out the geotechnical testing program so described in Schedule 16 as soon as practicable after the Commencement Date and submit the results of that program to the State's Representative together with a statement (**Test Statement**) either:

- (a) based on Good Engineering Practice asserting that no further tests are necessary; or
- (b) detailing the further tests required to supplement those tests already carried out.

The State's Representative may within 10 Business Days of receipt of the test results and the Test Statement either:

- (c) accept the Test Statemeut; or
- (d) require DEVELOPER to undertake further testing to comply with Good Engineering Practice.

#### 6.2 Further testing

DEVELOPER must carry out any further tests required by (and in accordance with) a Test Statement (as may be modified to comply with clause 6.1(d)) and then repeat the process described in clause 6.1 in relation to the results of that further testing.

#### 6.3 Modelling and Court Design Program

- (a) As soon as the State's Representative accepts the Test Statement, DEVELOPER must engage the consultant described in Schedule 16 (being the consultant nominated by DEVELOPER).
- (b) DEVELOPER must ensure the consultant runs the models described in Schedule 16

   (Models) utilising the results of the test program referred to in clause 6.1 in accordance with Good Engineering Practice to produce Models Results sufficient to enable the design of the Tennis Courts in accordance with Good Engineering Practice and as soon as practicable after the results of that modelling are available, submit those results together with a court design program for acceptance by the State's Representative.
- (c) The court design program must be in the same general form as the Design Program, particularly in relation to stages when court design documentation is to be submitted for review.
- (d) The State's Representative shall accept or comment on the Models Results or the court desigu program within 10 Business Bays of receiving it.
- (e) If the State's Representative does not reject or comment upon the Models Results or the court design program within the 10 Business Days, they (or it as the case may be) will be deemed to be accepted.
- (f) If the State's Representative rejects either or both of the Models Results or the court design program, the State's Representative must provide reasons.
- (g) If the State's Representative rejects or comments upon the court design program, DEVELOPER must either amend the court design program and/or rerun the Model (as the case may be) to address the comments or reasons and resubmit it under paragraph (b) of this clause or issue a dispute notice in which case clause 28 will apply to resolve the dispute as if all the procedures in clauses 28.1 to 28.5 inclusive had beeu followed and the Parties agreeing they will not give a notice under clause 28.9.
- (h) Once accepted by the State's Representative, the documents will become the Models Results and the Court Design Program respectively.
- (i) Notwithstanding the formal process for acceptance set out in this clause, the Parties acknowledge that their mutual intention is to work cooperatively during court design development to minimise the time taken for acceptance.

#### 6.4 Court design documentation

DEVELOPER must progressively cause court design documentation to be prepared generally in conformity with the Court Design Program and the provisions of clause 5.3, the results of the modelling referred to in clause 6.3 and the Prescribed Court Documents as defined in clause 6.13.

#### 6.5 Submission of court design documentation

DEVELOPER must submit the court design documentation to the State's Representative in accordance with the Court Design Program.

#### 6.6 State's response to court design documentation

Within 10 Business Days after receiving the court design documentation the State may either:

- (a) accept the court design documentation (in which case once developed to 100% and certified by DEVELOPER to be developed from the court design documentation as submitted consistent with the Prescribed Court Documents it becomes 'Court Design Documentation'); or
- (b) notify DEVELOPER of inconsistencies between the court design documentation and the Prescribed Court Documents.

#### 6.7 Allowable changes to court design documentation

The State may only require changes to the court design documentation to the extent the court design documentation is inconsistent with any of the Prescribed Court Documents.

If the State does not respond within the time specified in clause 6.6 (or any extended period under clause 6.10) then it is deemed to have accepted the court design documentation (which then subject to the provisions of clause 6.6(a) becomes 'Court Design Documentation').

#### 6.8 DEVELOPER'S response to court State's changes

If the State notifies DEVELOPER of required changes to the court design documentation then DEVELOPER must, within 10 Business Days of the notification or as mutually agreed, either:

- (a) change the court design documentation to comply with the Prescribed Court Documents and then give new court design documentation to the State; or
- (b) issue a dispute notice on the grounds the court design documentation is consistent with the Prescribed Documents (in which event clause 28 will apply to resolve the dispute as if all procedures in clauses 28.1 to 28.5 inclusive had been followed, and the Parties agreeing that they will not give a notice under clause 28.9).

#### 6.9 Acceptance process

This procedure will continue until the court design documentation is accepted by the State or a dispute about whether the State is entitled to require changes to the court design documentation has been resolved.

The State must respond to changes to court design documentation within 10 Business Days of notification.

#### 6.10 Extension of response time

The State may by written notice extend the time by which it must respond under clause 6.6 or 6.9 if the State reasonably requires additional time to consider the court design documentation and frame its response. The State's notice must be given within the original time for the response and the extension must not be for more than 10 Business Days.

#### 6.11 Design warranties

DEVELOPER warrants that:

- (a) the Court Design Documentation will be prepared with due skill and care and with attention to the 'whole of life' costs of the Tennis Courts;
- (b) the Tennis Courts when constructed in accordance with the Court Design Documentation will be fit for the purposes identified in or necessarily inferred from the State's objectives set out in clause 3.1.

#### 6.12 State's liability

DEVELOPER acknowledges that the State by its involvement in the process of testing, modelling and court design development (including consultation and acceptance) does not incur any responsibility or liability for the design of the Tennis Courts, which responsibility and liability remains solely with DEVELOPER.

#### 6.13 Prescribed Court documents

Prescribed Court Documents means:

- (a) the State Tennis Centre Project Brief;
- (b) the Models Results;
- (c) the Plans Drawings and Diagrams;
- (d) Methodology for the Geotechnical Investigations and Design and Construction of the Tennis Courts;
- (e) the Implementation Program;
- (f) the State Tennis Centre Concept; and
- (g) the State's objectives set out in clause 3.1.

To the extent there is any inconsistency or ambiguity in any of these documents, the order of precedence for interpretation will be (in descending order) from (a) to (g), with documents higher in the list taking precedence over documents lower in the list.

#### 7. Approvals and Associated Activities

#### 7.1 Approvals and associated activities

The Parties acknowledge that for the purposes of clause 4.1(a), the Approvals shall be limited to the Development Approvals other than a development permit for building works (not including earthworks necessary for the buildings works) as defined in the *Integrated Planning Act 1997* for the State Tennis Centre and the Associated Development.

#### 7.2 Applications for approvals etc

- (a) In relation to the Approvals specified in clause 7.1, as soon as practicable after the date of this Agreement, DEVELOPER must:
  - (i) apply for the Approvals in accordance with the Approvals Program but subject to clause 7.3;
  - (ii) diligently pursue the applications for the Approvals;
  - (iii) diligently carry out all associated activities, including those activities needed to:
    - (A) resolve any Native Title and Cultural Heritage Requirements; and
    - (B) have the State Tennis Centre Site taken off the Environmental Management Register on or before the Handover Date;
  - (iv) through the medium of the Project Control Group, keep the State informed about the progress of the applications for Approvals and associated activities;
  - (v) promptly notify the State of any material changes to the Plans Drawings and Diagrams or conditions of an Approval required by an Authority; and

- (vi) promptly notify the State of the result of the applications for the Approvals and associated activities and, if requested, give the State a copy of each Approval or document recording the outcome of the associated activity.
- (b) Subject to clause 7.3, the State hereby grants (or will procure the grant of) an irrevocable consent to the lodgement of any application for Conforming Approvals in respect of the Tennyson Site. For the avoidance of doubt, such a consent is not an adjudication in relation to that application.

#### 7.3 State's consent to Development Approvals

DEVELOPER must not apply for those Approvals where the relevant application requires the submission of Design Documentation until after the Design Documentation is finalised under clause 5.

The State will consent (or procure consent) to the lodgment of an application for a Conforming Approval provided DEVELOPER provides to the State:

- (a) a copy of the application (including all supporting material) for consent by the registered owner of the Tennyson Site; and
- (b) certification from [DEVELOPER/certifier] that the plans, drawings and specifications for the State Tennis Centre included in the application are in accordance with the Design Documentation finalised under clause 5.

#### 7.4 Program and methodology

DEVELOPER must use its best endeavours to comply with the Approvals Program.

If a public sector entity as defined in the *Integrated Planning Act 1997* fails to complete an activity associated with a Conforming Approval specified in clause 7.1 within the time (or extended time) specified for the completion of that activity by legislation (including subordinate legislation) and such failure to complete the activity is not caused or contributed to by DEVELOPER:

- (a) DEVELOPER may by notice to the State identify:
  - (i) the activity that the public sector entity has failed to complete; and
  - (ii) the actual delay that has been caused to the Approvals Program by the failure to complete the activity; and
  - (iii) an amended Approvals Program that takes account of the actual delay; and
- (b) the Approvals Program as amended by DEVELOPER to take account of the actual delay caused by the public sector entity shall become the Approvals Program for the purposes of this Agreement.

#### 7.5 Approval of agreements

Any agreement entered into by DEVELOPER with an Authority or other third party to comply with an Approval must:

- (a) be consistent with the provisions of this Agreement; and
- (b) provide that the rights and obligations of DEVELOPER under it are assignable to the State at the State's election without further consent of the Authority or other third party following any termination of this Agreement provided the State assumes all of

DEVELOPER'S obligations and liabilities arising after the date of the assignment under and in connection with the agreement.

DEVELOPER must not enter into such an agreement with an Authority or other third party concerning the Project without the prior informed approval of the State, not to be unreasonably withheld.

#### 7.6 Key Personnel

DEVELOPER acknowledges that the State in part selected DEVELOPER to enter this Agreement based on the strength of the team DEVELOPER represented would be assigned to perform its obligations under this Agreement.

Accordingly, DEVELOPER will:

- (a) employ those people described in Schedule 20 in the roles described in that schedule and ensure that those people continue in the roles described in that schedule for the times set out in that schedule;
- (b) not replace any of those people without the State's prior informed and written approval except if a person:
  - (i) dies;
  - (ii) becomes ill or incapacitated so as to be unable to perform their role;
  - (iii) resigns from DEVELOPER's employment; or
  - (iv) despite DEVELOPER's reasonable endeavours refuses to continue in their role,

in which case DEVELOPER will then replace that person with someone of at least equivalent ability, experience and expertise approved by the State, which approval will not unreasonably be withheld. Where a designated person is replaced under this provision, DEVELOPER will (unless the person has died) ensure that there is a proper handover which will require the person and their replacement working together for at least 2 weeks.

DEVELOPER acknowledges that if it breaches this obligation, the State will suffer loss or damage due to increased administration and management costs and possible delay, disruption and quality issues, and as and by way of a genuine pre-estimate of this loss and damage (and not as a penalty), DEVELOPER will be indebted to the State for liquidated damages for every day a nominated person is replaced (other than in accordance with this clause), at the rate set out against that person's name in the letter signed by the State and DEVELOPER at or about the time this Agreement was signed.

#### 7.7 Community Consultation

DEVELOPER acknowledges the importance to the State of appropriate continuing community consultation prior to commencement of, during and after execution of the Works.

DEVELOPER agrees:

- (a) to comply with the various obligations on its part contained in the Community Consultation Strategy contained in Schedule 21; and
- (b) that if it does not perform any of those obligations, the State may (but is not obliged to) arrange to carry out those obligations on DEVELOPER's behalf at DEVELOPER's expense.

#### 7.8 Transportation and Access Works

DEVELOPER will be obliged to resolve to the satisfaction of the State:

- (a) the scope of the Transport and Access Works;
- (b) arrangements for the execution of the Transport and Access Works;
- (c) associated land tenure, ownership and maintenance issues.

[#The precise obligations and the timing will depend in part on the proposal submitted, and the final clause will be resolved during negotiations before execution of the Development Agreement#]

#### 8. Interface Issues

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Depending on the proposal, there may be a number of issues arising in relation to access and the Associated Development and the impact of them on the State Tennis Centre. The principles to be applied are as follows, and may lead to modification of contractual terms, eg.

- (a) if access arrangements are to be shared, appropriate cross easements will have to be granted;
- (b) safe access will have to be provided if Transport and Access Works are to be shared between the State Tennis Centre and the Associated Development and the State Tennis Centre is handed over before the Associated Development is complete - may involve sequencing issues and possible temporary access;
- (c) if work includes an upgrade of the railway station, appropriate arrangements with QR will be required;
- (d) construction of Associated Development must be undertaken so as to minimise impact on the operation of the State Tennis Centre.

#### 9. Tenure Arrangements

#### 9.1 Scope of clause

This clause 9 sets out the Tenure Arrangements necessary to carry out and complete the Project.

#### 9.2 Boundaries

The existing configuration and boundaries of the Tennyson Site are shown on the Plan of Land Configuration and the proposed configuration and boundaries of the Tennyson Site (which indicates the State Tennis Centre Site) are shown on the Site Plan.

The Parties acknowledge that the configuration and boundaries of the various elements within the Tennyson Site may vary as a result of the Approvals.

#### 9.3 Activity listing

Details of the Tenure Arrangements necessary to implement the Project are specified and described in Schedule 4. The timetable for implementation of these activities (Tenure Program) is also specified in Schedule 4.

#### 9.4 Easements

The State advises and DEVELOPER acknowledges that various entities being Queensland Electricity Transmission Corporation Limited, ENERGEX, Queensland Rail aud the Brisbane City Council (collectively the **Entities** and each individually an **Entity**) are entitled to easements (the **Easements**) over the Tennyson Site, with the general location of the Easements being shown on the Plan of Land Configuration, and the minimum terms and conditions set out in Schedule 3 (Minimum Terms and Conditions).

DEVELOPER may negotiate with the Entities and the State as to the exact location of the Easements, and the terms and conditions of them (consistent with the Minimum Terms and Conditions).

DEVELOPER agrees that subject to negotiated changes accepted by the State and the relevant Entity, the Easements to be granted pursuant to clause 20.1 will be the Easements as described in Schedule 3, as may be modified by conditions attaching to Approvals.

#### 9.5 Implementation

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The State must, to the extent that it is within the power of the State, with all proper diligence and expedition, proceed to implement the Tenure Arrangements in accordance with:

- (a) the Approvals;
- (b) the Tenure Program;
- (c) all laws; and
- (d) the State's reasonable requirements and directions.

DEVELOPER acknowledges that the State is not required to incur costs of or interfere with or fetter the exercise of a discretion of any person required to exercise a statutory discretion in relation to the implementation of the Tenure Arrangements.

#### 9.6 Access licence

Subject to this Agreement, for the purposes of obtaining the Approvals and for carrying out nondestructive investigations the State will procure the grant to DEVELOPER of a right of access to so much of the Tennyson Site as is reasonably required.

Before accessing the Tennyson Site, DEVELOPER must effect and maintain the insurances referred to in clause 16.1(a) (to the extent applicable).

DEVELOPER agrees that the indemnity in clause 27 applies to indemnify the State from all losses (as defined in clause 27.1) caused by DEVELOPER accessing the Tennyson Site in accordance with this clause 9.6 except to the extent the losses are caused by the negligent act or default of the State.

When accessing the Tennyson Site, DEVELOPER must comply with all laws (including environmental laws and workplace health and safety laws).

#### 9.7 Development Lease

Within 14 days of the Commencement Date, the State will grant the Development Lease to DEVELOPER.

#### 9.8 Animal Research Institute Access Corridors

Within 14 days of the Commencement Date, the State will procure the grant to DEVELOPER of a licence (in the form set out in Schedule 7) to the Animal Research Institute Access Corridors sufficient to enable it to construct so much of the Transport and Access Works as will be within the Animal Research Institute Access Corridors, subject to the terms and conditions of the Agreement and that licence.

#### 9.9 Wharf

DEVELOPER acknowledges:

- (a) the existence of the Wharf; and
- (b) that the State gives no warranty and makes no representation as to its condition and the existence of any permit or approval in relation to it.

[If the Wharf is attached to the Associated Development Site, DEVELOPER takes possession of it, without any warranty as to the title 'as is where is'.

If the Wharf is attached to the State Tennis Centre site, DEVELOPER is responsible at its cost for the remediation of the land upon which it was constructed and to which it is joined as if this were part of the State Tennis Centre Works.]

#### 9.10 Access for Transport and Access Works

As and from the Commencement Date, the State will procure the grant to DEVELOPER of an Access Licence in the terms and conditions set out in Schedule 7 for the land described in that Licence to enable DEVELOPER to carry out certain demolition activities described in that Licence and to construct a road and bikeways as described in Schedule 11.

#### 10. Construction

#### 10.1 Approval of construction contract

Any contract (**Contract**) with a Builder for construction of the State Tennis Centre Works or the Transport and Access Works or any part of them must:

- (a) comply with the provisions of this Agreement; and
- (b) contain covenants in favour of and enforceable by the State which provide that:
  - (i) the terms of the Contract cannot be varied in any material respect without the prior informed consent of the State; and
  - (ii) the Builder must at the State's election by written notice to the Builder assign the benefit of the Contract to the State provided only that the State assumes all of DEVELOPER'S obligations and liabilities arising after the date of assignment.

DEVELOPER must not enter into a contract with a Builder without the prior informed approval of the State, not to be unreasonably withheld if DEVELOPER enters into a contract with the Builder which complies with the requirements of this clause 10.1.

#### 10.2 Additional requirements relating to the Tennis Courts

The DEVELOPER acknowledges that the State's objectives (which are set-out in clause 3.1), including its objective of attracting international tennis tournaments such as Fed Cup and Davis Cup ties, can only be achieved if the quality and performance characteristics of the Tennis Courts (including both their bases and surfaces) meet or exceed the standards of quality and the performance characteristics of those tennis courts and venues that currently host such tournaments (Minimum Requirements).

To ensure that the Minimum Requirements are met or bettered, DEVELOPER must not enter into a contract with a Builder with respect to the construction of the Tennis Courts without the prior informed consent of the State, which consent will not be unreasonably withheld provided:

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- (a) the Builder has the demonstrated expertise, skill and experience in, constructing tennis courts that meet or exceed the Minimum Requirements;
- (b) the Builder has a level of financial strength which, in the opinion of the State (acting reasonably), means that the risk the Builder may fail to complete the Tennis Courts because the Builder encounters financial difficulties is negligible; and
- (c) DEVELOPER enters into a contract with the Builder of the Tennis Courts which complies with the requirements of clause 10.1.

#### 10.3 Programming of works

As soon as practicable after the Commencement Date, DEVELOPER shall submit to the State's Representative a program (broadly consistent with the Draft Program, particularly with respect to the Date for Practical Completion which cannot be later than the Critical Finish Date) for the execution of the State Tennis Centre Works and the Transport and Access Works for review by the State's Representative (the **Program**).

The State's Representative shall review and comment on the Program within 10 Business Days of receiving it.

DEVELOPER must consider the State Representative's comments on the Program in good faith and act reasonably in deciding whether or not to implement any recommendations made.

The Program must:

- (a) clearly depict the several separable components of the Project (including the construction of the State Tennis Centre Works and Transport and Access Works), and be in the form of a time-scaled critical path network generally in accordance with AS2443-1981 'Glossary of Terms for Network Planning in the Building and Construction Industry' and shall meet the following criteria:
  - work under the Agreement shall be broken down into activities of sufficient specificity to enable accurate assessment of progress and the effects of delays to be made;
  - (ii) relationships between activities shall be sufficient in number to clearly indicate the intended sequence of work and shall show all dependencies dictated by constructability and the availability of labour or equipment resources;
  - (iii) make particular provision for commissioning (including commissioning procedures) for all mechanical, electrical, lighting, hydraulics, fire services, security, building management and electrical equipment and other systems within the State Tennis Centre Works and the Transport and Access Works; and
  - (iv) off-site procurement activities shall be shown, including but not limited to:
    - (A) preparation, submission and approval of shop drawings;
    - (B) order, manufacture and delivery periods for materials, plant and equipment;
- (b) be revised by DEVELOPER at DEVELOPER'S cost and submitted to the State's Representative for the State's Representative's review and comment whenever the DEVELOPER falls 21 days behind the Program; and
- (c) be submitted to the State's Representative for the State's Representative's review and comment whenever DEVELOPER wishes to make material changes to the Program.
DEVELOPER must provide the State's Representative with the Program in both 'hard copy' and electronic format once it is approved and must also promptly provide the State with changes to the Program.

### 10.4 Construction of works

DEVELOPER must, with all proper diligence and expedition, proceed to cause the State Tennis Centre Works and the Transport and Access Works to be carried out:

- (a) before the Date for Practical Completion;
- (b) in accordance with the Approvals;
- (c) in accordance with site access arrangements and the Tenure Arrangements;
- (d) in a proper and workmanlike manner;
- (e) in accordance with the Design Documentation, the Court Design Documentation and to the extent applicable, to a standard of workmanship which conforms to the State Tennis Centre Project Brief;
- (f) in accordance with the Government policies described in clause 10.5;
- (g) in accordance with the Program;
- (h) in accordance with all laws (including, environmental laws and workplace health and safety laws); and
- (i) in accordance with the State's reasonable requirements and directions related to the State Tennis Centre Works and the Transport and Access Works.

#### 10.5 Compliance with Government policies

In relation to the State Tennis Centre Works and the Transport and Access Works and for the purposes of this clause assuming that they are State funded works having the value so described in Schedule 1, DEVELOPER must:

- (a) comply with the Art Built in Policy, the State's Quality Assurance Policy, the Queensland
  Code of Practice for the Building and Construction Industry and the Local Industry Policy
  as part of its development of the State Tennis Centre under this Agreement; and
- (b) procure that the Builder and Subcontractors require that apprentices and trainees are employed for that part of the State Tennis Centre Works and the Transport and Access
   Works performed on the Tennyson Site for the minimum number of labour hours.

#### 10.6 Supply of labour, materials and equipment

DEVELOPER shall:

- (a) provide (either directly or through the employment of the Builder, consultants and Subcontractors) all necessary labour, materials, plant, equipment and expertise required for the execution of the Works;
- (b) be solely responsible for the proper co-ordination of all contractors and consultants engaged in the execution of the Works;
- (c) ensure that the Builder and all consultants engaged in the execution of the Works and employees of the Builder and those consultants will be duly paid as and when such payments are due; and

(d) ensure that the Builder's terms of engagement include an obligation for the Builder to ensure that all Subcontractors engaged in the execution of the Works and their employees will be duly paid as and when such payments are due.

# 11. Changes

### 11.1 Variations

- (a) The State, if it wishes to, may direct DEVELOPER to carry out a Variation within the general scope of the State Tennis Centre Works or the Transport and Access Works and on giving such direction must request DEVELOPER to advise of the effect of the Variation.
- (b) Within 3 Business Days of receipt of a direction from the State under clause 11.1(a), DEVELOPER must provide to the State an indicative estimate of the cost and time implications of the proposed Variation and may also provide preliminary advice on whether or not the proposed Variation:
  - (i) may affect any critical date in the Program including the Date for Practical Completion or the Critical Finish Date and the way in which it is likely to be affected, in which case DEVELOPER must also advise if the proposed Variation should be effected immediately to avoid delay to the Program;
  - (ii) may require DEVELOPER to:
    - (A) obtain Approvals of the type specified in clause 7.1;
    - (B) obtain amendments to the Approvals obtained in satisfaction of clause 4.1(a);
    - (C) resolve any Native Title and Cultural Heritage Requirements; or
    - (D) obtain amendments to any resolution of any Native Title and Cultural Heritage Requirements achieved in satisfaction of clause 4.1(d);

and DEVELOPER may include with that notice a statement of whether it reasonably considers that it cannot be compensated for any such matters by the payment of additional money through the Variation Cost and/or an amendment to the Program.

- (c) Within 10 Business Days of DEVELOPER'S estimate and advice given under paragraph(b) the State may notify DEVELOPER:
  - (i) that the State does not wish to proceed with the proposed Variation; or
  - (ii) that the State requires DEVELOPER to provide detailed particulars of the Variation Cost and the impact of the Variation on the Program, in which case, DEVELOPER must do so promptly.
- (d) Within 10 Business Days of receiving particulars of the Variation Cost and its impact on the Program under clause 11.1(c)(ii), the State may:
  - (i) agree the Variation Cost and the extent to which the Variation may affect the Program; or
  - (ii) if the State disputes DEVELOPER'S advice about:
    - (A) the effect on the Program, under clause 11.1(b)(i); or

(B) the amount of the Variation Cost, particularised under clause 11.1(c)(ii);

it may:

- (C) refer the dispute for expert determination in accordance with the procedures in clauses 28.6 to 28.10; or
- (D) direct DEVELOPER not to proceed with the proposed Variation (in which case the State must pay DEVELOPER'S reasonable cost of preparing the detailed particulars of the Variation Cost under paragraph 10.1(c)(ii)).
- (e) If, for a proposed Variation directed by the State, the Variation Cost and the effect of the proposed Variation on the Program, has been:
  - (i) agreed by DEVELOPER and the State; or
  - (ii) if not agreed under sub-paragraph (i), determined under clause 11.1(d)(ii),

then the State may direct DEVELOPER to carry out the proposed Variation, except if:

- (iii) the Variation (if carried out) would adversely affect DEVELOPER'S ability to complete either the State Tennis Centre Works or the Transport and Access Works by the Critical Finish Date except where either:
  - (A) the State agrees a later Critical Finish Date and the Variation Cost includes an equitable adjustment to compensate DEVELOPER for cost, loss or damages associated with the delay to the Critical Finish Date; or
  - (B) the DEVELOPER has agreed to accelerate the Works so that Practical Completion of the State Tennis Centre Works can be achieved by the original Critical Finish Date and the Variation Cost includes an equitable adjustment to compensate DEVELOPER for additional costs, loss or damage associated with the acceleration; or
- (iv) the DEVELOPER acting reasonably has given notice that it does not consider that it can be compensated by a Variation Cost and an adjustment to the Program for any of the matters in paragraphs 11.1(b)(i) - (ii).
- (f) DEVELOPER must within 10 Business Days after receiving a direction from the State to carry out a Variation modify the Design Documentation (or Court Design Documentation, as the case may be) to accommodate the Variation and submit them to the State for acceptance.
- (g) Within 10 Business Days after receiving the modifications to the Design Documentation (or Court Design Documentation, as the case may be) the State may either:
  - (i) accept the modified Design Documentation (or Court Design Documentation, as the case may be); or
  - (ii) notify DEVELOPER of changes that are required to ensure that the modified Design Documentation (or Court Design Documentation, as the case may be) properly accommodate the Variation.
- (h) The State may only require changes to the modifications to the Design Documentation (or Court Design Documentation, as the case may be) to the extent they are consistent with the Variation the State has directed DEVELOPER to carry out. If the State does not respond within the time specified in this clause then it is deemed to have approved the

modifications to the Design Documentation (or Court Design Documentation, as the case may be).

- (i) If the State notifies DEVELOPER of required changes to the modifications to the Design Documentation (or Court Design Documentation, as the case may be) then DEVELOPER must, within 10 Business Days of the notification or as mutually agreed; either:
  - (i) change the modifications to the Design Documentation (or Court Design Documentation, as the case may be) as required by the State and then give new copies to the State; or
  - (ii) issue a dispute notice on the grounds that the modifications to the Design Documentation (or Court Design Documentation, as the case may be) are inconsistent with the Variation the State has directed DEVELOPER to carry out (in which case sub-clauses 28.6 to 28.10 inclusive will apply to resolve the dispute).
- (j) This procedure will continue until the modified Design Documentation (or Court Design Documentation, as the case may be) are approved by the State or the subject of an adjudication under clause 28. If the State does not respond within the time specified in paragraph (g) then it is deemed to have approved the modifications to the Design Documentation (or Court Design Documentation, as the case may be).
- (k) Work in respect of the Variation must not be commenced until the State gives DEVELOPER a written direction to carry out the Variation under clause 11.1(e) and the State has accepted (or deemed to have accepted), the modifications to the Design Documentation (or Court Design Documentatiou, as the case may be) or an adjudication has been made under clause 28.
- (1) Within 30 days of the Date of Practical Completion, the State's Certifier will issue a statement setting out the aggregate amount payable by the State (or DEVELOPER, as the case may be) in respect of all Variations.
- (m) The State (or DEVELOPER, as the case may be) shall pay the amount set out in the certificate referred to in clause 11.1(l) within 30 days of receipt of it.

### 11.2 Other changes

During construction, DEVELOPER may only change the Design Documentation without the State's consent:

- (a) if the changes are of no practical significance to the State; and
- (b) (i) if required by an Authority; or
  - (ii) in the case of fixtures, fittings or colour choice, by replacement with items of equivalent quality and function provided that the change conforms to the State Tennis Centre Project Brief.

Any other changes will require the State's prior written consent.

DEVELOPER may not change the Court Design Documentation without the State's prior written consent.

# 12. Party Representatives

### 12.1 State's Representative

(a) Appointment of the State's Representative

The State shall appoint a representative (State's Representative) to serve as the State's interface with DEVELOPER with respect to all aspects of the performance of the Works. The State may replace the State's Representative at any time (and from time to time) with prior written notice to DEVELOPER.

(b) Authority of State's Representative

Except to the extent otherwise stated in this Agreement or as otherwise notified by the State from time to time, the State's Representative shall have full authority to act on behalf of the State for all purposes in connection with this Agreement, including review and approval of drawings, issuance of certificates, decisions, instructions, and orders, reporting, and advisory matters specified in this Agreement to be carried out by the State, provided however, that any direction must be in writing and that the State's Representative shall not have authority to amend or modify any of the provisions of this Agreement unless the State has given written notice to the DEVELOPER of the State's Representative's express authority. The State's Representative shall be DEVELOPER'S primary point of contact with the State in relation to performance of the Works.

(c) State's responsibility

The State shall cause the State's Representative to perform every act required under this Agreement to be performed by the State's Representative, and any obligation stated under this Agreement to be an obligation of the State's Representative shall be deemed to be an obligation of the State. The State shall be responsible to DEVELOPER for any act or omission of the State's Representative in the performance of its duties under this Agreement as if it were an act or omission of the State.

#### (d) State's delegates

The State's Representative may from time to time appoint individuals (**State's Delegates**) to exercise any functions of the State's Representative under the Agreement but not more than one State's Delegate shall be delegated the same function at the same time. The appointment of a State's Delegate shall not prevent the State's Representative from exercising any function.

The State's Representative shall forthwith notify DEVELOPER in writing of:

- the appointment and the name of any State's Delegates and the functions delegated to the State's Delegates; and
- (ii) the termination of the appointment of a State's Delegate.
- (e) Availability

The State's Representative must be reasonably available during working hours for the Works to perform that person's tasks under this Agreement.

(f) Alternate

The State may also from time to time by notice to DEVELOPER appoint an alternate representative, who in the absence of the State's Representative may exercise all the powers of the State's Representative.

### 12.2 DEVELOPER'S representative

#### (a) Appointment of DEVELOPER'S Representative

DEVELOPER shall appoint a DEVELOPER'S Representative. DEVELOPER may replace DEVELOPER'S Representative at any time (and from time to time) with prior written notice to the State.

#### (b) Authority of DEVELOPER'S Representative

Except to the extent otherwise stated in this Agreement or as otherwise notified by DEVELOPER from time to time, DEVELOPER'S Representative shall have full authority to act on behalf of the DEVELOPER for all purposes in connection with this Agreement, including review and approval of drawings, issuance of certificates, decisions, instructions, and orders, reporting, and advisory matters specified in this Agreement to be carried out by DEVELOPER, provided however, that DEVELOPER'S Representative shall not have authority to amend or modify any of the provisions of this Agreement unless the DEVELOPER has given written notice to the State of DEVELOPER'S Representative's express authority. DEVELOPER'S Representative shall be the State's primary point of contact with the DEVELOPER in relation to performance of the Works.

#### (c) DEVELOPER'S Responsibility

DEVELOPER shall cause DEVELOPER'S Representative to perform every act required under this Agreement to be performed by DEVELOPER'S Representative, and any obligation stated under this Agreement to be an obligation of DEVELOPER'S Representative shall be deemed to be an obligation of DEVELOPER. DEVELOPER shall be responsible to the State for any act or omission of DEVELOPER' Representative in the performance of its duties under this Agreement as if it were an act or omission of DEVELOPER.

(d) DEVELOPER' Delegates

DEVELOPER' Representative may from time to time appoint individuals (DEVELOPER'S Delegates) to exercise any functions of DEVELOPER'S Representative under the Agreement but not more than one DEVELOPER'S Delegate shall be delegated the same function at the same time. The appointment of a DEVELOPER'S Delegate shall not prevent DEVELOPER'S Representative from exercising any function.

DEVELOPER' Representative shall forthwith notify the State in writing of:

- the appointment and the name of any DEVELOPER'S Delegates and the functions delegated to DEVELOPER'S Delegates; and
- (ii) the termination of the appointment of a DEVELOPER'S Delegate.
- (e) Availability

DEVELOPER's Representative must be reasonably available during working hours for the Works to perform that person's tasks under this Agreement.

(f) Alternate

DEVELOPER may also from time to time by notice to the State appoint an alternate representative who in the absence of DEVELOPER'S Representative may exercise all of the powers of DEVELOPER'S Representative.

#### 12.3 State's Certifier

The State shall ensure that at all times there is an appropriately qualified person appointed to act as the State's Certifier. 'The State's Certifier must in exercising their functions under this Agreement:

- (a) act honestly and fairly;
- (b) act within the time prescribed under this Agreement, or where no time is prescribed, within a reasonable time; and
- (c) arrive at a reasonable measure or value of work, quantities or time.

DEVELOPER must ensure that the State's Certifier has:

- (d) access to the Tennyson Site and the Works; and
- (e) after reasonable notice to DEVELOPER access to any place other than the Tennyson Site where the Works are being performed or materials are being prepared or stored,

for the purposes of discharging their functions under this Agreement.

# 13. Project Control Group

### 13.1 Roles and membership of Project Control Group

The objective of the Project Control Group is to provide a forum for regular and formal interaction between:

- (a) the management of DEVELOPER and the relevant State departments charged with the administration of the Agreement;
- (b) the State's Representative and DEVELOPER'S Representative; and
- (c) such other parties who are invited to attend from time to time who may include the Builder, consultants or Subcontractors,

for the purpose of maintaining a consistent overview of the Project and considering all issues relevant to the successful delivery of the Project in accordance with this Agreement. Those issues shall be recorded in a log (**Issues Log**).

DEVELOPER shall be represented at Project Control Group meetings by DEVELOPER'S Representative and a senior executive of DEVELOPER.

The State shall be represented at Project Control Group meetings by the State's Representative and, at the State's discretion, other senior government officers of the State, consultants and advisers.

#### 13.2 Procedure

DEVELOPER'S Representative shall prepare and circulate agenda papers 2 Business Days prior to Project Control Group meetings.

DEVELOPER'S Representative must circulate a copy of the Issues Log weekly.

The State or the State's Representative may add items to the agenda by written notice to DEVELOPER.

The Agenda shall always include the Issues Log, in which either Party (or the State's Representative) may record issues arising out of or in connection with the Works.

The chair of the Project Control Group will be the State's Representative or their delegate.

DEVELOPER'S Representative shall prepare and distribute minutes within 2 Business Days of each Project Control Group meeting for certification or correction at the next meeting.

The Project Control Group shall meet:

- (a) at least monthly up to Handover; and
- (b) between Handover and Final Completion at such intervals as the Parties may agree, and in default of agreement, as determined by the State,

at a time and place agreed between the Parties, or in default of agreement, at 10.00am on the first working day of each month, with the first meeting to be held within 10 Business Days of the date of this Agreement.

The Project Control Group meetings may consider the progress of the Works and issues arising from DEVELOPER'S progress reports as submitted under clause 14.1.

# 14. Completion of Works

### 14.1 Progress reports

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Within 15 Business Days of the end of each month after the date of this Agreement, DEVELOPER must provide to the State's Representative a written report for consideration by the Project Control Group.

This report shall be in a format and to a level of detail agreed to by the State's Representative and contain:

- (a) procedural matters/outstanding issues from the previous Project Control Group meeting;
- (b) progress of the Approvals by reference to the Approvals Program;
- (c) a construction report detailing the progress of the Works by reference to elements in the Program;
- (d) details of any potential causes of delay in doing anything that DEVELOPER must do under this Agreement;
- (e) a financial report, including budget and actual costs;
- (f) instructions given to DEVELOPER by the State's Representative; and
- (g) defects lists;

and have appended to it:

- (h) minutes of the previous Project Control Group meeting;
- (i) consultant's design and documentation reports, including tests;
- (j) details of the Program;
- (k) site inspection reports;
- (l) photographs showing the project status;
- (m) a statutory declaration certifying compliance with DEVELOPER's obligations under clause 10.6(c) and (d); and

(n) any other matters requested by the State's Representative from time to time.

### 14.2 On-Site delegate

- (a) The State's Representative may, at its own cost, appoint a State's Delegate under clause 12.1(d) to:
  - (i) inspect and measure the progress of the State Tennis Centre Works and the Transport and Access Works; and
  - (ii) direct the undertaking of reasonable tests applicable to the relevant type of works.

The State's Delegate shall not otherwise be empowered to issue instructions and shall otherwise at all times deal with and through the State's Representative.

- (b) DEVELOPER must give to the State's Delegate referred to in sub-paragraph (a):
  - (i) reasonable facilities for the inspection of the State Tennis Centre Works and the Transport and Access Works including unrestricted use of an air-conditioned onsite office complete with 2 desks, 4 chairs, phone, facsimile and filing cabinet, plan storage and plan reading bench or table, such office to be of an equivalent standard to other on-site offices used by the Builder;
  - (ii) reasonable access to the Tennyson Site;
  - (iii) access to all programs of Works including test programs;
  - (iv) access to all Design Documentation; and
  - (v) access to relevant DEVELOPER'S personnel engaged in the State Tennis Centre Works and the Transport and Access Works from time to time and senior representatives of the Builder (holding the positions of Project Manager, Site Manager and General Foreman or person holding the equivalent position however described) provided that the State's Delegate must not give or purport to give directions to personnel other than as expressly set out in the State's Delegate's appointment, and that generally the State's Delegate must not obstruct or delay the execution of the Works.

### 14.3 DEVELOPER'S tests

**DEVELOPER** must:

- (a) give the State's Delegate under clause 14.2 (or the State's Representative if no State's Delegate has been appointed) reasonable notice of all tests (including those tests described in Schedule 16 and Schedule 19) to be carried out on any part of the State Tennis Centre Works or the Transport and Access Works (including all tests to be performed on the base and then the surface of each tennis court) or the materials incorporated therein (collectively Tests) and reasonable notice of when each 'hold point' will be achieved; and
- (b) allow the State's Delegate or other alternative representative of the State to be present at the Tests and at the time each 'hold point' is achieved; and
- (c) allow the State's Delegate or other alternative representative of the State to view and take copies of the Test results.

DEVELOPER must, when providing its progress report submitted under clause 14.1, furnish to the State copies of the results of all the Tests conducted during the previous month.

#### 14.4 Work to comply with benchmarks

Subject to permitted Variations, all materials and workmanship in relation to the State Tennis Centre Works and the Transport and Access Works will be of the respective kinds and standards which are in accordance with the Design Documentation and DEVELOPER must, if required by the State, produce evidence reasonably necessary to show that the materials and workmanship comply with this clause.

### 14.5 Quality Assurance

DEVELOPER must establish implement and maintain a Quality Plan to the reasonable satisfaction of the State and which must comply with ISO 9001:2000 (Quality Plan).

The Quality Plan shall include:

- (a) identification and definition of key activities consistent with the Program;
- (b) identification of how DEVELOPER proposes to deliver those key activities, including what internal controls, methodologies, activities and a sample of DEVELOPER'S procedures;
- (c) identification of how DEVELOPER is to verify these key activities and a sample of its verification plan; and
- (d) identification of review and agreement of quality assurance records DEVELOPER is to provide the State confirming compliance by DEVELOPER of its obligations under this Agreement.

Within 14 days of the Commencement Date, DEVELOPER must submit its Quality Plan to the State's Representative for approval, and then comply with any directions given by the State's Representative to amend the Quality Plan to comply with this clause.

If DEVELOPER'S Quality Plan does not comply with ISO 9001:2000, it must ensure that all design consultants that it or the Builder engage, establish, implement and maintain a Quality Plan complying with ISO 9001:2000.

DEVELOPER must, and ensure that the Builder and design and other consultants engaged by DEVELOPER or the Builder, participate in and allow reasonable access to the State's Representatives to audit DEVELOPER'S quality assurance program and the Quality Plan. Verification by the State's Representative shall not relieve DEVELOPER of any of its obligations under this Agreement.

### 14.6 Re-Execution of faulty works

In any case prior to the Date of Practical Completion, where the State's Representative considers that any of the State Tennis Centre Works or the Transport and Access Works executed by DEVELOPER are not in accordance with the Design Documentation, the Approvals, or good building and construction practice, the State's Representative may by notice in writing to DEVELOPER specifying the manner in which the State Tennis Centre Works and/or the Transport and Access Works are not so in accordance, require DEVELOPER to remove, re-execute, replace or amend any such works.

Unless DEVELOPER refers the matter to dispute under clause 28 DEVELOPER must:

- (a) within a reasonable time commence rectification; or
- (b) prepare and deliver to the State's Representative a proposal and program for rectification and must then perform such work in accordance with its proposal and program.

If DEVELOPER refers the matter to dispute resolution under clause 28:

- (c) that clause will apply to resolve the dispute as if all procedures in clauses 28.1 to 28.5 inclusive had been followed and the Parties agree that they will not give a notice under clause 28.9; and
- (d) it must promptly comply with any decision reached or adjudicated under that clause.

### 14.7 Notice of practical completion

When in the opinion of DEVELOPER the State Tennis Centre Works and the Transport and Access Works have reached Practical Completion, DEVELOPER shall give to the State notice in writing and allow the State to inspect those works and carry out any relevant tests.

#### 14.8 Notice of incomplete works

Within 10 Business Days after the service of a notice under clause 14.7, the State may give to DEVELOPER a notice in writing of those matters and things (if any) which, in the opinion of the State, are still required by this Agreement to be done before the State Tennis Centre Works and the Transport and Access Works have achieved Practical Completion.

### 14.9 DEVELOPER'S response

If the State issues a notice under clause 14.8 then DEVELOPER must either:

- (a) cause the work specified in the notice to be carried out and then give the State a further notice; or
- (b) give the State a dispute notice under clause 28.

#### 14.10 Repeat procedure

If DEVELOPER gives the State a notice under clause 14.9(a) then the procedure in clauses 14.7 to 14.9 applies until the State agrees that no work is required to bring the State Tennis Centre Works and the Transport and Access Works to Practical Completion. The State must conduct the further inspection within 10 Business Days after receiving a notice under clause 14.9(a).

#### 14.11 Date of practical completion

The date of Practical Completion will be:

- (a) the date the State notifies the DEVELOPER in writing that it is satisfied the State Tennis Centre Works and the Transport and Access Works have achieved Practical Completion; or
- (b) if the State does not give a notice in accordance with clause 14.8 within the specified period (**the Notice Period**), the day after the end of the Notice Period; or
- (c) if the State issues a notice under clause 14.8 and DEVELOPER responds by issuing a dispute notice under clause 28, the date determined under clause 28.

### 14.12 Risk

When the State Tennis Centre has achieved Practical Completion it shall remain at the risk of DEVELOPER until Handover, at which time risk will pass to the State.

#### 14.13 Assignment of warranties

If requested by the State, DEVELOPER must, within 10 Business Days after the expiration of the Warranty Period, assign to the State (so far as they are capable of assignment) the benefit of any warranties or guarantees (which have not then expired) given by its Builder, its Builder's

subcontractors and the manufacturers or suppliers of any materials, plant or equipment incorporated into the State Tennis Centre.

DEVELOPER agrees to execute all such further documents and assurances as may be reasonably required by the State in order to give effect to the intention of the Parties expressed in this clause.

DEVELOPER must also assign to the State any security bond or performance guarantee held in relation to any warranty or guarantee assigned under clause 14.13.

With respect to those warranties and guarantees which have not expired and which are not capable of assignment, DEVELOPER hereby irrevocably appoints the State its attorney for the purposes of enforcing the benefit of such warranties and guarantees.

DEVELOPER will obtain appropriate warranties in respect of materials, plant and equipment and workmanship incorporated into the State Tennis Centre.

#### 14.14 The State may rectify and complete works

If DEVELOPER fails to properly execute the State Tennis Centre Works or the Transport and Access Works with reasonable diligence and such failure continues for a period of 20 Business Days after the State has given written notice in accordance with clause 14.6 and DEVELOPER has not issued a dispute notice under clause 28, the State may without prejudice to any other remedy available to it employ and pay other persons to carry out the State Tennis Centre Works and the Transport and Access Works, provided the State has first terminated this Agreement.

If this occurs the State may, with its contractors and workers, enter upon the Tennyson Site and use all goods and materials intended for, delivered to and placed on or adjacent to the Tennyson Site and may purchase all such other materials and goods necessary for the carrying out of the State Tennis Centre Works and the Transport and Access Works and all moneys expended by the State in doing this shall be paid by DEVELOPER to the State upon demand.

### 15. Security

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#### 15.1 Acknowledgment

DEVELOPER acknowledge that this Agreement is not subject to Section 67K(2) of the QBSAA which would otherwise limit the security or retention amount to an amount less than 5% of the contract price. DEVELOPER expressly agree that Section 67K(2) of the QBSAA does not apply to this Agreement and that it will be bound by the terms in this clause 14.

Initialled:....

Print Name:.....

For and on behalf of ## Limited

Initialled:.....

Print Name:

For and on behalf of the State of Queensland

[Whether this is necessary/possible will depend on enactment of security for payments legislation.]

### 15.2 Provision of security

DEVELOPER shall on or prior to the Commencement Date provide the State with Bank Guarantees which in aggregate have a face value equal to the amount set out in Schedule 1 for the purpose of securing the due and proper performance of DEVELOPER'S obligations to complete the Works.

Note: The amount of security will depend on the proposal, and may change during the 'life' of the Project. The principles the State will follow in setting the level of security are:

- if the State has to reinstate the Tennyson Site upon DEVELOPER failure, the State will have access to sufficient cash to do so; and
- if the State has to complete the State Tennis Centre upon DEVELOPER failure, the State will have access to sufficient cash to do so.

### 15.3 Incidental costs

Subject to clause 21, all costs (including, all stamp duty or other taxes) incidental or relating to the security required under this clause shall be borne by DEVELOPER.

### 15.4 Conversion of security

If Default occurs prior to Practical Completion of the Works and the State has given written notice of the Default under clause 26.1 or 26.3, the State may, without prejudice to any of its rights under this Agreement, convert the security held under this clause to cash to do any one or more of the following:

- (a) recover any amounts owing to it under this Agreement;
- (b) complete the design and construction of the Works;
- (c) complete the Tenure Arrangements;
- (d) remedy any defective work;
- (e) reinstate the Tennyson Site; and
- (f) recover any losses, costs, expenses or damages suffered by it as a result of DEVELOPER'S breach of this Agreement (including a breach of the obligations contained in clause 10.6(c) and (d).

### 15.5 No interest

Interest shall not be payable by the State to DEVELOPER on any of the cash proceeds of the security held under this clause.

### 15.6 Release of security

Subject to the DEVELOPER:

- (a) complying with its obligations to provide security under clause 17.9; and
- (b) not being in breach of a provision of this Agreement which would entitle the State to have access to the security,

the State will release the security (or so much of it as has not been utilised under this Agreement) held under this clause to DEVELOPER within 5 Business Days after receiving a written request from DEVELOPER to do so, which request may not be made until after Practical Completion of the Works.

### 15.7 Notice

The State will give no less than 2 Business Days notice of its intention to call up and apply security held under this clause.

#### 15.8 Unrestricted access to security

The State may exercise its right under clause 15.4 irrespective of whether or not:

- (a) dispute resolution procedures have been invoked or proceedings have been commenced under clause 28; or
- (b) any judgment or other order of a court has been made in respect of any matter (but subject to compliance with any such judgment or order).

However, the rights of the State under clause 15.4(a), (d) and (f) may be exercised whether or not this Agreement has been terminated under clause 26 but the rights of the State under clause 15.4(b), (c) and (e) can only be exercised after termination under clause 26.

### 15.9 Assigned security

The State will accept an assignment of securities held by DEVELOPER as against the Builder (for equivalent amounts) provided that the assignment is absolute and the securities once assigned will be Bank Guarantees.

### 16. Insurance

### 16.1 Policy requirements

- (a) DEVELOPER must at its cost and expense, effect and maintain the following insurances for the Project in the joint names of the State, DEVELOPER and all contractors (collectively 'Insured') for their respective rights, interests and liabilities, from the commencement of any work or activity on the Tennyson Site:
  - (i) a contractor's all risk insurance policy on usual commercial terms and conditions, which must cover:
    - (A) the whole of the Works; and
    - (B) all associated temporary works including material incorporated or to be incorporated into the Works; and
    - (C) material incorporated, or to be incorporated, into the Works, the property of the Insured, or for which they are responsible, whilst on or adjacent to the Tennyson Site;
    - for:
    - (D) loss or destruction of, or damage to, the property insured, arising from causes normally insured by a policy of this nature; and
    - (E) an amount not less than their full replacement value plus an amount (to be determined by DEVELOPER acting reasonably) to cover the costs of 'demolition and removal of debris and the fees of architects, engineers, quantity surveyors and consultants to rebuild the property insured; and
  - a public liability insurance policy which must cover liability up to the amount set out in Schedule 1 to any person for any death, personal injury, property damage or other loss or costs (and must specifically cover liability associated with any

demolition activity), other than a liability covered by a policy in force at the relevant time under the workers compensation, or similar legislation; and

- (iii) a professional indemnity policy of an aggregate value of not less than the amount set out in Schedule 1 covering design responsibilities assumed by DEVELOPER under this Agreement. (Despite anything else in clause 16.1(a), the State is not required to be named on this policy.)
- (b) The insurance cover required under clause 16.1(a)(i) may contain but not be limited to the following exclusions:
  - the cost of making good fair wear and tear or rust, oxidation, corrosion or gradual deterioration but shall not exclude the loss or damage resulting therefrom;
  - (ii) the cost of making good faulty design, workmanship and materials but shall not exclude the loss or damage resulting therefrom;
  - (iii) consequential loss of any kind, but shall not exclude loss of or damage to the Works;
  - (iv) damages for delay in completing or for the failure to complete the Works;
  - (v) loss or damage resulting from ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel resulting from any cause; and
  - (vi) war, invasion, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection or military or usurped power, act of terrorism, martial law or confiscation by order of any Government or Authority.

### 16.2 Worker's Compensation

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DEVELOPER must effect and maintain and must ensure the Builder effects and maintains a worker's compensation policy for an unlimited sum against any liability, loss, claim or proceedings, whether arising by virtue of any statute relating to worker's compensation or employer's liability or at common law for any person employed by DEVELOPER or the Builder (as the case may be) in or about the execution of the Works.

#### 16.3 Period of insurance

The insurance required under this Agreement must be maintained for a period ending on the Handover Date except for the insurance required under clause 16.1(a)(i) and (ii) which must be maintained until expiry of 12 months after Practical Completion of each separable part of the Works and under clause 16.1(a)(ii) which must have a 'run off' period of at least six Years. Thereafter for so long as DEVELOPER is required to remedy defects in the Buildings or to carry out other work on the Tennyson Site, DEVELOPER shall ensure that at any time when work is carried out on the Tennyson Site by DEVELOPER or the Builder or any Subcontractor, a public liability policy complying with the requirements of clause 16.1(a)(ii) is in place.

#### 16.4 Approved insurer

The insurances required under this Agreement:

- (a) must be effected with a responsible and reputable insurer approved by the State;
- (b) may (where applicable) be effected under a group or blanket policy held by DEVELOPER or a related corporation; and

(c) shall provide that insofar as each policy covers more than one insured, all insuring agreements and endorsements with the exception of limits of liability shall operate in the same manner as if they were a separate policy of insurance covering each Party. Each policy shall further provide that the insurer waives all rights, remedies or relief to which it might become entitled by subrogation against any of the Parties comprising the insured and that failure by any insured to observe and fulfil the terms of the applicable policy shall not prejudice the insurance in regard to any other insured.

### 16.5 Certificates of currency

DEVELOPER must deposit with the State certified copies of all policies of insurance required under this Agreement and receipts for premiums or other evidence of compliance prior to DEVELOPER accessing the Tennyson Site to commence the Works, and DEVELOPER must provide to the State upon request from the State from time to time evidence of the currency of such policies of insurance as and when required in writing by the State.

#### 16.6 Failure to insure

If DEVELOPER fails to effect or maintain any of the insurances required by this Agreement the State may effect such insurances required by this Agreement and the premiums therefore will be a debt due and payable forthwith by DEVELOPER to the State.

#### 16.7 Application of insurance proceeds

Any amounts paid or payable to DEVELOPER by the insurer on account of any loss, damage or destruction of the Works or materials must be applied by DEVELOPER to the re-building or reinstatement of the Works and materials as the case may be.

[Note if the Transport and Access Works are being undertaken on land not included in the Tennyson Site, certain of the insurance arrangements will require modification including the possibility of adding other entities as co-insureds on policies.]

# 17. Defects and Warranties

### 17.1 DEVELOPER'S warranty on works

DEVELOPER warrants that:

- (a) services provided and procedures followed by DEVELOPER under this Agreement will be in accordance with manufacturer or vendor warranty requirements, and all terms and conditions of this Agreement; and
- (b) the State Tennis Centre Works and the Transport and Access Works when executed will be new and conform to the State Tennis Centre Project Brief, will be free from defects in materials, construction and workmanship, and will conform with the Approvals, applicable laws and this Agreement.

#### 17.2 Warranty period

DEVELOPER must correct or replace, in accordance with clause 17.1, any item of the State Tennis Centre Works or the Transport and Access Works as executed not meeting the warranties in clause 17.1 during the periods described in Schedule 1 for that item commencing on the Handover Date (each a 'Warranty Period').

Any repairs or replacements during a Warranty Period for that item, shall have an extended warranty for a further period of 12 months commencing on the date of repair or replacement.

Notwithstanding the expiration of the relevant Warranty Period, DEVELOPER must correct or replace, in accordance with clause 17.3, the relevant item of the Works as executed not meeting the warranties in clause 17.1 that existed at the end of the relevant Warranty Period, but could not have been revealed by a reasonable inspection carried out on or before the end of the relevant Warranty Period (a 'Latent Defect').

## 17.3 Repair of collateral damage during warranty period

DEVELOPER must also correct, replace, or repair any part of the State Tennis Centre Works or the Transport and Access Works damaged as a result of the failure of any part of the State Tennis Centre Works or the Transport and Access Works as executed not meeting the warranties in clause 17.1.

DEVELOPER will not be excused from performing warranty work after the end of a Warranty Period if it receives notice of the defect before the end of the Warranty Period nor will the DEVELOPER be excused from performing warranty work for Latent Defects.

#### 17.4 Notice of defect

The State's Representative shall promptly give notice to DEVELOPER of the discovery of any breach of DEVELOPER'S warranties under clause 17.1, together with a description of the basis of the State's Representative's claim. The State may only exercise this right:

- (a) during the relevant Warranty Period; or
- (b) if notice of a defect was given in the relevant Warranty Period and that defect becomes the subject of an extended warranty period, the State may give notice during the extended warranty period but only in relation to the defect to which that extended warranty period relates.

#### 17.5 Urgent repair of defect

The DEVELOPER, (on an expedited basis if so requested by the State's Representative) must correct or replace the applicable part of the State Tennis Centre Works or the Transport and Access Works as executed at no cost to the State.

### 17.6 Timing for repairs

Promptly after receipt by DEVELOPER of a notice under clause 17.4 DEVELOPER and the State's Representative will agree upon a schedule for DEVELOPER performance of its warranty obligations that will allow DEVELOPER to complete that work within a reasonable period of time without unreasonably interfering with the operation of the State Tennis Centre.

With the State's approval (not to be unreasonably withheld or delayed), DEVELOPER may leave non-urgent defects until a time when there are a reasonable number of defects to fix.

#### 17.7 Access for repairs

The State shall provide DEVELOPER with reasonable access to the State Tennis Centre to perform its warranty obligations. If any defect is due to a design flaw in the Works DEVELOPER must replace that part of the Works with a substitute which conforms with the Prescribed Documents and the Prescribed Court Documents.

### 17.8 State may repair at DEVELOPER'S cost

If, after notification of a defect in materials or workmanship, DEVELOPER unreasonably delays commencing, continuing or completing the making good of that defect(s) in accordance with the notice, then the State by written notice to DEVELOPER (except in case of emergency where no

notice is required) may, but is not obliged to, correct that defect(s) in accordance with this Agreement.

The DEVELOPER will be liable for the costs and expenses incurred by the State in connection with that repair or replacement and must pay to the State an amount equal to those costs and expenses upon receipt of invoices certified by the State's Representative.

For the avoidance of doubt, remedial work necessary to enable a state, national or international tournament or event to be held at the State Tennis Centre will be an 'emergency'.

### 17.9 Security for Warranty Period and Final Completion

Upon Practical Completion of the State Tennis Centre Works and the Transport and Access Works, DEVELOPER inust give the State a Bank Guarantee for an amount equal to the amount described in Schedule 1 as 'Warranty Period Guarantee'. The State may call on that Bank Guarantee to pay any amount due under clause 17.8. The Bank Guarantee (or as much of it as has not been utilised) must be returned to DEVELOPER on Final Completion.

### 17.10 Notice on bank guarantee

The State will give no less than 2 Business Days notice of its intention to call up and apply the Bank Guarantee held under clause 17.9.

### 18. Time

### 18.1 Avoidance of delays

DEVELOPER shall avoid delay in the progress of the execution of any Works and ensure that construction of the State Tennis Centre Works and the Transport and Access Works proceeds in accordance with the Program.

#### 18.2 Notification of delay

If DEVELOPER becomes aware of a delay then it must notify the State accordingly, setting out the cause and likely duration of the delay.

#### 18.3 Timing of notice

DEVELOPER must notify the State of a delay within a reasonable time after the delay has ended and, if asked within 10 Business Days of giving the notice, must give the State reasonable details of the delay.

#### 18.4 Extensions of time for force majeure

Provided DEVELOPER has complied with clauses 18.2 and 18.3, the State may extend at DEVELOPER'S request any date by which something must be done under this Agreement (including dates in the Program but excluding the Critical Finish Date) if the thing is delayed because of an event of Force Majeure, by the period for which the doing of the thing is delayed by the event of Force Majeure.

#### 18.5 Extension of time for other causes

Provided DEVELOPER has complied with clauses 18.2 and 18.3, the State may extend at DEVELOPER'S request the Critical Finish Date by the period of time DEVELOPER is actually delayed in achieving Practical Completion of the State Tennis Centre Works or the Transport and Access Works by a breach by the State of an obligation on its part under this Agreement, and DEVELOPER may also extend any other date in the Program including the Date for Practical

Completion by the time by which the doing of the thing required by that date was delayed by the relevant breach on the part of the State.

#### 18.6 Changes

For the avoidance of doubt, the provisions of clauses 18.4 and 18.5 do not limit those provisions of clause 11 which allow for extensions of time to be agreed or determined consequent upon a Variation.

#### 18.7 State's representative may extend

If the State is in breach of an obligation on its part under this Agreement so as to delay DEVELOPER in the performance of any obligation on its part under this Agreement, the State's Representative may by notice to DEVELOPER make an equitable adjustment to any date in the Program (including the Critical Finish Date).

### 18.8 Notification of completion

DEVELOPER must notify the State upon Practical Completion of each separable part of the State Tennis Centre Works or the Transport and Access Works and will provide the State with access to the Tennyson Site to inspect each separable part upon Practical Completion of it, in order to verify such completion.

### 18.9 Liquidated damages

DEVELOPER acknowledges that if it fails to bring the State Tennis Centre Works and the Transport and Access Works to Practical Completion by the Date for Practical Completion, the State will be exposed to substantial damages as a result of DEVELOPER'S failure so to do.

Accordingly, if DEVELOPER fails to achieve Practical Completion of the State Tennis Centre Works and the Transport and Access Works by the Date for Practical Completion, DEVELOPER shall be indebted to the State as and by way of a genuine pre-estimate of damages (and not as a penalty), liquidated damages at the rate set out in Schedule 1 for every day after the Date for Practical Completion to and including the date that Practical Completion of the State Tennis Centre Works and the Transport and Access Works is achieved or the date that the Agreement is terminated, whichever first occurs.

### 19. Handover

#### 19.1 Requirements of handover

On the Handover Date DEVELOPER must deliver to the State:

- (a) a partial surrender of the Development Lease so far as it applies to the State Tennis Centre Lot capable of immediate registration in the Land Registry;
- (b) unencumbered title to all improvements to the State Tennis Centre Lot, including the State Tennis Centre;
- (c) such documentation as is necessary to effect transfers to the State of the items in paragraph (b);
- (d) written confirmation that DEVELOPER has provided to the State two complete sets of keys for the State Tennis Centre and Transport and Access Works (where relevant) together with the master key and written records of all codes and combinations necessary for the purpose of fastening or unfastening any lock or activating or de-activating any security device;

- (e) all Development Approvals for the State Tennis Centre and Transport and Access Works including the certificate of classification (unless earlier provided under this Agreement);
- (f) a statutory declaration sworn by a director of DEVELOPER stating that all payments due and owing to the Builder and to Subcontractors have been paid;
- (g) two complete sets of final Design Documentation and Court Design Documentation
  (reflecting the 'as constructed' state of the State Tennis Centre and Transport and Access
  Works) in both hard copy and, where relevant for floor plans and specifications, in
  electronic format to include:
  - two copies of final operating manuals and maintenance manuals for all services, plant and equipment forming part of the State Tennis Centre and Transport and Access Works;
  - (ii) two complete sets of 'as constructed' architectural and engineering drawings;
  - (iii) two copies of trade specifications, workshop drawings, and other documents,

for the State Tennis Centre and Transport and Access Works,

- (h) an electronically based asset management system populated with initial data, maintenance plan, training manuals, test certificates, operating and maintenance manuals, commissioning and test data and all infrastructure, equipment and software required under the State Tennis Centre Project Brief;
- search results carried out with the Queensland Environmental Protection Agency that confirm that the State Tennis Centre Site has been taken off the Environmental Management Register;
- (j) the Warranty Deed in Schedule 6, duly executed by each of the covenantors described in it;
- (k) any other document or thing reasonably necessary to deliver vacant possession of the State Tennis Centre to the State and to give effect to this Agreement;
- (I) a final detailed survey showing that the whole of the State Tennis Centre is within the boundaries of the State Tennis Centre Lot; and
- (m) a list of all Subcontractors employed by DEVELOPER or the Builder for the State Tennis Centre Works and Transport and Access Works together with the address, telephone number and contact personnel of each Subcontractor for future reference in building maintenance.

### 19.2 Warranties on handover

On Handover, DEVELOPER warrants to the State that:

- (a) it has completed the State Tennis Centre and Transport and Access Works in accordance with this Agreement;
- (b) there are no defects in the State Tennis Centre Works or the Transport and Access Works known to DEVELOPER and which have not been reported to the State's Representative;
- (c) all payrolls, payroll taxes, liens, charges, claims, demands, judgments, security interests, bills for materials, and other indebtedness connected with the State Tennis Centre and Transport and Access Works for which DEVELOPER is liable (including indebtedness to the Builder and subcontractors) have been paid;

- (d) DEVELOPER has complied with all of the obligations imposed on it by the Agreement where those obligations have fallen to be complied with at the time of Handover;
- (e) the quality of the State Tennis Centre is in accordance with the terms of this Agreement;
- (f) except as expressly provided in this Agreement, the State Tennis Centre and Transport and Access Works are free and clear of all liens and Encumbrances; and
- (g) each of the representations and warranties made by DEVELOPER in clause 23 were true and correct when made and remain true and correct on Handover.

# 20. Vesting Land

### 20.1 Creation of Titles

- (a) After the DEVELOPER has complied with its obligations under clause 9.4 and the State has complied with its obligations under clause 9.5 such that the boundaries of the State Tennis Centre Site and the Associated Development Site can be surveyed to create separate lots on a survey plan, the Easements can be identified upon that plan and the terms and conditions of the Easements have been finalised, DEVELOPER must prepare registrable Plans of Subdivision consistent with the Plan of Land Re-Allocation for the State's approval.
- (b) The State as owner shall endorse the Plans for Subdivision if they are consistent with the Plan of Land Re-Allocation.
- (c) Where a Plan of Subdivision is not substantially in accordance with the Plan of Land Re-Allocation, the State must give bona fide and reasonable consideration to endorsing the Plan of Subdivision but will be under no obligation to accept any change which, in the State's reasonable opinion, is prejudicial to the State's interests under this Agreement. DEVELOPER must give bona fide and reasonable consideration to making any changes to the Plans of Subdivision that the State may reasonably require.
- (d) After the State has endorsed the Plans of Subdivision, DEVELOPER must at its cost lodge the Plans of Subdivision for registration in the Land Registry.
- (e) DEVELOPER must give the State written notice as soon as it becomes aware that the Plans of Subdivision have registered and that separate titles have been created for the State Tennis Centre Lot and the Associated Development Lot.

[If the titling arrangements involve the creation of community title lots or volumetric lots, the State will also need to endorse relevant community management statement or building management statement (as the case may be).]

DEVELOPER must then lodge the Plans for Subdivision and Easements for registration.

### 20.2 Settlement

On the Settlement Date:

- (a) the State must deliver to DEVELOPER a Transfer capable of immediate registration (subject to stamping) of the Associated Development Lot and any declaration required by the *Duties Act 2001* to be furnished to procure the stamping of the Transfer; and
- (b) DEVELOPER must:
  - (i) accept the Transfer of the Associated Development Lot;

- (ii) deliver to the State a surrender of the Development Lease capable of immediate registration in the Land Registry;
- (iii) pay to the State the sum of \$# [delete if not applicable]; and
- (iv) pay to the State any amounts due and owing to the State for rent and outgoings under the Development Lease.

### 20.3 Transfer documents

- (a) The Transfer Documents must be prepared by DEVELOPER'S solicitor and delivered to the State not less than 5 Business Days before the Settlement Date.
- (b) If DEVELOPER pays the State's reasonable expenses, it may require the State to produce the Transfer Documents at the Office of State Revenue in Brisbane for stamping before Settlement.

#### 20.4 Notings on Associated Development Lot

The Associated Development Lot will be transferred to DEVELOPER subject to the Easements and any other grants, reservations, restrictions, rights and interests noted on the title and unregistered interests over the Associated Development Lot created by DEVELOPER whether or not protected by a caveat on the title but otherwise free from Encumbrances.

### 20.5 Costs

All stamp duty on this Agreement and any duty in respect of the conveyance by the State to DEVELOPER of the Associated Development Lot must be paid by DEVELOPER and if not paid by DEVELOPER may be paid by the State and recovered from DEVELOPER as a liquidated debt.

### 21. Payments

### 21.1 Responsibility for project costs

DEVELOPER is responsible for and must meet the total cost of the Project.

### 21.2 Land tax rebate

To the extent that DEVELOPER pays land tax on the State Tennis Centre Lot, DEVELOPER shall issue an invoice to the State for that duty or tax accompanied by evidence of payment of it, and the State shall pay the invoiced amount within a reasonable time.

### 22. Goods and Services Tax

### 22.1 Consideration is GST exclusive

Any consideration to be paid or provided for a supply made under or in connection with this Agreement, does not include an amount on account of GST.

#### 22.2 Gross up of Consideration

Despite any other provision in this Agreement, if a Party (Supplier) makes a supply under or in connection with this Agreement on which GST is imposed (not being a supply the consideration for which is specifically described in this Agreement as 'GST inclusive'):

(a) the consideration payable or to be provided for that supply under this Agreement but for the application of this clause (GST exclusive consideration) is increased by, and the

recipient of the supply (Recipient) must also pay to the Supplier, an amount equal to the GST payable by the Supplier on that supply; and

(b) subject to clause 22.4 the amount by which the GST exclusive consideration is increased must be paid to the Supplier by the Recipient without set off, deduction or requirement for demand, at the same time as the GST exclusive consideration is payable or to be provided.

### 22.3 Reimbursements

If a payment to a Party under this Agreement is a reimbursement or indemnification, calculated by reference to a loss, cost or expense incurred by that Party, then the payment will be reduced by the amount of any input tax credit to which that Party is entitled for that loss, cost or expense.

That Party is assumed to be entitled to a full input tax credit unless it proves, before the date on which the payment must be made, that its entitlement is otherwise.

### 22.4 Tax Invoice and registration

Despite any other provision of this Agreement, the State need not make a payment of any amount for GST until DEVELOPER has given the State:

- (a) a GST tax invoice for that payment stating the amount of GST imposed on the DEVELOPER in respect of the supply to which the GST tax invoice relates; and
- (b) evidence satisfactory to the State that the DEVELOPER is registered for the purposes of GST.

### 22.5 Interpretation

Words or expressions used in this clause 22 which are defined in the *A New Tax System (Goods and Services Tax) Act 1999 (Cth)* have the same meaning in this clause. Without limitation, GST includes an amount relating to the State's notional liability for GST referred to in section 177-3 of that Act.

# 23. DEVELOPER'S Warranties and Statements

### 23.1 Warranties

DEVELOPER represents and warrants the statements in clauses 23.2 to 23.14.

### 23.2 Standing

DEVELOPER is duly organised, validly existing, and in good standing under the laws of Australia and is qualified to do business in all jurisdictions in which the nature of the business conducted by it makes such qualification necessary and where failure to so qualify would have a material adverse effect on its financial condition, operations, prospects, or business.

### 23.3 No violation of law or litigation

DEVELOPER is not in violation of any law which would affect its performance of any obligations under this Agreement. There are no legal or arbitration proceedings or any proceeding by or before any Authority or other government body, now pending or (to the best knowledge of DEVELOPER) threatened against DEVELOPER that, if adversely determined, could reasonably be expected to have a material adverse effect on the financial condition, operations, prospects, or business of DEVELOPER or its ability to perform under this Agreement.

### 23.4 Governmental authorisations

DEVELOPER is or will be the holder of all Approvals required to permit it to undertake the Works or any part thereof prior to it performing the relevant Works.

### 23.5 No breach

Neither the execution and delivery of this Agreement, nor the consummation of the transactions contemplated by this Agreement or compliance with its terms and provisions, will:

- (a) conflict with, result in a breach of, or require any consent under the organisational documents of DEVELOPER, or any applicable law or any agreement or instrument to which DEVELOPER is a party or by which it is bound or to which it is subject; or
- (b) constitute a default under any such agreement or instrument.

### 23.6 Necessary action

DEVELOPER has all necessary power and authority to execute, deliver, and perform its obligations under this Agreement, the execution, delivery, and performance by DEVELOPER of this Agreement has been duly authorised by all necessary action on its part, and this Agreement has been duly and validly executed and delivered by DEVELOPER and constitutes a legal, valid, and binding obligation of DEVELOPER enforceable in accordance with its terms, except as its enforceability may be limited by bankruptcy, insolvency, reorganisation, moratorium, or other similar laws relating to the enforcement of creditors' rights generally.

### 23.7 Suitably qualified

DEVELOPER at all times shall be suitably qualified and experienced to perform the Works and shall exercise due skill, care and diligence in the execution and completion of the Works.

### 23.8 Competent builder

DEVELOPER shall engage and retain a Builder and consultants who are suitably qualified and experienced.

### 23.9 Works compliance

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DEVELOPER shall execute and complete the State Tennis Centre Works and the Transport and Access Works in accordance with the Prescribed Documents and the Prescribed Court Documents so that the Works, when completed, shall comply with all the requirements of the Agreement and all applicable laws and the Approvals and shall allow the State Tennis Centre and Transport and Access Works to be efficiently operated.

#### 23.10 Supply of documents

The documents to be supplied by DEVELOPER under clause 14.13 and 19.1 will be sufficient to enable the State or any other person to fully use, operate, maintain and refurbish the State Tennis Centre and Transport and Access Works.

### 23.11 Risk assessment

DEVELOPER has made its own interpretations as to the difficulties of executing the Works, has taken into account all of the risks in relation to the Works (including, but without limiting the generality of this provision, the risks described in clause 24) and has made full allowance for those risks in its Project costings.

### 23.12 Site examination

DEVELOPER has examined the Tennyson Site and its surroundings and has informed itself of all relevant physical conditions upon and below the surface of the Tennyson Site.

# 23.13 Site constraints

DEVELOPER has informed itself of the nature of the work, materials and equipment necessary for the execution of the Works, the facilities at the Tennyson Site, the times permitted by the relevant authorities for the construction of the Works, the means of access to and egress from the Tennyson Site and transport facilities for deliveries to the Tennyson Site and the constraints on such access and egress applying or to apply from time to time.

#### 23.14 Warranties not to be read down

Where, in this Agreement, DEVELOPER provides a warranty, the warranty must be given full effect in its own right and is not to be read down by reason of the existence of or absence of any other warranty.

#### 23.15 Reliance on warranties

DEVELOPER acknowledges that the State has entered into this Agreement in reliance on the representations and warranties set out in this Agreement.

# 24. Risks Accepted by the DEVELOPER

### 24.1 Risk acceptance

Except as provided for elsewhere in this Agreement, DEVELOPER accepts all risks associated with the Project whether ascertainable or not, including, risks associated with or arising in relation to:

- (a) obtaining the Approvals;
- (b) resolving Native Title and Cultural Heritage Requirements;
- (c) fulfilling other requirements relating to matters of cultural heritage and archaeological significance;
- (d) contamination of the Tennyson Site;
- (e) any ambiguities, errors, omissions or discrepancies in the State Tenuis Centre Project Brief which a reasonable developer could or ought to be able to detect;
- (f) time delays, cost increases, losses and expenses however caused by the execution of the Works;
- (g) all industrial matters (save for statewide or nationwide strikes to the extent that the State takes the risk of delay occasioned thereby under clause 18.4);
- (h) delays, cost increases, loss or expense caused (whether directly or indirectly) by adverse weather or site conditions;
- all delays and increased costs, losses and expenses caused by or arising out of (whether directly, indirectly or howsoever) the physical conditions and characteristics of the Tennysou Site (including subsurface, latent conditions or hidden defects and contamination of any kind) and its surroundings suffered or incurred by DEVELOPER, the Builder and/or their agents, employees, Subcoutractors and suppliers in or about the execution of the Works including, without limitation, any increased costs caused by or

resulting out of the execution of additional works by DEVELOPER for any design and/or construction of additional or altered ground works, foundations and the like as a result of such physical conditions and characteristics of the Tennyson Site;

- (j) all increased costs howsoever incurred in the execution of the Works resulting from any delay or disruption in the progress of the works other than costs which are otherwise payable under the Agreement; and
- (k) any other matter in respect of which, pursuant to the Agreement, DEVELOPER is required to accept the risk.

### 24.2 Release of Enertrade

DEVELOPER acknowledges that the State will acquire the Associated Development Site and the State Tennis Centre Site (collectively for this clause 'Site') from Queensland Power Trading Corporation ('Enertrade') on certain terms and conditions including a condition that the State procured from DEVELOPER a release of any claim it might otherwise have against Enertrade for any loss, damage, action, demand, cost or expense that DEVELOPER may suffer as a result of any residual contamination that may exist on the Site.

Accordingly, within 60 days from the date of this Agreement, DEVELOPER must deliver to the State a duly executed deed in the form of Schedule 22.

# 25. Assignment

### 25.1 Assignment of benefits

Where, in this Agreement, DEVELOPER must assign the benefit of some right to the State then:

- (a) to the extent that the right can be assigned, that right is, without any further action being required, hereby assigned;
- (b) if a time for assignment is specified, then immediately upon that time arising, without any further action being required;
- (c) to the extent that the right cannot be assigned then DEVELOPER holds that right on trust for the State;
- (d) where any right is held on trust by DEVELOPER, DEVELOPER:
  - (i) must assist the State in the enforcement of the right;
  - hereby irrevocably appoints the State as attorney of DEVELOPER for the purpose of enforcing the right with full power to act in the name of the DEVELOPER for this purpose; and
  - (iii) must cooperate fully with the State in relation to the enforcement of any such right.

### 25.2 Assignment of DEVELOPER'S interest

DEVELOPER may not novate or assign its interest in this Agreement without the prior informed consent of the State.

#### 25.3 Novation by State

The State may by notice to DEVELOPER novate this Agreement to any entity owned or controlled by the State, the novation to be accompanied by a covenant in favour of DEVELOPER from the nominated entity to be bound by the provisions of this Agreement. Such novation will

take effect from the day after it is delivered without any further action required by DEVELOPER or the State and the nominated entity will then enjoy all of the rights and benefits of the State under this Agreement as if the nominated entity had been named in it in lieu of the State.

### 25.4 References

Where, in this Agreement, there is a reference to the assignment of a right or the holding of a right on trust, the reference is a reference to a thing, right, benefit or property, including all the right, title and interest in that thing, right, benefit or property and all rights, benefits, choses in action, the benefit of and the right to enforce all claims, demands, causes of action, rights of action past, present and future, in relation to or arising out of or in respect of that thing, right, benefit or property.

# 26. Default and Termination

### 26.1 Financial default

If:

- (a) DEVELOPER informs the State in writing or its creditors generally that it is insolvent or is financially unable to proceed with the Agreement;
- (b) execution is levied against DEVELOPER by a creditor for a sum exceeding \$2 million;
- (c) a mortgagee or other person enters into possession of any of the assets or undertaking of DEVELOPER;
- (d) notice is given of a meeting of creditors with a view to the DEVELOPER entering a deed of company arrangement or notice is given of a meeting of creditors with a view to DEVELOPER entering a deed of company arrangement;
- (e) DEVELOPER enters into a deed of company arrangement with creditors;
- (f) a controller or administrator is appointed to DEVELOPER;
- (g) an application is made to a court for the winding up of the DEVELOPER and is not stayed within 14 days;
- (h) a winding up order is made in respect of DEVELOPER; or
- (i) DEVELOPER resolves by special resolution that it will be wound up voluntarily (other than for a member's voluntary winding up),

then the State may terminate this Agreement by notice in writing to DEVELOPER, to take effect on service of the notice.

The rights given by this clause 26.1 are in addition to any other rights and may be exercised notwithstanding that there may have been no breach of this Agreement.

### 26.2 Events of Default

Each of the following constitutes an Event of Default by DEVELOPER:

- (a) any material representation or warranty of DEVELOPER was incorrect at the date made and remains incorrect at the time in question;
- (b) DEVELOPER is for any reason (other than a default under this Agreement by the State) falling behind the Program for the Works and the State's Representative reasonably determines that DEVELOPER is not diligently pursuing the Works or that the

DEVELOPER cannot achieve Practical Completion of the Transport and Access Works and/or State Tennis Centre by the Critical Finish Date;

- (c) DEVELOPER fails to make prompt payment of undisputed amounts due to the Builder or Subcontractors for materials or labour;
- (d) DEVELOPER otherwise repudiates or is in default with respect to any of its obligations to the Builder or any Subcontractor;
- (e) DEVELOPER fails to comply with Approvals or applicable laws;
- (f) DEVELOPER fails to correct any defective work of which it is advised by the State's Representative within the time specified, or if no time is specified, within a reasonable time;
- (g) DEVELOPER fails to perform any term or provision contained in this Agreement; or
- (h) DEVELOPER fails to pay any amounts payable by DEVELOPER under this Agreement in accordance with the provisions of this Agreement.

### 26.3 Termination for material default

- If:
- (a) an Event of Default occurs which in the State's reasonable opinion:
  - (i) has a material adverse effect on DEVELOPER'S ability to perform its obligations under this Agreement; or
  - (ii) does not have a material adverse effect on DEVELOPER'S ability to perform its obligations under this Agreement but:
    - (A) the same event has occurred on three or more occasions; and
    - (B) the State has given a notice under clause 26.4; and
    - (C) DEVELOPER has not complied with each of the notices; and
- (b) the State's Representative serves a notice (**Notice to Remedy**) on the DEVELOPER stating the nature of the Event and requiring:
  - (i) DEVELOPER to remedy the Event of Default;
  - (ii) DEVELOPER to diligently commence to correct the Event of Default; or
  - (iii) where the Event cannot be remedied, DEVELOPER to take action to ensure the Event does not recur, and pay appropriate compensation; and
- (c) within 10 Business Days of service of the Notice to Remedy, the DEVELOPER does not comply with the Notice to Remedy,

then without prejudice to any other right or remedy it may have under this Agreement the State may, on 5 Business Days notice terminate this Agreement.

### 26.4 Remedies for non material default

If:

- (a) an Event of Default occurs; and
- (h) in the State's reasonable opinion, the Event of Default does not have a material adverse effect on DEVELOPER'S ability to perform its obligations under this Agreement; and

- (c) the State's Representative serves a notice (Minor Notice to Remedy) on DEVELOPER stating the nature of the Event of Default and requiring:
  - (i) DEVELOPER to remedy the Event of Default;
  - (ii) DEVELOPER to diligently commence to correct the Event; or
  - (iii) where the Event of Default cannot be remedied, DEVELOPER to take action to ensure the Event of Default does not recur, and pay appropriate compensation; and
  - (iv) within 10 Business Days of service of the Minor Notice to Remedy, DEVELOPER does not comply with the Minor Notice to Remedy,

then subject to clause 26.3(a)(ii), the State may pursue all remedies (other than termination of this Agreement) in respect of such Event of Default, including a claim for damages.

#### 26.5 State's rights after termination

If the State elects to terminate this Agreement pursuant to clause 26.1 or 26.3, then DEVELOPER shall provide the State, and any replacement developer and their subcontractors, at DEVELOPER'S expense, the right to possess and use any or all of DEVELOPER'S materials, equipment, machinery and supplies that are intended to become a permanent part of the completed Works that the State deems necessary to complete the Works.

Furthermore, the State may employ any other person (a 'Replacement Developer') to finish the Works or remediate the Tennyson Site in accordance with the terms of this Agreement by whatever method that the State may deem expedient. If the unfinished work relates to the State Tennis Centre Works or the Transport and Access Works, the State may access the security under clause 15 to meet the costs of such work.

### 26.6 Obligations after termination

If the State elects to terminate this Agreement pursuant to clause 26.1 or 26.3, then DEVELOPER shall cease the Works and, at the State's Representative's request and at DEVELOPER'S expense, perform the following services in relation to the Works so affected:

- (a) undertake such part of the Works as the State's Representative may specify in the termination notice for the sole purpose of protecting that part of the Works already executed;
- (b) assist the State's Representative in preparing an inventory of all equipment in use or in storage at the Tennyson Site;
- (c) terminate all subcontracts, except those to be assigned to the State or any Replacement Developer;
- (d) assign to the State or to any Replacement Developer designated by the State, without any right to compensation, title to all Works not already owned by the State, together with all subcontracts and other contractual agreements (including any agreement entered into with the Council, adjoining landowners or traditional owners pursuant to the Approvals) as may be designated by the State, all of which subcontracts and contractual agreements shall be so assignable, and assign to the State, to the extent assignable, all issued permits, licenses, authorisations, approvals, patents and other Approvals, if any, then held by DEVELOPER pertaining to the Project;
- (e) grant the State and any Replacement Developer and their subcontractors unrestricted access as the State deems necessary to complete the State Tennis Centre and Transport and Access Works and to rectify and make safe the Associated Development Site;

- (f) remove from the Tennyson Site all equipment and rubbish as the State's Representative may request; and
- (g) supply any proprietary components needed for the completion and operation of the State Tennis Centre and Transport and Access Works.

### 26.7 Payment obligations

If the State terminates this Agreement pursuant to clause 26.1 or 26.3, the State's Certifier shall determine the total reasonable and necessary expenses incurred and accrued by the State in connection with the termination of this Agreement (including all legal and other consultants fees and expenses) and the completion or remediation of the Works, including all amounts charged by any Replacement Developer to finish or remediate the Works based on the obligations such Replacement Developer assumes under this Agreement and under any subcontract(s) or other contractual agreement(s) that the State elects to have assigned to such Replacement Developer pursuant to clause 26.5 and additional reasonable and necessary overhead costs incurred and accrued by the State to effect such takeover and to complete or remediate the Works (collectively, the 'Termination Costs').

DEVELOPER shall pay the Termination Costs to the State upon demand.

### 26.8 Continuing obligations

Clauses 26, 27, 28, 29 and the State's rights set out in clause 29.7 shall continue to operate despite the termination of this Agreement.

### 27. Indemnities

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### 27.1 Indemnity by DEVELOPER

DEVELOPER shall indemnify and keep indemnified the State from all damages, losses, costs, charges, expenses, penalties, interest and fines (collectively 'losses') arising by way of actions, proceedings, suits, claims or demands for:

- (a) personal injury, illness or death of:
  - (i) any of DEVELOPER'S or Builder's or Subcontractor's personnel; or
  - (ii) any other person; and

(b) loss of or damage to any property (including damage to the environment),

caused by or incidental to the execution of the Works (save and to the extent the loss or damage is caused by the negligent act or default of the State) where the losses arise directly or indirectly out of the negligence of DEVELOPER or a breach by DEVELOPER of an applicable law in the course of or caused by the execution of the Works, or the breach by DEVELOPER of an obligation under this Agreement or otherwise, other than for Excepted Risks.

For the avoidance of doubt the exclusion of Excepted Risks does not prevent the State from seeking damages at common law.

The indemnity given by DEVELOPER is a continuing obligation, separate and independent from the other obligations of DEVELOPER and survives the termination of this Agreement.

The State must take all steps to minimise any losses arising out of such actions, proceedings, suits, claims or demands. The State acknowledges that actions, proceedings, suits, claims or demands, the subject of the indemnity given by DEVELOPER may be handled by the insurer under the

insurances effected under clause 16. If the insurer agrees to handle any such actions, proceedings, suits, claims or demands, the State agrees to cooperate fully with the insurer. If the insurer does not agree to handle any such actions, proceedings, suits, claims or demands, DEVELOPER shall remain liable to the State in accordance with this clause 27.1.

#### 27.2 Workers compensation

In any suit or claim by the State, whether under this indemnification provision or otherwise, DEVELOPER hereby expressly waives any defence or immunity from suit which might otherwise be conferred upon or available to it under any relevant workers compensation statute and which would preclude or limit either enforcement of this indemnification clause or a direct claim by the State. DEVELOPER further agrees to pay any reasonable costs incurred by the State in securing compliance with the provisions of this indemnification provision.

### 27.3 No limit

The indemnification obligations set forth in this clause 27 shall apply regardless of the amount of insurance coverage held by the relevant Party, including that under any relevant workers' compensation statute, disability act, or other act or law that would limit the amount payable by or for the Party, and shall not be limited by any insurance carried or provided by the Party in accordance with this Agreement or otherwise.

### 28. Disputes

### 28.1 Method of resolution

All disputes between the Parties must be resolved in accordance with the provisions of this clause 28.

### 28.2 Acknowledgment

The Parties acknowledge that while disputes may arise from time to time, their common intent is to ensure that any dispute is resolved in a timely and cost effective manner.

The Parties bave agreed that disputes and any other issues of contention must be addressed at the Project Control Group meeting immediately following the incident or dispute arising or the circumstances leading to the incident or dispute becoming known.

### 28.3 Service of notice

If a dispute arises at any time and is not resolved at the Project Control Group meeting or between the Parties' Representatives, then if a Party (**Disputant**) wishes to pursue the dispute it must give the other Party (**Respondent**) a notice (**the Notice**) in writing complying with the provisions of this clause 28. The date of issue of the Notice will be the date it is delivered to the Respondent.

### 28.4 Form of notice

- (a) A Notice given by a Disputant under clause 28 must be in writing, dated, signed, and must specify that it is given under clause 28.
- (b) Where the dispute relates to a dispute raised by that Party in accordance with clause 28.3, the Notice must specify:
  - (i) whether the dispute relates to a term of the Agreement or otherwise; and
    - (A) if based on a term of the Agreement, clearly identifying the specific term; and

- (B) if not based on a term of the Agreement, identifying its legal basis;
- the facts relied upon by the Disputant to support its contentions and sufficient detail to permit verification;
- (iii) sufficient information to show clearly the relief claimed and details (and the manner of computation) of the quantification of the relief claimed; and
- (iv) such other information which, when aggregated with the preceding information, will enable the Respondent to make an informed decision in respect of the
  Disputant's contentions.
- (c) Where the dispute relates to a dispute raised by the other Party, the Notice must specify:
  - (i) the basis of the dispute as advised to the Disputant;
  - (ii) the facts as known by the Disputant; and
  - (iii) any other information that will enable the Respondent to make an informed decision in respect to the Disputant's position.
- (d) Where a dispute is raised by either Party under clause 28.3 and the Respondent does not respond to a Notice within 60 days, the Respondent will be absolutely barred from taking any action (including court proceedings) in relation to the issue and the position put by the Disputant in the Notice will be deemed to be accepted by, and be binding upon, the Respondent.

#### 28.5 Executive negotiations

If:

- (a) a Disputant gives a Notice under clause 28;
- (b) the dispute remains unresolved after the response to that Notice; and
- (c) a Party wishes to pursue the resolution of the dispute,

then the Disputant must copy the Notice to:

- (d) the Chief Executive Officer of DEVELOPER; and
- (e) the Director General, of the Department responsible for the administration of this Agreement;

both of whom must jointly use reasonable endeavours to expeditiously resolve the dispute, and for this purpose may appoint nominees to undertake such investigations, hold such meetings and conduct such informal hearings as they think necessary.

#### 28.6 Appointment of expert

(a) Agreement on Expert

If at the end of the executive negotiations conducted in accordance with clause 28.5, the dispute remains unresolved and the Disputant wishes to pursue resolution of the dispute, it may call upon the Respondent to agree on and jointly appoint an expert to determine the dispute.

(b) Non Agreement on Expert

If the Parties have not appointed an expert by the 14th day after the date the Disputant calls on the Respondent to agree to jointly appoint an expert to determine the dispute, then

either Party may call upon one of the following persons as is appropriate in the circumstances to appoint an expert for the determination of the dispute.

| Subject of Dispute                                                   | Expert Applicable                                                                                                                       |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Engineering design or defects                                        | An engineer appointed by the president for the time<br>being of the Institution of Engineers                                            |
| Architectural design or<br>construction defects                      | An architect appointed by the president for the time<br>being of the Royal Australian Institute of Architects,<br>Qld Chapter           |
| Insurance                                                            | An expert in insurance appointed by the president for<br>the time being of the Insurance Institute of Qld                               |
| Delays in reaching<br>Practical Completion –<br>cost related matters | A quantity surveyor appointed by the president for<br>the time being of the Australian Institute of Quantity<br>Surveyors, Qld Division |
| Delays in reaching<br>Practical Completion –<br>time related matters | An expert in programming appointed by the president<br>for the time being of the Institution of Engineers                               |
| Any other case                                                       | A person appointed by the president for the time<br>being of the Qld Law Society Inc                                                    |

In so nominating a person, the president of the relevant body will endeavour to nominate a person with expertise and experience in the area of the dispute.

(c) References to the Expert

The expert appointed under this clause is referred to as the Expert.

### 28.7 Reference to Expert

If at the end of the 7th day after the appointment of the Expert the dispute remains unresolved and the Disputant wishes to pursue the resolution of the dispute, the Disputant must as soon as reasonably practicable:

- deliver a copy of the Notice to the Expert accompanied by a list of any matters now conceded together with all arguments that the Disputant wishes to advance in support of its submission (collectively the **Reference**); and
- (ii) copy the Reference to the Respondent.
- (b) Respondent's Submission

Before the end of the 7th day after receiving the Reference, the Respondent may submit to the Expert a written submission setting out its position in relation to the Reference and all of its arguments in support of its position (the **Respondent's Submission**).

At the same time, the Respondent must copy to the Disputant the Respondent's Submission.

<sup>(</sup>a) Reference of dispute

#### (c) Disputant's response

If the Disputant wishes to respond to the Respondent's Submission, it must deliver to the Respondent and the Expert its written response to the Respondent's Submission before the end of the 7th day after receiving the Respondent's Submission (the **Disputant's Response**).

### 28.8 Powers of the expert

(a) Status of report

The Expert shall act as an expert and not as an arbitrator.

(b) Matters considered by expert

The Expert is not limited to consideration of the submissions received from the Parties in relation to the matters in dispute and may inform himself upon those matters in such other ways as the Expert may think appropriate.

(c) Expert's powers

The Expert has the power to:

- proceed to the resolution of the dispute in the manner and subject to any rules the Expert may agree with the Parties and, failing agreement, as the Expert may in the Expert's reasonable discretion determine in any particular case;
- (ii) engage and consult advisers (both legal and technical) as the expert may think appropriate.
- (d) Expert procedure

The Expert:

- (i) is not bound by any rules of evidence or natural justice;
- (ii) may, but is not bound to receive oral submissions from the Parties;
- (iii) may, but is not obliged to receive submissions from any legal or other advisers of either Party; and
- (iv) is not obliged to provide reasons for the Expert's decision.
- (e) Expert's decision

As soon as practicable after receiving the Reference and where applicable the Respondent's Submission and the Disputant's Response, the Expert must inform the Parties of the Expert's decision in writing.

(f) Expert's costs

The Expert must make a determination (which will be binding) as to who is to pay the Expert's costs (including the fees of any consultants the Expert may engage and the Expert's disbursements) in which the Expert may take into account the merits of each Party's case and the conduct of the Parties in terms of meeting deadlines and providing information.

#### 28.9 Certain decisions binding

Once the Expert makes a decision, either Party, if not satisfied with that decision, may before the end of the 14th day after receiving the Expert's decision give a notice to the other Party stating

that it will not abide by the decision, in which case either Party may then proceed to institute proceedings to resolve the dispute in any court of competent jurisdiction.

If neither Party gives a notice under this clause, the Expert's decision will then be final and binding on the Parties in the absence of fraud or manifest error.

### 28.10 Continued performance of obligations

Notwithstanding the existence of a dispute, each of the Parties must continue to perform its obligations under the Agreement, save for the payment of any money which is the subject of the dispute.

### 28.11 Matters precedent to litigation

Each Party expressly agrees not to commence any action in any court in relation to a dispute (other than where a Party seeks urgent injunctive or declaratory relief) unless and until it has complied with all of the provisions of this clause 28.

# 29. Confidentiality and Intellectual Property

# 29.1 Confidential information

Confidential information of a Party (Disclosing Party) means all information:

- (a) treated by the Disclosing Party as confidential;
- (b) disclosed by the Disclosing Party to the other Party or of which the other Party becomes aware, whether before or after the date of this Agreement; and
- (c) in the case of the State includes the Information;

except information:

- (d) the other Party creates (whether alone or jointly with any third person) independently of the Disclosing Party; or
- (e) that is public knowledge (otherwise then as a result of a breach of confidentiality by the other Party or any of its permitted disclosees).

### 29.2 Confidentiality obligation

Each Party (Recipient):

- may use confidential information of a Disclosing Party only for the purposes of this Agreement;
- (b) must keep confidential all confidential information of each Disclosing Party except:
  - (i) for disclosures permitted under clause 29.3; and
  - to the extent (if any) the Recipient is required by law (including the rules of any Stock Exchange) to disclose any confidential information.

### 29.3 Permitted disclosures

A Recipient may disclose confidential information of a Disclosing Party to:

- (a) officers or employees of the Recipient who:
  - have a need to know for the purposes of this Agreement (and only to the extent that each has a need to know); and

- before disclosure have been directed by the Recipient to keep confidential all confidential information of the Disclosing Party;
- (b) any legal, accounting, financial or other advisers or consultants to the Recipient; or
- (c) in the case of the State, Portfolio Ministers and Members of the Cabinet (including their advisors).

### 29.4 Publicity

DEVELOPER may not make press or other public announcements or releases relating to this Agreement and the transactions the subject of this Agreement without the approval of the State as to whether it should be released and the form, content and manner of the announcement or release unless that announcement or release is required to be made by law or to comply with the requirements of the Australian Stock Exchange (in which latter case, DEVELOPER will use reasonable endeavours to give the State prior notice of the release or announcement and must give the State a copy of it).

#### 29.5 Limited Warranty and Release

The State confirms and DEVELOPER acknowledges that while the State has used reasonable endeavours to collate all information in its possession relating to the Tennyson Site which is relevant and material to a developer of that site, the decommissioning of the power station on that site, the disaggregation of the State's power industry and the fact that the State is not a developer of land means that the Information may not be complete.

Accordingly, save and to the extent that the State has knowingly and deliberately concealed or withheld or distorted information, DEVELOPER releases the State and the respective authors of the Information from any liability they (or any of them) may otherwise have had in relation to the Information and its disclosure and warrants that DEVELOPER has not relied upon the Information (or the Information being complete and/or accurate) in entering into this Agreement.

#### 29.6 Intellectual Property

- (a) DEVELOPER acknowledges that the State remains the owner of Background Intellectual Property developed by the State, and that nothing in this agreement prevents, limits or restricts the State's subsequent use or exploitation of that Background Intellectual Property.
- (b) The State acknowledges that, except as expressly provided in this clause 29.6,
  DEVELOPER remains the owner of Background Intellectual Property developed by
  DEVELOPER, and that nothing in this agreement prevents, limits or restricts
  DEVELOPER'S subsequent use or exploitation of that Background Intellectual Property.
- (c) DEVELOPER grants to the State an irrevocable, unlimited licence to use any of the DEVELOPER'S Background Intellectual Property that may be provided for or in connection with the planning, construction, operation, refurbishment or expansion of the State Tennis Centre and Transport and Access Works.
- (d) Title to, copyright in and other intellectual property rights in any documents, plans, specifications, designs, drawings, sketches, reports and materials produced by DEVELOPER for or in connection with the planning, construction, operation, refurbishment or expansion of the State Tennis Centre or any access routes to the State Tennis Centre vests in the State on creation.
#### 29.7 Intellectual property rights granted to the State

Any Intellectual Property registered by DEVELOPER in the State Tennis Centre will be registered in the name and on behalf of the State.

DEVELOPER:

- in relation to documents in which DEVELOPER holds copyright or other Intellectual Property rights, hereby grants; and
- (b) in relation to third party documents, shall obtain in favour of the State,

a non-exclusive irrevocable royalty free licence to use those documents which are used in or developed as part of the construction of the State Tennis Centre and Transport and Access Works and are necessary for the use, operation, maintenance, repair or alteration of the State Tennis Centre and Transport and Access Works.

DEVELOPER shall do everything necessary to perfect such vesting.

#### 30. Miscellaneous Provisions

#### 30.1 Entire agreement

This Agreement contains the entire understanding of the Parties with respect to its subject matter and reflects the prior agreements and commitments with respect to it. There are no other oral understandings, terms, or conditions and neither Party has relied upon any representation, express or implied, not contained in this Agreement.

#### 30.2 Amendments

No change, amendment, or modification of this Agreement shall be valid or binding upon the Parties unless such change, amendment, or modification is in writing and duly executed by both Parties.

#### 30.3 Notice

- (a) Any notice, demand, offer, or other written instrument required or permitted to be given pursuant to this Agreement shall be in writing signed by the Party giving such notice and shall be hand delivered or sent by overnight courier, messenger, or registered letter or fax, to the other Party at the address shown at the beginning of this Agreement.
- (b) A Party may from time to time amend its details for communications and notices by giving notice in writing to the other Party.
- (c) Notices must be given in English and in writing.
- (d) Notices given after 4.00pm local time on a Business Day are deemed to be given on the next day.
- (e) Notices given by post are deemed to be given on the second day after the notice is posted.
- (f) Notices given by facsimile transmission are deemed to be given when an acknowledgment of transmission report is received on the sending machine indicating that the facsimile transmission has been sent and received.
- (g) Notices or documents given by a Party's solicitor are taken to have been given with the authority of the Party.

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#### 30.4 No partnership, etc

Nothing stated or implied in this Agreement constitutes a Party as a partner, agent or legal representative of the other Party for any purpose or creates any partnership, agency or trust. Except as expressly provided in this Agreement, a Party has no authority to bind the other Party, or to act for, or to incur any obligation or assume any responsibility on behalf of that other Party.

#### 30.5 Costs

Each Party must pay its own costs (including legal costs) associated with the preparation, negotiation and execution of this Agreement and all documents contemplated by this Agreement. DEVELOPER shall pay all fees, duties and taxes (including, but not limited to, stamp duty, registration fees, the levy payable under the *Building and Construction Industry (Portable Long Service Leave) Act 1991 (Queensland)* and the fee payable under the *Workplace Health and Safety Regulation 1997 (Queensland)*) arising in relation to the Project (subject to clause 21.2 of this Agreement).

#### 30.6 Severability

The invalidity of one or more phrases, sentences or clauses contained in this Agreement shall not affect the validity of the remaining portions of this Agreement so long as the material purposes of this Agreement can be determined and given effect to.

#### 30.7 No Waiver

Any failure of any Party to enforce any of the provisions of this Agreement or to require compliance with any of its terms at any time during the term of this Agreement shall in no way affect the validity of this Agreement, or any part of it, and shall not be deemed a waiver of the right of such Party thereafter to enforce any and each such provisions.

#### 30.8 Applicable Law

This Agreement shall be governed by, construed and enforced in accordance with the laws of the State of Queensland without giving effect to principles relating to conflicts of laws.

#### 30.9 Successors and assigns

This Agreement shall be binding upon the Parties and their successors and permitted assigns.

#### 30.10 Exhibits

All schedules, exhibits or other attachments referenced in this Agreement shall be incorporated into this Agreement by such reference and shall be deemed to be an integral part of this Agreement.

#### 30.11 Further assurances

DEVELOPER and the State agree to provide such information, execute and deliver any instruments and documents and to take such other actions as may be necessary or reasonably requested by the other Party that are not inconsistent with the provisions of this Agreement and that do not involve the assumption of obligations other than those provided for in this Agreement, in order to give full effect to this Agreement and to carry out the intent of this Agreement.

#### 30.12 Counterparts

This Agreement may be executed by the Parties in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute but one and the same instrument.

# Schedule 1 - Particulars

C.

| Item                                                                                                       |                                                                                                                      |  |
|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|--|
| Critical Finish Date (clause 1.1)                                                                          | The day being 18 months<br>after the Commencement<br>Date                                                            |  |
| Notional Value of State Tennis Centre Works and<br>Transport and Access Works (clause 10.5)                |                                                                                                                      |  |
| Value of Bank Guarantees (clause 15.2)                                                                     | [Note: level will depend on<br>DEVELOPER's proposal,<br>see statement of principle in<br>clause 15.2]                |  |
| Insurance details; Public Liability; (clause 16.1(a))                                                      | \$20 million                                                                                                         |  |
| Extent of Professional Indemnity Insurance (clause 16.1(a)(iii))                                           | \$5 million                                                                                                          |  |
| Warranty Period for Tennis Courts (clause 17.2)                                                            | For Training Courts, 5 years<br>from the Handover Date.<br>For Cushion Acrylic Courts,<br>12 years from the Handover |  |
| Warranty Period for all other State Tennis Centre<br>Works and Transport and Access Works (clause<br>17.2) | 1 year from the Handover<br>Date                                                                                     |  |
| Value of Warranty Period Bank Guarantee (clause 17.9)                                                      | 2.5% of the Notional Value<br>of the State Tennis Centre<br>Works and the Transport and<br>Access Works              |  |
| Daily rate for liquidated damages (clause18.9)                                                             | \$3,000                                                                                                              |  |

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# Schedule 2 - State Tennis Centre Project Brief

# Schedule 3 - Plan of Land Configuration, including Easements and Minimum Terms and Conditions of Easements

## **Energex and Powerlink**

## Minimum Terms and Conditions of Easements

C.

**Title Reference** 

#### DEFINITIONS

#### 1. In this Easement:

- 1.1 'Acts' means the Electricity Act 1994 and Government Owned Corporations Act 1993 and any amendments to them or either of them or any Acts superseding those Acts.
- 1.2 'Date of this Easement' means the execution date of the Easement by the Grantor.
- 1.3 'Easement' means the rights granted by the Grantor to, and the obligations imposed on, the Entity with respect to the Easement Land including but not limited to the terms and conditions contained in this Schedule.
- 1.4 'Easement Land' means that portion of the Grantor's land over which this Easement is granted.
- 1.5 'Electricity Works ' means such works, conduits, apparatus, structures and things as the Entity may in its absolute discretion consider appropriate as a means of conveying or transmitting electricity, telecommunications and other electromagnetic energy in all its forms underground, including conductors, cables, fibre-optics, supports, cable markers and other associated or appurtenant works. The expression includes the Electricity Works existing under the Easement Land at the Date of this Easement or constructed on or under it after that date, and where the context permits it includes a reference to any part of the Electricity Works.
- 1.6 'Entity' means the Grantee, together with its successors and assigns and others authorised by it. Where the context permits, the term includes the servants, agents, employees, workmen, linesmen, contractors of the Entity and other persons authorised by the Entity to use or enter upon the Easement Land.
- 1.7 'Owner' means the Grantor together with their successors, successors in title and assigns. Where the term appears in Clauses 3, 5, 6 and 7 it includes the servants, agents, employees, workmen and contractors of the Owner and other persons authorised by the Owner to use or enter upon the Easement Land.

#### ENTITY'S RIGHTS

- 2. The Owner grants this Easement in perpetuity to permit the Entity the right to:
  - 2.1 convey and transmit electricity, telecommunications and other electromagnetic energy in all its forms from under and through (but except in the case of cable markers, not on) the Easement Land by Electricity Works;
  - 2.2 construct Electricity Works, under or through (but except in the case of cable markers not on) the Easement Land;
  - 2.3 inspect, maintain, repair or replace the Electricity Works;
  - 2.4 subject to Clause 8, clear the Easement Land of undergrowth, vegetation or any obstruction in the manner and by the means the Entity considers appropriate;
  - 2.5 construct and maintain on the Easement Land such tracks and roads as the Entity considers necessary and pass and repass over them at any time of the day or night; and
  - 2.6 enter upon and traverse the Easement Land
    - 2.6.1 with vehicles, plant and equipment, if necessary, to exercise its rights under this Easement at any time of the day or night; or
    - 2.6.2 for the purposes of preventing or rectifying any infringement by the Owner of the Entity's rights under this Easement.

and in granting these rights the Owner acknowledges that the Entity may in connection with its use and enjoyment of this Easement, exercise such of its rights, powers, discretion and functions under the Acts,

#### **Title Reference**

or any other Act or at law as it sees fit. For the purposes of clarification, the Entity is not permitted to construct above ground Electricity Works except cable markers on the Easement Land.

#### ENTITY'S OBLIGATIONS TO THE OWNER

- 3. The Entity will, in exercising its rights pursuant to this Easement:
  - 3.1 cause as little inconvenience to the Owner as possible;
  - 3.2 act reasonably; and
  - 3.3 maintain the surface on the Easement Land to and from the switchyard/substation to a standard the Entity considers necessary.

#### ENTITY TO COMPLY WITH SAFETY LAWS

- 4.1 The Entity will comply with all laws regarding the use of this Easement and the safety of persons upon the Easement Land;
  - The Entity will not be liable for:

4.2.1 the negligent acts or omissions of the Owner; or

4.2.2 the acts or omissions of the Owner that are a breach of this Easement or of the law;

and the Owner indemnifies the Entity against any loss damage or cost made against or incurred by the Entity to the extent the same resulted from or arose out of the negligent acts or omissions, breach of this Easement or of the law by the Owner or its servants, agents, employees, workmen, contractors or authorised representatives.

#### THINGS THE OWNER MUST NOT DO

- 5. The Owner must not, or consent to allow another party to, after the Date of this Easement:
  - 5.1 interfere with, damage or place at risk the Electricity Works, any other structures or works or plant, equipment, tools or material of the Entity under or on the Easement Land; or
  - 5.2 interfere with or obstruct the Entity in the exercise or enjoyment of its rights and powers under this Easement.

#### THINGS THE OWNER MAY ONLY DO IF ENTITY CONSENTS

- 6. The Owner must not, or consent to allow another party to, after the Date of this Easement, without first obtaining the written consent of the Entity:
  - 6.1 erect or place any buildings or structures or make any additions or alterations to any buildings or structures on the Easement Land;
  - 6.2 erect any fence on the Easement Land;
  - 6.3 place fill or other substance or carry out any works or do anything whatsoever on the Easement Land which would affect the Electricity Works;
  - 6.4 cause or allow, except in the case of force majeure, the inundation of those parts of the Easement Land where any Electricity Works are located or are proposed to be located;
  - 6.5 lay or permit the laying of underground services or any metal conduit or pipe under or across the Easement Land;
  - 6.6 do any act or thing which jeopardises the Electricity Works, including (without limitation) excavation, stockpiling or removal of any soil, sand or gravel;
  - 6.7 plant upon the Easement Land trees which may in any way interfere with the Electricity Works or road surface that may exist from time to time; or

#### **Title Reference**

6.8 reside in or permit anyone to reside in or occupy any building, structure, caravan, or other accommodation (including temporary accommodation) which may be located on the Easement Land;

and the Entity will not unreasonably withhold its consent, but in granting any consent may impose reasonable conditions.

#### OWNER MAY USE EASEMENT

7. The Owner may use the Easement Land for any lawful purpose not inconsistent with the terms of this Easement and the rights granted to the Entity.

#### **REMOVAL OF TREES**

8. The Entity shall not cut or remove timber or trees from the said land without the prior written consent of the Owner and obtaining all necessary permits. Such consent or permits will not be required under this clause if there is an actual or potential danger to persons or property or there is any interference or jeopardy to the Electricity Works.

#### **REMOVAL OF ASSETS UPON TERMINATION OF EASEMENT**

9. Upon termination of the Easement, the Entity will, at its own cost and expense, remove all of the Entity's above ground assets from the Easement Land and shall remove any other assets of the Entity below the ground that may cause contamination or environmental harm to the Easement Land as defined by the *Environmental Protection Act 1994* or similar legislation.

#### INDEMNITY

10. The Entity indemnifies the Owner of the Easement Land against all actions, suits, proceedings, claims demands, costs, losses, damages and expenses arising out of or in respect of any act or omission of the Entity in the use or attempted use of the Easement Land by the Entity, except where such actions, suits, proceedings, claims, demands, costs, losses, damages or expenses arise as a result of any negligent act or omission, an illegal act or a breach of a condition of the Easement by the Owner. The Entity hereby releases and discharges the Owner of the Easement Land from any such actions, suits, proceedings, claims, demands, costs, losses, damages and expenses which but for the provisions hereof might be brought against or made upon the Owner of the Easement Land.

#### **PUBLIC RISK**

11. The Entity will effect and keep current a public risk liability insurance policy in respect of the Easement and the use by the Entity of the Easement Land for an amount which the Entity considers appropriate to its public liability risk but in any event, for an amount not less than TEN MILLION DOLLARS (\$10,000,000.00). The Entity will provide the Owner with a certificate of currency for the public liability policy as required by the Owner.

#### POWER OF ATTORNEY

- 12. The Entity irrevocably appoints The State of Queensland whilst it remains the Owner of the Easement Land, the true and lawful attorney of the Entity enabling the attorney to do all such things as the attorney may consider necessary or desirable to effect a surrender of this Easement upon the default by the Entity of any condition, covenant or clause of this Easement provided however that The State of Queensland may only exercise its right to surrender the Easement under this clause if:
  - 12.1 the Entity has breached a condition, covenant or clause of this Easement; and
  - 12.2 the State of Queensland has given written notice of the breach to the Entity; and
  - 12.3 the State of Queensland has allowed the Entity ninety (90) days from the date of receipt of the notice to remedy the breach; and

FORM 20 Version 1 Land Title Act 1994 and Land Act 1994

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#### SCHEDULE

#### **Title Reference**

#### 12.4 the Entity has not remedied the breach by the expiration of that ninety (90) days.

#### ENTITY TO PAY COSTS

- 13. In addition to the consideration payable under this Easement, the Entity will pay:
  - 13.1 the costs of the preparation, execution and registration of this Easement on the relevant property title;
  - 13.2 the Owner's reasonable legal and (if applicable) valuation costs;
  - 13.3 the cost of obtaining any consent or approval to this Easement or survey plan from any mortgagee or other party having an interest in the land affected by this Easement or by any authority having jurisdiction in respect of the Easement Land or survey; and
  - 13.4 the stamp duty and registration fees payable with respect to this Easement.

## **Queensland Rail**

## **Minimum Terms and Conditions of Easements**

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#### Title Reference

#### 1. DEFINITIONS

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In this Easement:

- 1.1 'Acts' means the *Government Owned Corporations Act 1993* and any amendments to them or either of them or any Acts superseding those Acts.
- 1.2 **'Date of this Easement'** means the execution date of the Easement by the Grantor.
- 1.3 **'Easement'** means the rights granted by the Grantor to, and the obligations imposed on, the Entity with respect to the Easement Land including but not limited to the terms and conditions contained in this Schedule.
- 1.4 'Easement Land' means that portion of the Grantor's land over which this Easement is granted.

**'Entity'** means the Grantee, together with its successors and assignees and others authorised by it. Where the context permits, the term includes the servants, agents, employees, workmen, linesmen, contractors of the Entity and other persons authorised by the Entity to use or enter upon the Easement Land.

1.6 **'Owner'** means the Grantor together with their successors, successors in title and assignees. Where the term appears in Clauses 3, 4, 5, 6 and 7 it includes the servants, agents, employees, workmen and contractors of the Owner and other persons authorised by the Owner to use or enter upon the Easement Land.

#### 2. ENTITY'S RIGHTS

The Owner grants this Easement to permit the Entity the right to:

- 2.1 enter upon and traverse the Easement Land, with vehicles, plant and equipment, if necessary, to exercise its rights under this Easement,
- 2.2 subject to clause 8, clear the Easement Land of undergrowth, vegetation or any obstruction in the manner and by the means the Entity considers appropriate;
- 2.3 construct and maintain on the Easement Land such roads formed and/or unformed as the Entity considers necessary (but only for the purposes of access);
- 2.4 enter upon and traverse the Easement Land for the purposes of preventing or rectifying any infringement by the Owner of the Entity's rights under this Easement;

and in granting these rights the Owner acknowledges that the Entity may in connection with its use and enjoyment of this Easement, exercise such of its rights, powers, discretion and functions under the Acts, or any other Act or at law as required.

#### 3. ENTITY'S OBLIGATIONS TO THE OWNER

The Entity will, in exercising its rights pursuant to this Easement:

- 3.1 cause as little inconvenience to the Owner as possible;
- 3.2 act reasonably;
- 3.3 maintain the formed and/or unformed roads on the Easement Land at its cost;
- 3.4 maintain the Easement Land in a clean, tidy and safe manner;
- 3.5 reinstate the Easement Land to its original state if damaged or altered due to an act done or permitted or suffered by the Entity if so required by the Owner;
- 3.6 not object to any application for development approval by the Owner;
- 3.7 allow the Owner to construct gates, roads, bridges, culverts and other ancillary equipment or fittings on or across the access points or other structures on the Easement Land to facilitate development by the Owner provided that the Entity is supplied any relevant keys or other means of access for the use of the gates or other access points;

#### **Title Reference**

- 3.8 allow the Owner to temporarily site a caravan or demountable office but only for the purposes of co-ordinating site management or projects or works; and
- 3.9 not store vehicles, plant, equipment or electrical apparatus on the Easement Land.

#### 4. ENTITY TO COMPLY WITH SAFETY LAWS

The Entity will comply with all laws regarding the use of this Easement and the safety of persons upon the Easement Land and the Owner is not released from liability for any loss damage or cost made against or incurred by the Entity as a result of or arising out of the Owner's negligent acts or omissions, breach of this Easement or of the law.

#### 5. THINGS THE OWNER MUST NOT DO

The Owner must not interfere with or obstruct the Entity in the exercise or enjoyment of its rights and powers under this Easement.

#### 6. THINGS THE OWNER MAY ONLY DO IF ENTITY CONSENTS

The Owner must not, or consent to allow another party to, after the Date of this Easement, without first obtaining the written consent of the Entity:

- 6.1 erect or place any buildings or structures or make any additions or alterations to any buildings or structures on the Easement Land;
- 6.2 reside in or permit anyone to reside in or occupy any building, structure, caravan, or other accommodation (including temporary accommodation) which may be located on the Easement Land;

and the Entity will not unreasonably withhold its consent.

#### 7. OWNER MAY USE EASEMENT

The Owner may use the Easement Land for any lawful purpose not inconsistent with the terms of this Easement and the rights granted to the Entity. It is acknowledged that this Easement is not exclusive and the Owner may grant Easements over the Easement Land to other people, entities or groups.

#### o. REMOVAL OF TREES

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The Entity shall not cut or remove timber or trees from the said land without the prior written consent of the Owner and obtaining all necessary permits.

#### 9. REMOVAL OF ASSETS UPON TERMINATION OF EASEMENT

Upon termination of the Easement, the Entity will, at its own cost and expense, remove all of the Entity's above and below ground assets (if any) from the Easement Land.

#### 10. INDEMNITY

The Entity indemnifies the Owner of the Easement Land against all actions, suits, proceedings, claims demands, costs, losses, damages and expenses arising out of or in respect of any act or omission of the Entity in the use or attempted use of the Easement Land by the Entity, except where such actions, suits, proceedings, claims, demands, costs, losses, damages or expenses arise as a result of any negligent act or omission, an illegal act or a breach of a condition of the easement by the Owner. The Entity hereby releases and discharges the Owner of the Easement Land from any such actions, suits, proceedings, claims, demands, costs, losses, damages and expenses which but for the provisions hereof might be brought against or made upon the Owner of the Easement Land, except where such actions, suits, proceedings, claims, demands, costs, losses, damages or expenses arise as a result of any negligent act or othe Easement Land, except where such actions, suits, proceedings, claims, demands, costs, losses, damages or expenses arise as a result of any negligent act or othe Easement Land, except where such actions, suits, proceedings, claims, demands, costs, losses, damages or expenses arise as a result of any negligent act or othe Easement Land, except where such actions, suits, proceedings, claims, demands, costs, losses, damages or expenses arise as a result of any negligent act or othe Easement Land, except where such actions, suits, proceedings, claims, demands, costs, losses, damages or expenses arise as a result of any negligent act or other easement by the Owner.

#### **Title Reference**

#### 11. PUBLIC RISK

The Entity will effect and keep current a public risk liability insurance policy in respect of the Easement and the use by the Entity of the Easement Land for an amount which the Entity considers appropriate to its public liability risk but in any event, for an amount not less than TWENTY MILLION DOLLARS (\$20,000,000.00). The Entity will provide the Owner with a certificate of currency for the public liability policy as required by the Owner.

#### 12. POWER OF ATTORNEY

The Entity irrevocably appoints The State of Queensland whilst it remains the Owner of the Easement Land the true and lawful attorney of the Entity enabling the attorney to do all such things as the attorney may consider necessary or desirable to effect a surrender of this Easement upon the default by the Entity of any condition, covenant or clause of this Easement provided however that The State of Queensland may only exercise its right to surrender the Easement under this clause if:

12.1 the Entity has breached a condition, covenant or clause of this Easement; and

2 the State of Queensland has given written notice of the breach to the Entity; and

- 12.3 the State of Queensland has allowed the Entity ninety (90) days from the date of receipt of the notice to remedy the breach; and
- 12.4 the Entity has not remedied the breach by the expiration of that ninety (90) days.

#### 13. ENTITY TO PAY COSTS

In addition to the consideration payable under this Easement, the Entity will pay:

- 13.1 the costs of the preparation, execution and registration of this Easement on the relevant property title;
- 13.2 the Owner's reasonable legal and (if applicable) valuation costs;
- 13.3 the cost of obtaining any consent or approval to this Easement or survey plan from any mortgagee or other party having an interest in the land affected by this Easement or by any authority having jurisdiction in respect of the Easement Land or survey; and
- 13.4 the stamp duty and registration fees payable with respect to this Easement.

Schedule 4 - Tenure Arrangements and Tenure Program

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# **TENURE ARRANGEMENTS AND TENURE PROGRAM**

| Phase          | Phases/Events                                                                                                                                       | Responsibility      | Estimated Timing (Note 1)                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------------------------------------------|
| Phase 1 -      | - Satisfaction of Development Agreement Conditions Precedent                                                                                        |                     |                                                                                                                 |
| <del>,</del> , | DEVELOPER makes application for Council assessment of application for development approval.                                                         | DEVELOPER           | Application made following completion of DEVELOPER's investigations and preparation of documentation and plans. |
| 1.2            | Council assesses and approves application for development approval.                                                                                 | Council             | See Approvals Program.                                                                                          |
| 1.3            | Following satisfaction of Development Agreement (DA) conditions precedent on terms acceptable to the State and DEVELOPER, DA becomes unconditional. | DEVELOPER and State | See Approval Program.                                                                                           |
| Phase 2 -      | - State obtains title to the State Tennis Centre Site and Associated                                                                                | ' Development Site  |                                                                                                                 |
| 2.1            | State acquires the State Tennis Centre Site and Associated<br>Development Site from Enertrade.                                                      | State               | After Commencement Date.                                                                                        |
| 2.2            | Enertrade surrenders the road licence to Department of Natural Resources, Mines and Energy (DNRM&E).                                                | State               | Within 20 working days after Commencement Date.                                                                 |
| 2.3            | Enertrade surrenders the three freehold lots to the State as unallocated State land (USL).                                                          | State               | Within 20 working days after Commencement Date.                                                                 |
| 2.4            | Enertrade surrenders the Deed of Grant in Trust (DOGIT), exclusive of the substation/switchyard site, to the State as USL.                          | State               | Within 20 working days after Commencement Date.                                                                 |
| 2.5            | DNRM&E permanently closes the road (by Gazettal).                                                                                                   | State               | Will require consultation with Council, likely to be 3 months after Commencement Date.                          |

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| Phase     | Phases/Events                                                                                                                                                                                                         | Responsibility            | Estimated Timing (Note 1)                                                                                                                        |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.6       | The six parcels of site's land are now USL.                                                                                                                                                                           | State                     | Five to six week process from Commencement Date.                                                                                                 |
| 2.7       | DNRM&E arranges for land required by Queensland Rail (QR) to be included in adjoining rail corridor lease.                                                                                                            | State                     | Within 2 to 3 months after completion of actions 2.2 to 2.5 (inclusive).                                                                         |
| 2.8       | <ul><li>DNRM&amp;E subdivides the site and grants in freehold to State:</li><li>one lot for State Tennis Centre (STC); and</li><li>one lot for the associated development.</li></ul>                                  | State                     | Within 6 weeks after completion of actions 2.2 to 2.5 (inclusive) and provided a plan of survey of both lots has been provided.                  |
| 2.9       | State to grant Powerlink, Energex and QR easements and<br>register the easements for these entities immediately after<br>title to the State Tennis Centre Site and Associated<br>Development Site is issued to State. | State                     |                                                                                                                                                  |
| Phase 3 - | DEVELOPER given site access for development purposes (Note                                                                                                                                                            | 2)                        |                                                                                                                                                  |
| 3.1       | State provides DEVELOPER development lease for the State<br>Tennis Centre Site and the Associated Development Site<br>(subject to the easement conditions).                                                           | State                     | Within 14 days of Commencement Date.                                                                                                             |
| 3.2       | The State issues to DEVELOPER a licence to occupy the<br>Animal Research Institute Access Corridors for the purpose<br>of constructing the Transport and Access Works.                                                | DPIF                      | Within 14 days of Commencement Date.                                                                                                             |
| Phase 4 - | Creation of titles                                                                                                                                                                                                    |                           |                                                                                                                                                  |
|           | DEVELOPER prepares and registers on behalf of the State<br>survey plans and subdivision documents in accordance with<br>the draft subdivision plans and documents contained in the<br>DA.                             | DEVELOPER and State       | Following Practical Completion of State Tennis<br>Centre and Transport and Access Works, and<br>DEVELOPER satisfying the requirements of the DA. |
| 1.2       | DEVELOPER prepares on behalf of the State survey plans<br>for the Transport and Access Works in accordance with the<br>draft subdivision plans and documents contained in the DA.                                     | DEVELOPER, DPIF and State |                                                                                                                                                  |
|           |                                                                                                                                                                                                                       |                           |                                                                                                                                                  |

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| Phase     | Phases/Events                                                                                                                                                                                                                                                            | Responsibility      | Estimated Timing (Note 1)                                                                                                                                                                                                                       |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Phase 5 - | . Settlement                                                                                                                                                                                                                                                             |                     |                                                                                                                                                                                                                                                 |
| 5.1       | State transfers title for the Associated Development Lot to DEVELOPER in exchange for surrender of the development lease and licence for the Animal Research Institute Access Corridors and the completion of other requirements of the State, as required under the DA. | State and DEVELOPER | On Settlement.                                                                                                                                                                                                                                  |
| 5.2       | DPIF to surrender the portion of its reserve required for the Transport and Access Works for the purpose of the road's gazettal and declaration as a public road.                                                                                                        | DPIF and DNRM&E     | <ul> <li>Within 2 months after Commencement Date and subject to DNRM&amp;E being in receipt of:</li> <li>a plan of survey of road and balance reserve area; and</li> <li>written concurrence of Council to the road being dedicated.</li> </ul> |
| 5.3       | DNRM&E to gazette road reserve within the Animal Research Institute Access Corridors.                                                                                                                                                                                    | DNRM&E              | Within 2 to 3 months after Commencement Date.                                                                                                                                                                                                   |

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Note 1: While the estimates of timing in this Schedule are provided in good faith, they are estimates only and are non binding, the actual time will be dependant on a variety of factors - The provisions of the clauses in the Development Agreement govern the parties obligations with respect to time.

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Note 2: Certain aspects of phases 2 and 3 will occur in parallel.

# Schedule 5 - Development Lease

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FORM 7 Version 4

Land Title Act 1994 and Land Act 1994

Dealing No.

#### DEVELOPMENT LEASE (FREEHOLD) LEASE/SUB LEASE

Stamp Duty Imprint

Lodger Name, address & phone number Lodger 1. Lessor MINTER ELLISON Code The State of Queensland Waterfront Place 1 Eagle Street BRISBANE 021 (07) 3119 6000 CC:404386837 2. **Description of Lot** County Parish **Title Reference** Lot 1 on SP# # # Stanley 3. Lessee Given names Surname/Company name and number (include tenancy if more than one) Interest being leased Fee simple Description of premises being leased 5. The whole of the Land 7. 6. Term of lease Rental/Consideration Commencement date: # \$1.00 per year \*Expiry date: \*\*Options on page .... Nil \*not required for leases in a retirement village \*\*insert nil if no option 8. Grant/Execution The Lessor leases the premises described in item 5 to the Lessee for the term stated in item 6 subject to the covenants and conditions contained in the attached schedule Witnessing Officer **Execution Date** Lessor's Signature 1 signature 1 full name qualification as per Schedule 1 of Land Title Act 1994 (eg Legal Practitioner, JP, C.Dec) 9. Acceptance The Lessee accepts this lease and acknowledges the amount payable or other considerations for this lease. Witnessing Officer **Execution Date** Lessee's Signature signature 1 full name qualification as per Schedule 1 of Land Title Act 1994 (eg Legal Practitioner, JP, C.Dec)

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#### SCHEDULE

#### **Title Reference**

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#### SCHEDULE

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#### **Title Reference**

# Lease terms

The Lessor and the Lessee agree as follows.

#### 1. Definitions and interpretation

#### 1.1 Definitions

In this lease:

Approvals has the meaning given to in the Development Agreement.

Associated Development has the meaning given to it in the Development Agreement.

Associated Development Lot has the meaning given to it in the Development Agreement.

Authority has the meaning given to it in the Development Agreement.

Business Days means a day that is not a Saturday, Sunday or Public Holiday in Brisbane.

Commencement Date means the date shown as Commencement Date in item 6 of the Form 7.

Critical Finish Date has the meaning given to in the Development Agreement.

**Development Agreement** means the agreement so called dated [ ], between the State, the Lessee, [*insert other parties*] relating to, amongst other things:

- (a) the development of the Land as a State Tennis Centre and Associated Development; and
- (b) the transfer of the Associated Development Lot to the Lessee or its nominee when certain conditions have been fulfilled.

Event means any event referred to in clause 8.1 of this lease.

Expiry Date means the date shown as Expiry Date in item 6 of the Form 7.

Land means the land described in item 2 of the Form 7, which is leased to the Lessee under this lease.

Lessee means the party shown as lessee in item 3 of the Form 7.

**Lessee's** Associates means each of the Lessee's employees, officers, agents, contractors, consultants, invitees, subtenants and licensees.

**Outgoings** means the total of amounts paid or payable by the Lessor in connection with the ownership of the Land but limited to:

- (a) rates, taxes (except land tax), levies and charges imposed by an Authority;
- (b) charges for Services which are not separately metered to the Lessee;
- (c) insurance premiums (but only to the extent the State takes out any of the insurances referred to in clause 16 of the Development Agreement as a consequence of the Lessee failing to do so);
- (d) complying with the requirements of any Authority in connection with Services requested by the Lessee and providing, operating, maintaining and repairing such Services; and

#### Title Reference

(e) payments made under any building management statement applying to the Land.

For the avoidance of doubt, Outgoings do not include:

- (i) internal management and administration costs of the State;
- (ii) the acquisition or replacement costs of any capital item; or
- (iii) the costs of structural works.

Payment Date means the Commencement Date and each anniversary of the Commencement Date.

Rent means the amount per annum stated in item 7 of the Form 7.

Service means the services provided by authorities, the State or others to the Land including, but not limited to, electricity, gas, water, sewerage and communications.

Settlement Date has the meaning given to it in the Development Agreement.

**State** means the State of Queensland represented by the Department of Local Government, Planning, Sport and Recreation being the Lessor named in item 1 of the Form 7.

STC has the meaning given to it in the Development Agreement.

Term means the period beginning on the Commencement Date and ending on the Expiry Date.

#### 1.2 Interpretation

In this lease:

- (a) the singular includes the plural and the other way around;
- (b) a reference to:
  - (i) this lease includes its schedules and annexures;
  - (ii) an item is to an item in the reference schedule to this lease;
  - (iii) Form 7 is to the Queensland Land Registry lease Form 7 which is part of this lease;
  - (iv) this lease or another document includes a reference to it as novated, altered or replaced;
  - (v) 'A\$', '\$A', 'dollar' or '\$' is to Australian currency;
  - (vi) a specific time for complying with an obligation is to that time in the place where that obligation is to be complied with;
  - (vii) anything is to the whole and each part of it;
  - (viii) a group of persons is to all of them or any two or more of them jointly and each of them severally;
  - (ix) a person includes the person's executors, administrators, successors and permitted assigns;
  - (x) legislation includes any amendment to it and any consolidation, re-enactments or replacements of it and any subordinate legislation made under it.
- (c) words importing natural persons include partnerships, bodies corporate, associations, governments and governmental and local authorities and agencies; and
- (d) a promise, representation or warranty:

#### Title Reference

- (i) in favour of two or more persons is in favour of all of them jointly and each of them severally; and
- (ii) made by two or more persons binds all of them jointly and each of them severally.

#### 2. Rent and other payments

#### 2.1 Lessee to pay Rent

The Lessee must pay the Rent in advance on each Payment Date during the Term if demanded.

#### 2.2 Outgoings

The Lessee must pay all Outgoings during the Term. The State must promptly provide to the Lessee a copy of each assessment notice for rates, levies and charges assessed on the Land by any Authority during the Term and the Lessee must pay on or before the due date for payment the amount stated in the relevant assessment notice. All other Outgoings must be paid within 30 days of invoice by the State.

#### 2.3 Costs, charges and expenses

The Lessee must pay promptly:

- (a) on demand, the State's proper costs, charges and expenses (including legal costs, charges and expenses on a full indemnity basis) in connection with:
  - (i) exercising rights under this lease including rights to take action because of the Lessee's default; and
  - (ii) considering matters in connection with the Lessee's requests for consent or approval (except for a consent or approval under the Development Agreement that the Lessee reasonably requires from the State to perform its obligations under the Development Agreement);
- (b) all stamp duty and registration fees; and
- (c) the cost of any required survey or re-survey of the Land.

Each party must pay its own legal costs associated with the negotiation, preparation, execution, stamping and registration of this lease.

#### 2.4 Payment conditions

The Lessee must pay amounts payable by it under this lease:

- (a) without set-off, counterclaim, withholding or deduction;
- (b) without demand unless this lease says demand must be made;
- (c) to the State or as the State directs; and
- (d) by any method the State reasonably requires.

#### 2.5 Expiry or termination

The Lessee's obligations to pay amounts payable before this lease expires or is terminated are not affected by expiry or termination of this lease.

#### **Title Reference**

#### 3. Use

#### 3.1 Permitted use

- (a) The Lessee must only use the Land for the purposes contemplated by the Development Agreement, including but not limited to:
  - (i) site investigations;
  - (ii) the development of the STC;
  - (iii) the development of the Associated Development; and
  - (iv) purposes ancillary to (ii) and (iii), such as marketing and promotional activities,

and must not use the Land for any other purpose.

#### Insurance

The Lessee must during the Term effect and maintain the insurances referred to in clause 16 of the Development Agreement.

#### 4. Indemnities and releases

#### 4.1 Lessee's risk

The Lessee occupies the Land and enters and uses the Land at its risk.

#### 4.2 Indemnity

The indemnities that the Lessee is required to give under the Development Agreement do not come to an end when this lease expires or is terminated. It is not necessary for the State to incur expense or make a payment before enforcing an indemnity.

#### 4.3 Releases

The Lessee releases the State from and agrees that the State is not liable for liability, loss, penalties, payments, costs, charges and expenses directly or indirectly arising from or incurred in connection with:

- (a) damage to or loss of any property or injury to or the death of any person except to the extent it is caused or contributed to by the negligence or default of the State or its officers or employees; or
- (b) the State doing anything the State is required or permitted to do under this lease or the Development Agreement except to the extent it is caused or contributed to by the negligence or default of the State or its officers or employees.

#### 5. Lessee's rights and general obligations

#### 5.1 Quiet enjoyment

Subject to the State's rights and to the Lessee complying with the Lessee's obligations under this lease, the Lessee may use and occupy the Land without interruption by the State or any person claiming through the State.

#### Title Reference

#### 5.2 Dangerous materials and substances

The Lessee must not keep, store or permit to be kept or stored on the Land any materials of a dangerous, flammable or explosive nature unless all statutes, local laws and regulations applicable to the keeping and storage of such materials have been complied with in every respect.

#### 5.3 Entry to install services

The Lessee must, at all reasonable times and on reasonable notice, permit the State and other relevant Authorities having jurisdiction in that regard and their agents, with or without workmen and others, to enter the Land to erect or install electricity supply mains, drainage mains and pipework and other Services provided that the State or other relevant Authority may only exercise its rights under this clause if:

- (a) before undertaking such work the State or other relevant Authority has consulted with the Lessee about whether the installation of the Services or the presence of the Services once they are installed may materially adversely affect the STC or the Associated Development;
- (b) the installation of the Services is coordinated with the development of the STC and the Associated Development; and
- (c) the State or other relevant Authority and their respective agents comply with the Lessee's reasonable site access policies.

#### 5.4 Lessee's Associates

The Lessee must ensure that the Lessee's Associates comply with the Lessee's obligations under this lease, if appropriate.

#### 6. State's rights

#### 6.1 Right of entry

The State may enter the Land after giving the Lessee reasonable notice:

- to exercise the State's rights, or to comply with the State's obligations, under this lease or the Development Agreement or to comply with the State's obligations under any law or to satisfy the requirements of an Authority; or
- (b) to inspect the progress of the works on the Land and to satisfy itself that the Lessee is complying with the Lessee's obligations under this lease and the Development Agreement.

In exercising its right of entry under this clause 6.1, the State must comply with relevant workplace health and safety laws.

## 7. Assigning and subletting

- (a) The Lessee must not without the prior written consent of the State assign its interest in this lease, grant a sublease, or allow any person to occupy the Land except in accordance with the Development Agreement.
- (b) If the Development Agreement is novated to a third party then either party may, by written notice to the other, require this lease to be assigned to the third party and the parties shall do all things and sign all documents to effect the assignment.

#### **Title Reference**

#### 8. Default

#### 8.1 Termination for material default

- lf:
- (a) the Lessee does not comply with an obligation of the Lessee under this lease ('an Event'); and
- (b) in the State's reasonable opinion, the Event:
  - (i) has a material adverse effect on the Lessee's ability to perform its obligations under the Development Agreement or this lease; or
  - does not have a material adverse effect on the Lessee's ability to perform its obligations under the Development Agreement or this lease but:
    - (A) the same event has occurred on three or more occasions; and
    - (B) the State has given notices under clause 8.3; and
    - (C) the Lessee has not complied with each of the notices; and
- (c) the State serves a notice (Notice to Remedy) on the Lessee, stating the Event and requiring remedial action; and
- (d) within 10 Business Days of service of the Notice to Remedy (or such longer period as is reasonable in all the circumstances having regard to the nature of the Event and its effect), the Lessee does not comply with the Notice to Remedy by doing one of the following:
  - (i) remedying the Event;
  - (ii) diligently commencing to remedy the Event (and then continuing to remedy the Event within a reasonable period); or
  - (iii) where the Event cannot be remedied, taking action to ensure the Event does not recur and pay appropriate compensation,

then without prejudice to any other legal right or remedy it may have, the State may, on 5 Business Days notice, terminate this lease.

#### 8.2 Other termination rights

If the Development Agreement is terminated for any reason, then either party may terminate this lease by written notice to the other.

#### 8.3 Remedies for non material default

lf:

- (a) an Event occurs; and
- (b) in the State's reasonable opinion, the Event does not have a material adverse effect on the Lessee's ability to perform its obligations under the Development Agreement or this lease; and
- (c) the State serves notice (Minor Notice to Remedy) on the Lessee stating the nature of the Event and requiring remedial action; and
- (d) within 10 Business Days of service of the Minor Notice to Remedy, the Lessee does not comply with the Minor Notice to Remedy by doing one of the following:

#### Title Reference

- (i) remedying the Event;
- (ii) diligently commencing to remedy the Event (and then continuing to remedy the Event within a reasonable period); or
- (iii) where the Event cannot be remedied, taking action to ensure the Event does not recur and pay appropriate compensation,

then, the State may pursue all legal rights and remedies (other than termination of this lease) in respect of such Event, including a claim for damages.

#### 8.4 How this lease is terminated

If the State is entitled to terminate this lease then it may do so by re-entering the Land or by giving the Lessee a notice stating that this lease is terminated from the date stated in the notice.

#### Application of Development Agreement

Unless the context dictates otherwise, the provisions of the Development Agreement dealing with:

- (a) party representatives (clause 12);
- (b) resolution of disputes (clause 28); and
- (c) notices (clause 30);

shall apply equally to this lease.

#### 10. Governing law, jurisdiction and service

#### 10.1 Law

This lease is governed by the law applicable in Queensland.

#### 10.2 Jurisdiction

Each party irrevocably and unconditionally submits to the non-exclusive jurisdiction of the courts of Queensland.

#### 11. Other matters

#### 11.1 Severability

Part or all of any provision of this lease that is illegal or unenforceable may be severed from this lease and the rest of this lease continues in force unless the severance means that this lease no longer substantially gives effect to the parties' intentions under this lease immediately before severance.

#### 11.2 Waiver and variation

A waiver or variation of any provision of or a right under this lease must be in writing signed by the party entitled to the benefit of that provision or right.

#### 11.3 No waiver

It is not a waiver of a breach of this lease or of the State's rights under this lease if the State:

(a) does not exercise or partly exercises or delays exercising a right;

#### Title Reference

(b) before or after this lease is terminated, accepts money owing under this lease;

(c) gives a concession to the Lessee; or

(d) attempts to mitigate its loss.

#### 11.4 Prior breaches

Rights in connection with a breach of this lease are not affected by the expiry or termination of this lease.

#### 11.5 Counterparts

This lease may consist of a number of counterparts.

#### 11.6 Statutory provisions excluded

The covenants, powers and provisions implied in leases by the Property Law Act 1974 do not apply to this lease.

#### 7 Deed

This lease is executed as a deed.

#### 12. Goods and services tax

#### 12.1 Consideration is GST exclusive

Any consideration to be paid or provided for a supply made under or in connection with this lease, does not include an amount on account of GST.

#### 12.2 Gross up of consideration

Despite any other provision in this lease, if a party ('Supplier') makes a supply under or in connection with this lease on which GST is imposed:

- (a) the consideration payable or to be provided for that supply under this lease but for the application of this clause ('GST exclusive consideration') is increased by, and the recipient of the supply ('Recipient') must also pay to the Supplier, an amount equal to the GST payable by the Supplier on that supply; and
- (b) the amount by which the GST exclusive consideration is increased must be paid to the Supplier by the Recipient without set off, deduction or requirement for demand, at the same time as the GST exclusive consideration is payable or to be provided.

#### 12.3 Reimbursements

If a payment to a party under this lease is a reimbursement or indemnification, calculated by reference to a loss, cost or expense incurred by that party, then the payment will be reduced by the amount of any input tax credit to which that party is entitled for that loss, cost or expense.

That party is assumed to be entitled to a full input tax credit unless it proves, before the date on which the payment must be made, that its entitlement is otherwise.

#### 12.4 Tax Invoice and registration

Despite any other provision of this lease, the Lessee need not make a payment of any amount for GST until the State has given the Lessee a GST tax invoice for that payment stating the amount of GST paid or payable by the State in respect of the supply to which the GST tax invoice relates.

#### Title Reference

#### 12.5 Interpretation

Words or expressions used in this clause 12 that are defined in the A New Tax System (Goods and Services Tax) Act 1999 (Cth) have the same meaning in this clause.

## 13. Extension of Term

If the Expiry Date of this lease is a date before the Settlement Date, then the parties must execute a Form 13 Amendment to extend the term of this lease to a date which is 6 months after the anticipated Settlement Date.

# Schedule 6 - Warranty Deed (Tennis Courts)

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# Warranty Deed

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collectively

State of Queensland (State)

# Warranty Deed

| Deta | ails                                               | 1  |
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# Details

# Date

# Parties

| Name            | ##          |
|-----------------|-------------|
| ABN             |             |
| Short form name | #           |
| Role            | #           |
| Notice details  | #           |
|                 | Facsimile # |
|                 | Attention # |

| <b>##</b> # |
|-------------|
| #           |
| #           |
| #           |
| #           |
| Facsimile # |
| Attention # |
|             |

| Name            | <b>##</b> # |
|-----------------|-------------|
| ABN             | #           |
| Short form name | #           |
| Role            | #           |
| Notice details  | #           |
|                 | Facsimile # |
|                 | Attention # |

#### (collectively Covenantor)

in favour of

| Name            | State of Queensland                         |
|-----------------|---------------------------------------------|
| Short form name | State                                       |
| Notice details  | 160 Mary Street, Brisbane, Queensland, 4000 |
|                 | Facsimile (07) 3235 9487                    |
|                 | Attention #                                 |

# Background

- A DEVELOPER has entered into the Development Agreement with the State to develop the State Tennis Centre at Tennyson.
- B The Covenantors will each receive a benefit arising out of the development of the State Tennis Centre by DEVELOPER.
- C In consideration of those benefits and of these presents, the Covenantors have agreed to provide this warranty to the State.

1

# Agreed terms

#### 1. Defined terms

#### 1.1 Defined terms

In this document:

Covenantors means #, # and #.

**Cushion Acrylic Courts** means those Tennis Courts so described in the Development Agreement and includes the Centre Court, Cushion Acrylic Courts and Match Courts.

Deed means this deed and includes the schedule.

**Development Agreement** means the agreement so titled and dated # pursuant to which DEVELOPER agreed with the State to carry out the Tennyson Riverside Development (as defined in that agreement).

**DEVELOPER** means #

**Fail** in respect of the Tennis Courts has the meaning given in Schedule 1 and Fails, Failed or Failure have analogous meanings.

Handover Date means the date so described in the Development Agreement.

Latent Defect has the meaning given in clause 3.2.

**Maintained** means the State procuring substantial compliance with the maintenance program described in Schedule 2 for the Tennis Courts by appropriately qualified and experienced personnel, and Maintenance has an analogous meaning.

**State** means the State of Queensland represented by the Department of Local Government, Planning, Sport and Recreation.

**State Tennis Centre** means State Tennis Centre to be developed for the State by DEVELOPER under the Development Agreement.

**Tennis Courts** means all of the tennis courts included in the State Tennis Centre and constructed by DEVELOPER under the Development Agreement.

Training Courts means those Tennis Courts being grass courts and clay courts.

**Warranty Period** means for the Cushion Acrylic Courts, the period from the Handover Date up to and including the 12th anniversary of that date, and for the Training Courts the period from the Handover Date up to and including the 5th anniversary of that date.

#### 2. Understanding this Agreement

#### 2.1 Interpretation

In this Deed, unless the context otherwise requires:

- (a) references to:
  - (i) a Party includes the Party's successors and assigns;
  - (ii) anything includes part of that thing;
  - (iii) persons include companies, associations, firms and authorities;
  - (iv) gender includes all other genders;
  - (v) documents include the document as changed or replaced from time to time;
  - (vi) currencies mean Australian currencies;
  - (vii) a Party, where the Party is more than one person, means all of them together and each of them separately;
  - (viii) a clause or schedule or recital refers to a clause or schedule or recital in this Deed;
  - (ix) a statute or regulation includes all statutory provisions or regulations amending, consolidating or replacing the statute or regulation; and
  - (x) a day refers to the period commencing at midnight and ending 24 hours later.
- (b) the singular includes the plural and the other way around;
- (c) where a Party is more than one person, this Deed binds all of them separately and each of them together;
- (d) headings do not affect the meaning of this Deed;
- (e) if a word or phrase is defined, any variation of that word or phrase has the same meaning to the extent possible;
- (f) a reference to 'a Party' or 'Parties' is a reference to a Party or the Parties to this Deed;
- (g) a reference to 'indemnify' means that the person giving the indemnity will indemnify and keep indemnified the person given the indemnity against any loss, (including consequential loss) damage, claims, actions, demands, costs or expenses suffered or sustained because of the event indemnified against except to the extent caused or contributed to by any act or omission of the person indemnified. This means that if the person indemnified suffers any loss or must pay any money (whether or not it is actually paid) because of an indemnified event the Party giving that indemnity must pay the amount of loss or the amount of liability to the indemnified Party. If it does not, the indemnified Party can recover the amount as a liquidated claim;
- (h) if there is any inconsistency between a clause of this Deed and a provision of a schedule, the provision of this Deed will prevail;
- (i) if anything to be done under the Deed falls on a day which is not a Business Day, then it must be done on the next Business Day within that area;
- (j) where examples of a general term are given (whether or not using words such as 'includes' or 'including'), the use of the examples is without limitation to the general term and the 'ejusdem generis' rule is specifically excluded;
- (k) any invoice for payment issued under this Deed must also be a tax invoice within the meaning of A New Tax System (Goods and Services Tax) Act 1999 (Cth); and
- (l) any payments to be made under this Deed by the Covenantors must be by way of bank cheque issued by a bank licensed under the Banking Act 1959(Cth).

### 3. Warranty

#### 3.1 Covenant

The Covenantors warrant to the State that:

- (a) the State Tennis Centre has been completed in accordance with the requirements of the Development Agreement; and
- (b) provided the Tennis Courts are Maintained, the Tennis Courts will be fit for their intended purpose and will not Fail during the Warranty Period.

#### 3.2 Warranty period

The Covenantors must correct or replace any Tennis Court which Fails during the Warranty Period unless the Failure is due to the Tennis Court not being Maintained.

Any repairs or replacements during the last year of the Warranty Period for an item, shall have an extended warranty for a further period of 12 months commencing on the date of repair or replacement.

Notwithstanding the expiration of the Warranty Period, the Covenantors must correct or replace any Tennis Court Failure that existed at the end of the Warranty Period, but could not have been revealed by a reasonable inspection carried out on or before the end of the Warranty Period (a 'Latent Defect').

#### 3.3 Repair of collateral damage during warranty period

The Covenantors must also correct, replace, or repair any area surrounding a Tennis Court damaged as a result of the Failure of a Tennis Court or any part of the Tennis Court.

The Covenantors will not be excused from performing warranty work after the end of a Warranty Period if they receive notice of the defect before the end of the Warranty Period nor will the Covenantors be excused from performing warranty work for Latent Defects.

#### 3.4 Notice of defect

The State shall promptly give notice to the Covenantor of the discovery of any Failure of a Termis Court. The State may only exercise this right:

- (a) during the relevant Warranty Period; or
- (b) if notice of a defect was given in the Warranty Period and that defect becomes the subject of an extended warranty period, the State may give notice during the extended warranty period but only in relation to the defect to which that extended warranty period relates.

#### 3.5 Urgent repair of defect

The Covenantors (on an expedited basis if so requested by the State) must correct or replace the applicable parts of the Tennis Courts at no cost to the State.

#### 3.6 Timing for repairs

Promptly after receipt by the Covenantors of a notice, under clause 3.4, the Covenantors and the State will agree upon a schedule for the Covenantors performance of its warranty obligations that will allow the Covenantors to complete that work within a reasonable period of time without unreasonably interfering with the operation of the State Tennis Centre.

With the State's approval (not to be unreasonably withheld or delayed), the Covenantors may leave non-urgent defects until a time when there are a reasonable number of defects to fix.

#### 3.7 Access for repairs

The State shall provide the Covenantors with reasonable access to the State Tennis Centre to perform its warranty obligations.

#### 3.8 State may repair at the Covenantors cost

If, after notification of a defect in materials or workmanship, the Covenantors unreasonably delay commencing, continuing or completing the making good of that defect(s) in accordance with the notice, then the State by written notice to the Covenantors (except in case of emergency where no notice is required) may, but is not obliged to, correct that defect(s) in accordance with this Deed.

The Covenantors will be liable for the costs and expenses incurred by the State in connection with that repair or replacement and must pay to the State an amount equal to those costs and expenses upon receipt of invoices certified by the State.

For the avoidance of doubt, remedial work necessary to enable a fixture to be held at the State Tennis Centre will be an 'emergency'.

#### 3.9 Extent of warranty

The Covenantors agree that the warranties given by them under this Deed shall be enforceable by action either by the State or by any person the State has by notice to the Covenantors identified as an operator of, or a successor in title to the State Tennis Centre.

#### 4. General

#### 4.1 Amendments

No change, amendment, or modification of this Deed shall be valid or binding upon the Parties unless such change, amendment, or modification is in writing and duly executed by both Parties.

#### 4.2 Costs

Each Party must pay its own costs (including legal costs) associated with the preparation, negotiation and execution of this Deed and all documents contemplated by this Deed. The Covenantors shall pay all fees, duties and taxes (including, but not limited to, stamp duty).

#### 4.3 Severability

The invalidity of one or more phrases, sentences or clauses contained in this Deed shall not affect the validity of the remaining portions of this Deed so long as the material purposes of this Deed can be determined and effectuated.

#### 4.4 No Waiver

Any failure of the State or any person entitled to the benefit of this Deed to enforce any of the provisions of this Deed or to require compliance with any of its terms at any time during the term of this Deed shall in no way affect the validity of this Deed, or any part of it, and shall not be

deemed a waiver of the right of the State or that person thereafter to enforce any and each such provisions.

#### 4.5 Applicable Law

This Deed shall be governed by, construed and enforced in accordance with the laws of the State of Queensland without giving effect to principles relating to conflicts of laws.

#### 4.6 Counterparts

This Deed may be executed by the Parties in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute but one and the same instrument.

# Schedule 1 - Definition of Fail

### Criteria to define Court 'Failure' Generally

'Failure' is not limited to collapse or degradation of the Tennis Courts to a standard that no-one can play on the Tennis Courts, but includes the condition of a Tennis Court at which it would be considered unsuitable for international standard play. The following criteria define this condition.

#### STATE TENNIS CENTRE – TENNIS COURT 'FAILURE' CRITERIA

(Evidence of any of the below in a Tennis Court would constitute 'Failure' of that Tennis Court) Criteria applying specifically to the cushion acrylic hardcourts

| Loss of as-constructed      | Average surface gradient less that 0.8% or greater than 1.5%.                                                                                                                          |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| planarity                   | Deviation from 3m straight edge >6mm.                                                                                                                                                  |
| Cushion layer               | Delamination of the acrylic playing surface from the cushion layer,<br>material separation within the cushion layer, and/or separation of cushion<br>layer from underlying court base. |
| Reflective features         | Visual evidence of construction joints/saw cuts, etc. in base obvious at court surface when inspected under wet conditions.                                                            |
| Moisture                    | Moisture penetration through base and/or cushion layer evident at surface.                                                                                                             |
| Energy absorption           | Falls outside the as-constructed ITF rating (greater than 15%) according to ITF Test - methods and criteria.                                                                           |
| Court speed                 | Falls outside 'medium' rating under ITF Test methods and criteria.                                                                                                                     |
| Net posts                   | Loss of verticality by more than 2%.                                                                                                                                                   |
|                             | Evidence of corrosion of post or in ground sleeve.                                                                                                                                     |
| Acrylic surface             | Blistering of the surface.                                                                                                                                                             |
| Net line construction joint | Differential level across joint >3mm.                                                                                                                                                  |
| Fencing                     | Non-conformance to 2004 Australian design standards.                                                                                                                                   |
|                             | Permanent loss of verticality from wind loading.                                                                                                                                       |
|                             | Rails moved from as-constructed position, particularly bottom rail >30mm from court surface.                                                                                           |
|                             | Corrosion evident.                                                                                                                                                                     |
| Lighting                    | Non-conformance with State Tennis Centre Project Brief criteria with new bulbs installed.                                                                                              |
|                             | Loss of structural integrity of light towers and supports.                                                                                                                             |
| Surface Pace                | Rating less than 30 or greater than 45 based on ITF Test methods and criteria.                                                                                                         |

### Criteria applying specifically to clay and grass courts

| Loss of as-constructed planarity | Average surface gradient deviation from as-constructed is in excess of minus 0.2% or plus 0.2%.                                                                                                                                                                        |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Surface drainage                 | Inadequate or failure of local surface drainage control provisions such that<br>storm water runoff occurs across court surfaces from external sources<br>resulting in scour of or deposition of debris on the playing surface.                                         |
| Sub-surface drainage             | Inadequate or loss of capacity of the sub-surface drainage system to<br>properly drain the base structures of the natural grass and clay courts such<br>that the courts become overly wet or water logged in part or in whole<br>following normal rainfall conditions. |
| Loss of playing surface          | Loss of playing surface material from the clay courts due to wind erosion.                                                                                                                                                                                             |
|                                  | (NB. this applies to clay courts only).                                                                                                                                                                                                                                |
| Net posts                        | Loss of verticality by more than 2%.                                                                                                                                                                                                                                   |
|                                  | Evidence of corrosion of post or in ground sleeve.                                                                                                                                                                                                                     |
| Fencing                          | Non-conformance to 2004 Australian design standards.                                                                                                                                                                                                                   |
|                                  | Permanent loss of verticality from wind loading.                                                                                                                                                                                                                       |
| ч<br>                            | Rails moved from as-constructed position, particularly bottom rail >30mm from court surface.                                                                                                                                                                           |
|                                  | Corrosion evident.                                                                                                                                                                                                                                                     |
| Lighting                         | Non-conformance with State Tennis Centre Project Brief criteria with new bulbs installed.                                                                                                                                                                              |
|                                  | Loss of structural integrity of light towers and supports.                                                                                                                                                                                                             |

ITF means the International Tennis Federation, and ITF Test Methods and criteria means the document so titled (or its replacement) as published by the ITF from time to time.

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# Schedule 2 - Maintenance Program

#### [To be included in Detailed Development Proposal]

Tennyson Riverside Development Warranty Deed

# Signing page

| Queensland by The H<br>Treasurer and Ministe<br>presence of      | onourable<br>Deputy Premier,<br>er for Sport, in the |          |                                                                       |  |
|------------------------------------------------------------------|------------------------------------------------------|----------|-----------------------------------------------------------------------|--|
| Signature of witness                                             |                                                      | <b></b>  | The Honourable Terence Michael Mackenroth                             |  |
| Name of witness (print)                                          | ,                                                    |          |                                                                       |  |
| The Common Seal of a<br>locument in accordance<br>he presence of | ## is fixed to this<br>with its constitution in      |          |                                                                       |  |
| Signature of director                                            |                                                      | <b>~</b> | Signature of director/company secretary (Please delete as applicable) |  |
| lamo of director (print)                                         |                                                      |          |                                                                       |  |
| vame of unector (print)                                          |                                                      |          | Name of director/company secretary (print)                            |  |
|                                                                  |                                                      |          | Name of director/company secretary (print)                            |  |
|                                                                  |                                                      |          | Name of director/company secretary (print)                            |  |
|                                                                  | ,<br>,<br>,<br>,<br>,<br>,                           |          | Name of director/company secretary (print)                            |  |
|                                                                  |                                                      |          | Name of director/company secretary (print)                            |  |
|                                                                  | ,                                                    |          | Name of director/company secretary (print)                            |  |
| Anne or director (print)                                         |                                                      |          | Name of director/company secretary (print)                            |  |

# Schedule 7 - Access Licence

# Access Licence for Construction of Transport and Access Works

State of Queensland (State) ## (DEVELOPER)

G....,

# Access Licence for Construction of Transport and Access Works

|   | Deta                                                                                | ils                                                                                                                                                                                                                                                                   | 1                                                             |
|---|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
|   | Agre                                                                                | ed terms                                                                                                                                                                                                                                                              | 2                                                             |
|   | <b>1.</b><br>1.1<br>1.2                                                             | <b>Defined terms &amp; interpretation</b> Defined terms Interpretation                                                                                                                                                                                                | <b>2</b><br>2<br>3                                            |
|   | 2.                                                                                  | Purpose                                                                                                                                                                                                                                                               | 4                                                             |
|   | 3.                                                                                  | Grant                                                                                                                                                                                                                                                                 | 4                                                             |
| - | <b>4.</b><br>4.2<br>4.3<br>4.4<br>4.5<br>4.6<br>4.7                                 | Terms and Conditions of Licence<br>Insurance<br>Indemnity<br>Occupational Health and Safety Plan<br>Environmental Management Plan<br>Reasonable Access and Use of Site<br>Security of Access Corridor, Bicycle Corridor, Works Zone and Works<br>Performance of Works | <b>4</b><br>4 4 4 4 5 5 5                                     |
|   | 5.                                                                                  | Interdependence with Development Agreement                                                                                                                                                                                                                            | 5                                                             |
|   | 6.<br>6.1<br>6.2<br>6.3<br>6.4<br>6.5<br>6.6                                        | Goods and Services Tax<br>Consideration is GST exclusive<br>Gross up of Consideration<br>Reimbursements<br>New Tax System changes<br>Tax Invoice and registration<br>Interpretation                                                                                   | <b>6</b><br>6<br>6<br>6<br>6<br>6                             |
|   | 7.1<br>7.2<br>7.3<br>7.4<br>7.5<br>7.6<br>7.7<br>7.8<br>7.9<br>7.10<br>7.11<br>7.12 | Miscellaneous Provisions<br>Entire agreement<br>Amendments<br>Notice<br>No partnership, etc<br>Costs<br>Severability<br>No Waiver<br>Applicable Law<br>Successors and assigns<br>Schedules, etc<br>Further assurances<br>Counterparts                                 | 6<br>7<br>7<br>7<br>7<br>7<br>8<br>8<br>8<br>8<br>8<br>8<br>8 |
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Tennyson Riverside Development Access Licence for Construction of Transport and Access Works

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## Details

### Date

### Parties

| Name            | State of Queensland                                                            |
|-----------------|--------------------------------------------------------------------------------|
| Short form name | State                                                                          |
| Notice details  | Level 5, 160 Mary Street, Brisbane, Queensland, 4000<br>Facsimile 07 3235 9487 |

| Name            |  |
|-----------------|--|
| Short form name |  |
| Notice details  |  |

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## **DEVELOPER** ## Facsimile ## Attention ##

### Background

- A The State is the owner of the DPIF Land of which the Access Corridor, Bicycle Corridor and Works Zone forms a part.
- B The State has appointed DEVELOPER to develop the Tennyson Site pursuant to the terms and conditions of the Development Agreement. Under the Development Agreement, one of DEVELOPER's obligations is to construct Transport and Access Works, comprising a road as well as pedestrian and bicycle infrastructure upon the Access Corridor and bicycle infrastructure upon the Bicycle Corridor.
- C The State has agreed to grant a licence to DEVELOPER over the Access Corridor, Bicycle Corridor and the Works Zone to enable it to perform the obligations referred to in Recital B, and to carry out certain other demolition and removal activities and other works described in this licence as Work Zone Activities.

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Tennyson Riverside Development Access Licence for Construction of Transport and Access Works

# Agreed terms

### 1. Defined terms & interpretation

#### 1.1 Defined terms

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In this document:

Access Corridor means the land outlined and so described in the plan forming Schedule 2.

Agreement means this agreement, and includes all schedules.

Authorisations means all approval, consents, authorisations, permits, clearances, licences or other requirements of any Commonwealth, State or Local Government or Government Instrumentality under any applicable law required for any activity.

Bicycle Corridor means the land outlined and so described in the plan forming Schedule 2.

Commencement Date means the date so described in the Development Agreement.

**DEVELOPER** means ##.

**Development Agreement** means the agreement so described between the State and DEVELOPER executed, or intended to be executed at the same time as this Agreement.

**DPIF Land** means the land so described in Schedule 1.

**Good Contracting Practice** means those practices, methods and activities that would commonly be used by internationally recognised contracting organisations and includes:

- (a) acting professionally;
- (b) following best practices;
- (c) acting with due care and skill in applying internationally accepted criteria and procedures; and
- (d) acting in accordance with all applicable laws, codes and standards.

Handover Date means the date so defined in the Development Agreement.

Purpose has the meaning set out in clause 2.

**State** means the State of Queensland represented by the Departments of Local Government, Planning, Sport and Recreation and Primary Industries and Fisheries.

Tennyson Site means the land so described in Schedule 1.

Term means the period of ## from the Commencement Date.

**Transport and Access Works** means those parts of the works so described in the Development Agreement and to be constructed upon the Access Corridor and Bicycle Corridor and includes any necessary relocation of services and utilities.

Works means all activities carried out by DEVELOPER on the Access Corridor, the Works Zone and the Bicycle Corridor, and includes the Works Zone Activities.

Works Zone means the land outlined and so described in the plan forming Schedule 2.

Works Zone Activities means the works so described in Schedule 3.

#### 1.2 Interpretation

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In this Agreement, unless the context otherwise requires:

- (a) references to:
  - (i) a Party includes the Party's successors and assigns;
  - (ii) anything includes part of that thing;
  - (iii) persons include companies, associations, firms and authorities;
  - (iv) gender includes all other genders;
  - (v) documents include the document as changed or replaced from time to time;
  - (vi) currencies mean Australian currencies;
  - (vii) a Party, where the Party is more than one person, means all of them together and each of them separately;
  - (viii) a clause or schedule or recital refers to a clause or schedule or recital in this Agreement;
  - (ix) a statute or regulation includes all statutory provisions or regulations amending, consolidating or replacing the statute or regulation; and
  - (x) a day refers to the period commencing at midnight and ending 24 hours later.
- (b) the singular includes the plural and the other way around;
- (c) where a Party is more than one person, this Agreement binds all of them separately and each of them together;
- (d) headings do not affect the meaning of this Agreement;
- (e) if a word or phrase is defined, any variation of that word or phrase has the same meaning to the extent possible;
- (f) a reference to 'a Party' or 'Parties' is a reference to a Party or the Parties to this Agreement;
- (g) a reference to 'indemnify' means that the person giving the indemnity will indemnify and keep indemnified the person given the indemnity against any loss, (including consequential loss) damage, claims, actions, demands, costs or expenses suffered or sustained because of the event indemnified against except to the extent caused or contributed to by any act or omission of the person indemnified. This means that if the person indemnified suffers any loss or must pay any money (whether or not it is actually paid) because of an indemnified event the Party giving that indemnity must pay the amount of loss or the amount of liability to the indemnified Party. If it does not, the indemnified Party can recover the amount as a liquidated claim;
- (h) if there is any inconsistency between a clause of this Agreement and a provision of a schedule, the provision of this Agreement will prevail;
- (i) if anything to be done under the Agreement falls on a day which is not a Business Day, then it must be done on the next Business Day within that area;
- (j) where examples of a general term are given (whether or not using words such as 'includes' or 'including'), the use of the examples is without limitation to the general term and the 'ejusdem generis' rule is specifically excluded;

- (k) any invoice for payment issued under this agreement must also be a tax invoice within the meaning of *A New Tax System (Goods and Services Tax) Act 1999 (Cth)*; and
- (I) any payments to be made under this Agreement by DEVELOPER must be by way of bank cheque issued by a bank licensed under the *Banking Act 1959 (Cth)*.

### 2. Purpose

The purpose of this Agreement is to enable DEVELOPER to have access for the Term to:

- (a) the Access Corridor and the Bicycle Corridor to construct the Transport and Access Works; and
- (b) the Works Zone to carry out the Works Zone Activities on the Works Zone,

in accordance with its obligations under the Development Agreement.

### 3. Grant

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The State grants to DEVELOPER a licence for the Term from the Commencement Date to enter upon the Access Corridor, the Bicycle Corridor and the Works Zone for the Purpose, subject to the terms and conditions of this Agreement.

### Terms and Conditions of Licence

#### 4.1 Insurance

As and from the Commencement Date, DEVELOPER must effect and maintain the insurance arrangements in Schedule 4.

#### 4.2 Indemnity

As and from the Commencement Date, DEVELOPER must indemnify the State in accordance with Schedule 5.

#### 4.3 Occupational Health and Safety Plan

DEVELOPER on or before the Commencement Date must prepare a Workplace Health and Safety Plan for the Access Corridor, Bicycle Corridor and Works Zone consistent with this Agreement and all applicable laws relating to Workplace Health and Safety and submit the plan to the State for approval by the Commencement Date.

The State will within a reasonable time of receipt of the plan advise whether or not the plan is accepted.

DEVELOPER will not commence work on the Access Corridor, Bicycle Corridor or Works Zone until the plan has been approved and will at all times comply with those plans once approved.

Compliance with a plan does not relieve DEVELOPER from its general obligations to comply with all laws.

#### 4.4 Environmental Management Plan

DEVELOPER on or before the Commencement Date must prepare an Environmental Management Plan for the Access Corridor, Bicycle Corridor and Works Zone consistent with this Agreement and all applicable laws relating to the environment and submit the plan to the State for approval by the Commencement Date.

The State will within a reasonable time of receipt of the plan advise whether or not the plan is accepted. DEVELOPER will not commence work on the Access Corridor, Bicycle Corridor or Works Zone until the plan has been approved and will at all times comply with those plans once approved.

Compliance with a plan does not relieve DEVELOPER from its general obligations to comply with all laws.

#### 4.5 Reasonable Access and Use of Site

DEVELOPER will permit representatives of the State to enter the Access Corridor, Bicycle Corridor and Works Zone and inspect the Works at all reasonable times provided that those representatives comply with DEVELOPER's reasonable safety measures.

DEVELOPER will also promptly provide all information regarding the Works requested by the State.

Unless this Agreement otherwise provides or the State gives prior written approval, DEVELOPER will not use (or allow to be used) the Access Corridor, Bicycle Corridor and Works Zone for any purposes not connected with the Works.

#### 4.6 Security of Access Corridor, Bicycle Corridor, Works Zone and Works

DEVELOPER will be responsible for developing, implementing, maintaining and supervising all security and protection of the Access Corridor, Bicycle Corridor, Works Zone and the Works.

#### 4.7 Performance of Works

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In the performance of the Works and the obligations under this Agreement, DEVELOPER will and will require its Contractors and Subcontractors to ascertain and comply with all Authorisations and Good Contracting Practice and in particular will:

- design the Works to minimise use of the DPIF Land and the impact on existing structures;
- minimise the impact of noise, dust and vibration in undertaking the Works;
- maintain the continuity of activities currently undertaken on the DPIF Land;
- provide any replacement, refurbished or relocated facilities on the DPIF Land to an equivalent standard and function or agree to appropriate arrangements with the State;
- relocate, maintain and continuously provide all required services and utilities;
- make good any land affected by the Works;
- provide both temporary and permanent fencing to allow for the Works and the operation of infrastructure located within the Access Corridor and Bicycle Corridor;
- meet all costs associated with provision of these Works; and
- obtain the agreement of the State for these Works including the associated strategy for maintaining continuity of existing services and operations undertaken on the DPIF Land.

### 5. Interdependence with Development Agreement

Unless otherwise agreed, this licence will automatically terminate upon termination of the Development Agreement, save that DEVELOPER will be obliged to make any incomplete works good and safe, and shall be entitled to occupy so much of the Access Corridor, the Bicycle Corridor or the Works Zone for a reasonable time so as to enable it so do. The provisions of clause 4 will continue to apply to such continued occupation.

### 6. Goods and Services Tax

#### 6.1 Consideration is GST exclusive

Any consideration to be paid or provided for a supply made under or in connection with this Agreement, does not include an amount on account of GST.

#### 6.2 Gross up of Consideration

Despite any other provision in this Agreement, if a Party (**Supplier**) makes a supply under or in connection with this Agreement on which GST is imposed (not being a supply the consideration for which is specifically described in this Agreement as 'GST inclusive'):

- (a) the consideration payable or to be provided for that supply under this Agreement but for the application of this clause (GST exclusive consideration) is increased by, and the recipient of the supply (Recipient) must also pay to the Supplier, an amount equal to the GST payable by the Supplier on that supply; and
- (b) subject to clause 6.5 the amount by which the GST exclusive consideration is increased must be paid to the Supplier by the Recipient without set off, deduction or requirement for demand, at the same time as the GST exclusive consideration is payable or to be provided.

#### 6.3 Reimbursements

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If a payment to a Party under this Agreement is a reimbursement or indemnification, calculated by reference to a loss, cost or expense incurred by that Party, then the payment will be reduced by the amount of any input tax credit to which that Party is entitled for that loss, cost or expense.

That Party is assumed to be entitled to a full input tax credit unless it proves, before the date on which the payment must be made; that its entitlement is otherwise.

#### 6.4 New Tax System changes

Both Parties must comply with Part VB of the Trade Practices Act 1974 (Cth).

#### 6.5 Tax Invoice and registration

Despite any other provision of this Agreement, the State need not make a payment of any amount for GST until DEVELOPER has given the State:

- (a) a GST tax invoice for that payment stating the amount of GST paid or payable by DEVELOPER in respect of the supply to which the GST tax invoice relates; and
- (b) evidence satisfactory to the State that the DEVELOPER is registered for the purposes of GST.

#### 6.6 Interpretation

Words or expressions used in this clause 6 which are defined in the A New Tax System (Goods and Services Tax) Act 1999 (Cth) or, if not so defined, then which are defined in the Trade Practices Act 1974 (Cth), have the same meaning in this clause.

### 7. Miscellaneous Provisions

#### 7.1 Entire agreement

This Agreement contains the entire understanding of the Parties with respect to its subject matter and reflects the prior agreements and commitments with respect to it. There are no other oral understandings, terms, or conditions and neither Party has relied upon any representation, express or implied, not contained in this Agreement.

#### 7.2 Amendments

No change, amendment, or modification of this Agreement shall be valid or binding upon the Parties unless such change, amendment, or modification is in writing and duly executed by both Parties.

#### 7.3 Notice

- (a) Any notice, demand, offer, or other written instrument required or permitted to be given pursuant to this Agreement shall be in writing signed by the Party giving such notice and shall be hand delivered or sent by overnight courier, messenger, or registered letter or fax, to the other Party at the address shown at the beginning of this Agreement.
- (b) A Party may from time to time amend its details for communications and notices by giving notice in writing to the other Party.
- (c) Notices must be given in English and in writing.
- (d) Notices given after 4.00pm local time on a Business Day are deemed to be given on the next day.
- (e) Notices given by post are deemed to be given on the second day after the notice is posted.
- (f) Notices given by facsimile transmission are deemed to be given when an acknowledgment of transmission report is received on the sending machine indicating that the facsimile transmission has been sent and received.
- (g) Notices or documents given by a Party's solicitor are taken to have been given with the authority of the Party.

#### 7.4 No partnership, etc

Nothing stated or implied in this Agreement constitutes a Party as a partner, agent or legal representative of the other Party for any purpose or creates any partnership, agency or trust. Except as expressly provided in this Agreement, a Party has no authority to bind the other Party, or to act for, or to incur any obligation or assume any responsibility on behalf of that other Party.

#### 7.5 Costs

Each Party must pay its own costs (including legal costs) associated with the preparation, negotiation and execution of this Agreement and all documents contemplated by this Agreement. DEVELOPER shall pay all fees, duties and taxes (including, but not limited to, stamp duty, registration fees, the levy payable under the *Building and Construction Industry (Portable Long Service Leave) Act 1991 (Queensland)* and the fee payable under the *Workplace Health and Safety Regulation 1997 (Queensland)* arising in relation to the Project.

#### 7.6 Severability

The invalidity of one or more phrases, sentences or clauses contained in this Agreement shall not affect the validity of the remaining portions of this Agreement so long as the material purposes of this Agreement can be determined and effectuated.

#### 7.7 No Waiver

Any failure of any Party to enforce any of the provisions of this Agreement or to require compliance with any of its terms at any time during the term of this Agreement shall in no way affect the validity of this Agreement, or any part of it, and shall not be deemed a waiver of the right of such Party thereafter to enforce any and each such provisions.

#### 7.8 Applicable Law

This Agreement shall be governed by, construed and enforced in accordance with the laws of the State of Queensland without giving effect to principles relating to conflicts of laws.

#### 7.9 Successors and assigns

This Agreement shall be binding upon the Parties and their successors and permitted assigns.

#### 7.10 Schedules, etc

All schedules, exhibits or other attachments referenced in this Agreement shall be incorporated into this Agreement by such reference and shall be deemed to be an integral part of this Agreement.

#### 7.11 Further assurances

DEVELOPER and the State agree to provide such information, execute and deliver any instruments and documents and to take such other actions as may be necessary or reasonably requested by the other Party that are not inconsistent with the provisions of this Agreement and that do not involve the assumption of obligations other than those provided for in this Agreement, in order to give full effect to this Agreement and to carry out the intent of this Agreement.

#### 7.12 Counterparts

This Agreement may be executed by the Parties in separate counterparts, each of which when so executed and delivered shall be an original, but all such counterparts shall together constitute but one and the same instrument.

# Schedule 1 - Description of Land

#### DPIF Land means ##

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#### Tennyson Site means ##

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Tennyson Riverside Development Access Licence for Construction of Transport and Access Works

# Schedule 2 - Map Outlining Access Corridor, Bicycle Corridor and Works Zone

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# Schedule 3 - Description of Works Zone Activities

[Note: The completion of this Schedule will be dependent upon the proposed design of, method and sequencing of work for the vehicular, pedestrian and bicycle infrastructure located within the primary access corridor and bicycle corridor.]

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### 1. Policy requirements

- (a) DEVELOPER must at its cost and expense, effect and maintain the following insurances for the Project in the joint names of the State and DEVELOPER and all contractors (collectively 'Insured') for their respective rights, interests and liabilities, from the commencement of any work or activity on the Access Corridor, Bicycle Corridor or Works Zone:
  - (i) a contractor's all risk insurance policy on usual commercial terms and conditions, which must cover:
    - (A) the whole of the Works; and
    - (B) all associated temporary works including material incorporated or to be incorporated into the Works; and
    - (C) material incorporated, or to be incorporated, into the Works, the property of the Insured, or for which they are responsible, whilst on or adjacent to the Access Corridor, Bicycle Corridor and Works Zone;
    - for:
    - (D) loss or destruction of, or damage to, the property insured, arising from causes normally insured by a policy of this nature; and
    - (E) an amount not less than their full replacement value plus an amount (to be determined by DEVELOPER acting reasonably) to cover the costs of demolition and removal of debris and the fees of architects, engineers, quantity surveyors and consultants to rebuild the property insured; and
  - (ii) a public liability insurance policy which must cover liability up to \$20M to any person for any death, personal injury, property damage or other loss or costs (and must specifically cover liability associated with any demolition activity), other than a liability covered by a policy in force at the relevant time under the workers compensation, or similar legislation,
- (b) The insurance cover required under clause 1(a)(i) may contain the following exclusions:
  - (i) the cost of making good fair wear and tear or rust, oxidation, corrosion or gradual deterioration but shall not exclude the loss or damage resulting therefrom;
  - the cost of making good faulty design, workmanship and materials but shall not exclude the loss or damage resulting therefrom;
  - (iii) consequential loss of any kind, but shall not exclude loss of or damage to the Works;
  - (iv) damages for delay in completing or for the failure to complete the Works;
  - loss or damage resulting from ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel resulting from any cause; and

 (vi) war, invasion, act of foreign enemies, hostilities, (whether war be declared or not), civil war, rebellion, revolution, insurrection or military or usurped power, martial law or confiscation by order of any Government or Authority.

### 2. Worker's Compensation

DEVELOPER must effect and maintain and must ensure the Contractor it engages, effects and maintains a worker's compensation policy for an unlimited sum against any liability, loss, claim or proceedings, whether arising by virtue of any statute relating to worker's compensation or employer's liability or at common law for any person employed by DEVELOPER or the Builder (as the case may be) in or about the execution of the Works.

### 3. Period of insurance

The insurance required under this Agreement must be maintained for a period ending on the Handover Date except for the insurance required under clause 1(a)(i) and (ii) which must be maintained until expiry of 12 months after practical completion of each separable part of the Works. Thereafter for so long as DEVELOPER is required to remedy defects in the Works or to carry out other work on the Tennyson Site, DEVELOPER shall ensure that at any time when work is carried out on the Tennyson Site by DEVELOPER or the Builder or any Subcontractor, a public liability policy complying with the requirements of clause 1(a)(ii) is in place.

### 4. Approved insurer

The insurances required under this Agreement:

- (a) must be effected with a responsible and reputable insurer approved by the State;
- (b) may (where applicable) be effected under a group or blanket policy held by DEVELOPER or a related corporation; and
- (c) shall provide that insofar as each policy covers more than one insured, all insuring agreements and endorsements with the exception of limits of liability shall operate in the same manner as if they were a separate policy of insurance covering each Party. Each policy shall further provide that the insurer waives all rights, remedies or relief to which it might become entitled by subrogation against any of the Parties comprising the insured and that failure by any insured to observe and fulfil the terms of the applicable policy shall not prejudice the insurance in regard to any other insured.

### 5. Certificates of currency

DEVELOPER must deposit with the State certified copies of all policies of insurance required under this Agreement and receipts for premiums or other evidence of compliance prior to DEVELOPER accessing the Access Corridor, Bicycle Corridor and Works Zone to commence the Works, and DEVELOPER must provide to the State upon request from time to time evidence of the currency of such policies of insurance as and when required.

### 6. Failure to insure

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If DEVELOPER fails to effect or maintain any of the insurances required by this Agreement the State may effect such insurances required by this Agreement and the premiums therefore will be a debt due and payable forthwith by DEVELOPER to the State.

### 7. Application of insurance proceeds

Any amounts paid or payable to DEVELOPER by the insurer on account of any loss, damage or destruction of the Works or materials must be applied by DEVELOPER to the re-building or reinstatement of the Works and materials as the case may be.

# Schedule 5 - Indemnity

### 1. Indemnity by DEVELOPER

DEVELOPER shall indemnify and keep indemnified the State from all damages, losses, costs, charges, expenses, penalties, interest and fines (collectively 'losses') arising by way of actions, proceedings, suits, claims or demands for:

- (a) personal injury, illness or death of:
  - (i) any of DEVELOPER'S or Builder's or Subcontractor's personnel; or
  - (ii) any other person; and
- (b) loss of or damage to any property (including damage to the environment)

caused by carrying out the Works, (save and to the extent the loss or damage is caused by the negligent act or default of the State),

where the losses arise directly or indirectly out of the negligence of DEVELOPER or a breach by DEVELOPER of an applicable law in the course of or caused by the execution of the Works, or the breach by DEVELOPER of an obligation under this Agreement or otherwise.

The indemnity given by DEVELOPER is a continuing obligation, separate and independent from the other obligations of DEVELOPER and survives the termination of this Agreement.

### 2. Workers compensation

In any suit or claim by the State, whether under this indemnification provision or otherwise, DEVELOPER hereby expressly waives any defence or immunity from suit which might otherwise be conferred upon or available to it under any relevant workers compensation statute and which would preclude or limit either enforcement of this indemnification clause or a direct claim by the State. DEVELOPER further agrees to pay any reasonable costs incurred by the State in securing compliance with the provisions of this indemnification provision.

# Signing page

#### **EXECUTED** as an agreement.

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| Premier, Treasurer and Minister for Sport in the presence of                                           | · · · |                                           |   |
|--------------------------------------------------------------------------------------------------------|-------|-------------------------------------------|---|
|                                                                                                        | ←     |                                           | • |
| Signature of witness                                                                                   |       | The Honourable Terence Michael Mackenroth |   |
|                                                                                                        |       |                                           |   |
|                                                                                                        |       |                                           |   |
| Name of witness (print)                                                                                |       |                                           |   |
|                                                                                                        |       |                                           |   |
| The Common Seal of ## is fixed to this document in accordance with its constitution in the presence of |       |                                           |   |
| ,                                                                                                      |       | ·                                         |   |
| Signature of director                                                                                  |       | Signature of director/company secretary   |   |
|                                                                                                        |       | (Please delete as applicable)             |   |
|                                                                                                        |       |                                           |   |
|                                                                                                        |       |                                           |   |

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# Schedule 8 - Design Stages

### DEVELOPED DESIGN STAGE

At the completion of the Developed Design stage, Design Documentation must be provided as set out below. Details are also to be provided of any proposed changes from the Development Agreement's Schedules 2 and 9-21 as a result of Developed Design process.

Drawings shall be provided for the State Tennis Centre's and Transport and Access Works configuration in both normal and major event modes, where applicable.

All drawings are to include appropriate dimensioning and be of a minimum scale of 1:100, unless noted otherwise.

#### Architectural Deliverables (for normal and major event modes)

Updated architectural design brief for the State Tennis Centre and Transport and Access Works including:

- room/area data sheets which are referenced to drawings that show all rooms and areas; and
  - comprehensive and co-ordinated schedules of all furniture, plant and equipment to be provided by the Developer, which are referenced to a room/area number.

Developed Design drawings for the Associated Development including but not limited to:

- site plan (scale 1:500);
- circulation diagrams;
- floor plans of all levels;
- elevations;
- typical cross sections;
- cross sections through major design features; and
- landscaping site plan;

Developed Design drawings for the State Tennis Centre and Transport and Access Works including:

- site plan (scale 1:500);
- circulation diagram;
- floor plans of all levels;
- elevations;
- typical cross sections;
- cross sections through major design features;
- furniture layout;
- internal and external finishes schedule;
- roof plans;
- construction methods;
- signage and way finding; and

preliminary specification.

Other documentation, including:

- drawings of temporary overlay arrangements for the State Tennis Centre in major event mode and a narrative on the supporting servicing and operational arrangements;
- perspective views of the precinct and buildings;
- perspective views of significant internal spaces for the State Tennis Centre and Transport and Access Works;
- model (1:500) for the State Tennis Centre, Transport and Access Works and the Associated Development; and
- sample boards showing materials and colours to be used for the State Tennis Centre, Transport and Access Works and the Associated Development and their locations.

#### Electrical Engineering Deliverables (for normal and major event modes)

Updated electrical engineering design brief and Developed Design drawings for the State Tennis Centre and the Transport and Access Works including:

- site plan (scale 1:500);
- plans of all levels;
- reflected ceiling plans co-ordinated with other disciplines;
- building systems and technology; and
- preliminary specification.

#### **Fire Services Deliverables**

Updated fire services design brief and Developed Design drawings for the State Tennis Centre and the Transport and Access Works including:

- site plan (scale 1:500);
- plans of all levels;
- resolved fire and smoke compartmentation plans and egress paths;
- building systems and technology; and
- preliminary specification.

# Telecommunications Services, Security Services and Audiovisual Services Deliverables (for normal and major event modes)

Updated design brief and Developed Design drawings for the State Tennis Centre and the Transport and Access Works including:

- site plan (scale 1:500);
- plans of all levels;
- building systems and technology; and
- preliminary specification.

#### Mechanical Engineering Deliverables (for normal and major event modes)

Updated mechanical engineering design brief and Developed Design drawings for the State Tennis Centre and the Transport and Access Works including:

- site plan (scale 1:500);
- plans of all levels;
- plant room(s) and equipment layouts;
- reflected ceiling plans co-ordinated with other disciplines;
- building systems and technology; and
- preliminary specification.

#### Vertical Transportation Deliverables

Updated vertical transportation design brief and Developed Design drawings for the State Tennis Centre and the Transport and Access Works including:

- plans of all levels;
- building systems and technology; and
- preliminary specification.

#### **Civil and Structural Engineering Deliverables**

Updated civil and structural engineering design brief and Developed Design drawings for the State Tennis Centre and the Transport and Access Works including:

- site plan (scale 1:500);
- plans of all levels;
- typical sections;
- sections through major design elements;
- construction methods;
- building systems, materials and technology;
- preliminary specification; and
- specific requirements with particular emphasis on the design of the tennis courts and precinct, including but not limited to:
  - geotechnical report on site investigations; and
  - report on analytical modelling results.

#### Hydraulic Services Deliverables (for normal and major event modes)

Updated hydraulic services design brief and Developed Design drawings for the State Tennis Centre and the Transport and Access Works including:

- site plan (scale 1:500);
- plans of all levels;
- construction methods;
- building systems, materials and technology; and

preliminary specification.

#### Landscaping Deliverables (for normal and major event modes)

Updated landscaping design brief and Developed Design drawings for the State Tennis Centre and the Transport and Access Works including:

- site plan (scale 1:500);
- landscape plans of all levels;
- planting layout;

- plant schedule, including maturity of plants and trees;
- external furniture layout;
- preliminary signage and way finding (for normal and major event modes);
- preliminary specification;
- perspective views of significant spaces; and
- sample boards showing materials and colours to be used and locations of same.

#### CONSTRUCTION DOCUMENTATION STAGE

Construction Documentation may be provided progressively during construction as required to meet the Implementation Program.

The Construction Documentation for the State Tennis Centre and the Transport and Access Works shall include:

- full working drawings for the construction of the facilities, including joinery and workstations;
- plant and equipment, including standard details and service requirements; and
- subcontract tender documents and specifications, including colour schemes.

With regard to the Tennis Courts and associated precincts, provide complete Construction Documentation drawings and specifications (including Testing and Commissioning Program) for the courts and precinct including hard and soft landscaping, drainage design, foundation and substructure design, and detailed drawings for the courts' construction.

# Schedule 9 - State Tennis Centre Concept

# Schedule 10 - Associated Development Concept

# Schedule 11 - Transport and Access Works Concept

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# Schedule 12 - Site Plan and Plan of Land Re-Allocation

# Schedule 13 - Plans, Drawings and Diagrams
Schedule 14 - Schedules and Data Sheets

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# Schedule 15 - Method Statements, Analyses and Reports

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## Schedule 16 - Methodology for the Geotechnical Investigations and Design and Construction of the Tennis Courts

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## Schedule 17 - Implementation Program

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## Schedule 18 - Approvals Program

## Schedule 19 - Testing and Commissioning Program

## Schedule 20 - Details of Key Personnel

| Name | Role | Duration of Role |
|------|------|------------------|
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## Schedule 21 - Community Consultation Strategy

## Schedule 22 - Deed of Release in favour of Enertrade

Deed in favour of:

QUEENSLAND POWER TRADING CORPORATION ('QPTC') trading as Enertrade.

BY ## (DEVELOPER)

#### 1. DISCLAIMER AND RELEASE

DEVELOPER hereby releases and forever discharges QPTC from any loss (including consequential loss), damage, claim, action demand, cost or expense that DEVELOPER may suffer as a result of any residual contamination that may exist on the Site (as that term is defined in a certain Development Agreement between DEVELOPER and the State of Queensland in relation to the development of the State Tennis Centre at Tennyson).

#### 2. INDEMNITY

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DEVELOPER hereby indemnifies and will keep indemnified QPTC and its employees, contractors, agents, licensees and invitees (jointly and severally the 'Indemnified Party') from and against all claims, actions, demands, damages, losses (including consequential losses), costs and expenses suffered or incurred by the Indemnified Party (including any claims, actions or demands brought by any third parties) arising from or in connection with any residual contamination that may exist upon the Site.

#### 3. COSTS AND DUTY

Each party will bear its own costs of and incidental to this Deed, but DEVELOPER must pay all taxes and duties levied upon it.

#### 4. DEED POLL

This Deed Poll is made by DEVELOPER for the benefit of and to be relied upon by the Indemnified Party and is binding on and enforceable against DEVELOPER by the Indemnified Party.

Signed sealed and delivered as a Deed for and ) on behalf of \_\_\_\_\_ by \_\_\_\_ ) (who warrants they are authorised so to do) ) on the ## day of 200# in the presence ) of

Signatory

Witness

## Signing page

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#### **EXECUTED** as an agreement

| Executed for and on behalf of<br>by<br>, Deputy Premier,<br>Treasurer and Minister for Sport, in the<br>presence of |        | ·                                                                     |   |
|---------------------------------------------------------------------------------------------------------------------|--------|-----------------------------------------------------------------------|---|
| Signature of witness                                                                                                | ←      | The Honourable Terence Michael Mackenroth                             | • |
|                                                                                                                     |        |                                                                       |   |
| Name of witness (print)                                                                                             |        |                                                                       |   |
| document in accordance with its constitution in the presence of                                                     | ←-     |                                                                       |   |
| Signature of director                                                                                               |        | Signature of director/company secretary (Please delete as applicable) | - |
| Name of director (print)                                                                                            |        | Name of director/company secretary (print)                            | - |
| ## expressly acknowledge the existence of claus<br>as required by the QSBAA.                                        | e 14.1 | of this Agreement and have initialled the clause                      | 4 |
| Signature of director                                                                                               | ì      | Signature of director/company secretary                               |   |

Name of director (print)

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(Please delete as applicable)

Name of director/company secretary (print)

## **Further information**





## **Tennyson Riverside Development**

## Stage 2 Evaluation of Detailed Development Proposals

December 2004

A Report to the Tennyson Riverside Development Steering Committee

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#### Executive Summary

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On 23 August 2004, the Tennyson Riverside Development (TRD) Project Office received detailed development proposals (DDPs) from the three shortlisted proponents – Devine Limited (Devine), Mirvac Queensland (Mirvac) and Stockland Development Pty Ltd (Stockland) – as part of Stage 2 of the TRD competitive bid process.

In accordance with the Terms of Reference and Evaluation Methodology for Stage 2, an Evaluation Committee was established comprising members from the TRD Project Office.

The Evaluation Committee found that two (2) of the DDPs (from Devine and Stockland) are significantly non-conforming and could not be assessed against the Stage 2 documents. Both of these proponents located the State Tennis Centre (STC) on alternative sites (Devine on the Goprint site at Woolloongabba and Stockland on the adjoining Animal Research Institute (ARI) site). In effect, these shortlisted proponents consider the TRD on the Tennyson Power Station (TPS) site to be non-commercial.

A preliminary review of the Mirvac DDP indicated that it is conforming on the basis that it offers a STC and associated development predominantly on the TPS site and could be assessed against the Stage 2 documents. Based on a detailed evaluation, the final score against the evaluation criteria was 53.55 out of 100.

The Evaluation Committee found that the Mirvac DDP has a number of key strengths including:

- an open design for the centre court to capture the sub-tropical environment of Brisbane;
- a counter-sunk centre court to increase the visible amenity of the development and enhance spectator viewing and allow for bump-in of alternative court surfaces for major events;
- an effective layout for an international-standard STC, with a centre court that provides for 3,000 permanent and 4,000 temporary seats and an additional 22 match and training courts covering hardcourt, clay and grass surfaces;
- high quality associated development, which includes residential units and commercial facilities such as cafés, retail outlets and a separate gymnasium (intended for unit residents only) to make the development an attractive precinct;
- community access to the Brisbane River through the inclusion of pedestrian and bicycle pathways and public parkland;
- a positive value for money outcome for the State with the gross value to the State estimated at \$81.8 million compared to the value to Mirvac of \$13.03 million (noting these figures are not risk adjusted and are subject to finalisation of negotiations on the Development Agreement with Mirvac); and
- a financial offer to the State including a balance payment (up to \$24.25 million) and a profit sharing arrangement (of \$10.7 million assuming 4.5% revenue and 3% cost escalation).

However, the Evaluation Committee also found a number of weaknesses and areas where the DDP does not satisfy the Stage 2 requirements. These include:

• Mirvac's site plan involves the location of four tennis courts, a maintenance shed and large trees on easements, which is unacceptable to ENERGEX and Powerlink for safety, reliability of supply and access reasons;

- Mirvac has not used the access corridor identified by the State on the ARI site, and has located the STC car parking in the access corridor identified by the State;
- there are potentially adverse impacts on court playability and television broadcasting of centre court matches due to shadows cast from the centre court roof and trellis structures;
- there are concerns the location of the venue management facilities will not allow optimal operation of the STC in normal mode;
- inadequate information has been provided on a number of key STC requirements including temporary seating, methodology for construction, testing and commissioning of the tennis courts and essential building services such as fire and telecommunications;
- Mirvae has said it will not provide the 12-year warranties for the hard courts as requested in the STC Project Brief;
- Mirvac's transport plan is inadequate and the access arrangements to Yeerongpilly Rail Station are not Disability Discrimination Act (DDA) compliant;
- Mirvac has requested the establishment of a State Project Team to assist in facilitating project approvals in a timely manner;
- Mirvac is seeking approval to undertake early works ahead of satisfying the conditions precedent to bring forward the completion of the STC from May 2009 to May 2008 (based on execution of a Development Agreement in December 2004);
- Mirvac has proposed that there be a staged settlement with titles to the associated development being transferred to it based on the level of commitment in the STC and transport and access works;
- Mirvac has sought to cap the target costs for the STC and associated transport and access works, with final target costs not to be determined until the completion of detailed design, engineering drawings and detailed specifications, and with any costs above the target cost to be deducted from the balance payment to the State;
- Mirvac has estimated lifecycle costs of \$7.8 million over a 20 year period, which is significantly lower than Project Services' assessment of \$28.3 million over the same period (noting it is difficult to draw definitive conclusions on this matter until details are provided by Mirvac on the quality and finishes of materials); and
- Mirvac sought over 70 departures to the Development Agreement, many of which significantly shift the risk profile of the project to the State.

While Mirvac has not used the access corridor identified by the State, it has identified an alternative access corridor on the ARI site, which it believes provides a more direct route, minimises the impact on the ARI infrastructure and activities and provides a better "street address" for the development.

Specialist advisors to the TRD Project Office (including Sinclair Knight Merz and Urbis JHD) advised the alternative route represents a more effective access solution, subject to the inclusion of traffic calming measures to prevent "rat running" through the ARI and TPS sites. The Department of Primary Industries and Fisheries (DPIF) has indicated it supports the alternative access corridor and Brisbane City Council is likely to be supportive of this corridor. DPIF also indicated that it may seek compensation for any land made available for the TRD.

The Evaluation Committee concluded that Mirvac could not be appointed preferred proponent based on its current DDP. However, the Evaluation Committee considers Mirvac's DDP could be adapted to be an effective DDP if a number of threshold issues can be satisfactorily addressed.

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The Evaluation Committee also found that while Mirvac will be required to address a number of deficiencies, the State may need to consider varying some of its project requirements to maximise the chances of a successful outcome and securing this landmark development, including an international-standard STC for Queensland.

The Evaluation Committee considers that if the State wishes to progress Mirvac's DDP to identify whether it can be appointed preferred proponent and subsequently preferred developer, the following approach should be adopted:

- 1. representatives of the State to meet with representatives of Mirvac to discuss the evaluation outcomes and the process for progressing consideration of Mirvac's DDP;
- 2. Mirvac to be provided with a paper outlining the outcome of the evaluation of its DDP, any changes proposed by the State to facilitate the project and changes Mirvac would need to make to its DDP in order to be appointed preferred proponent;
- 3. the State and Mirvac to agree on an approach to negotiating the terms of the Development Agreement to reflect an acceptable risk profile for both parties;
- 4. a Project Team to be established, chaired by SRQ, to advise Mirvac on project approval and infrastructure requirements, but with the clear understanding that Mirvac would be required to obtain all approvals; and
- 5. the negotiation process to be subject to oversight by the Probity Auditor and the TRD Project Office to have access to specialist advisers for what would be a complex negotiation process.

The TRD Project Office would envisage that steps 1 to 3 above could be managed within a timeframe of around two months to minimise the time and resources required from both parties to enter negotiations.

The negotiating framework should include the State's position on the threshold issues outlined above and a process to work collaboratively with Mirvac to modify its DDP to be consistent with the State's position on these issues.

In addition, the TRD Project Office should advise Devine and Stockland that it has entered into commercial-in-confidence negotiations with Mirvac in relation to its DDP and that they will be advised of the outcomes of this process.

The evaluation process and the preparation of this report have been subject to independent probity oversight.

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#### 1 Introduction

On 23 August 2004, the Tennyson Riverside Development (TRD) Project Office received detailed development proposals (DDPs) from Devine Limited (Devine), Mirvac Queensland (Mirvac) and Stockland Development Pty Ltd (Stockland) as part of Stage 2 of the TRD competitive bid process.

The purpose of this report is to detail the process for the evaluation of the DDPs and provide the TRD Steering Committee with the Evaluation Committee's findings and recommendations. This report contains the following sections:

- Section 2 overview of the evaluation process, including the methodology;
- Section 3 an outline of the DDPs submitted; and
- Section 4 findings and recommendations.

#### 2 Evaluation Process

#### 2.1 Composition of the Evaluation Committee

In accordance with the Terms of Reference and Evaluation Methodology for Stage 2, an Evaluation Committee was established to evaluate the DDPs. The composition and operation of the Evaluation Committee were endorsed by the TRD Steering Committee at its meeting on 7 May 2004. The Evaluation Committee was comprised of:

- <u>Tim Peisker (Chair, Sport and Recreation Queensland (SRQ));</u>
- (SRQ); and
- (SRQ).

#### 2.2 Specialist Advisors

The Evaluation Committee was provided with specialist advice on:

- legal issues MinterEllison;
- technical issues Project Services;
- financial and risk issues Queensland Treasury;
- transport issues Sinclair Knight Merz;
- land valuation issues LandMark White; and
- urban planning issues Urbis JHD.

Specific terms of reference for each of the specialist advisors were developed.

#### 2.3 Evaluation Methodology

The evaluation was undertaken using a weighted score assigned to each of the five (5) evaluation criteria listed in the *Request for Detailed Development Proposals* document. While the proponents were advised of the criteria in the Stage 2 document, the weightings were not disclosed.

The evaluation methodology including the weighting and scoring system was considered and endorsed by the TRD Steering Committee on 7 May 2004. The evaluation criteria and their respective weightings are as follows:

| Criteria                                     | Weighting (%) |
|----------------------------------------------|---------------|
| Total development and operational concept    | 30            |
| Transport and access arrangements            | 10            |
| Project management and resources             | 15            |
| Financial capability and project feasibility | 25            |
| Impacts on the State                         | 20            |
| Total                                        | 100           |

The scoring system for each criterion, which reflects the quality of responses and the level of compliance, is:

| Score | Description                                                      |
|-------|------------------------------------------------------------------|
| 9-10  | Excellent – exceeds required standards                           |
| 7-8   | Very Good – meets required standards                             |
| 5-6   | Good – meets required standards except for minor aspects         |
| 3-4   | Marginal – does not meet required standards but may be adaptable |
| 1-2   | Poor – major non-compliance with required standards              |
| 0     | Non-compliant                                                    |

Scores from each Evaluation Committee member were considered and a moderation process was undertaken to determine a single collective 'raw' score for each criterion. Weighted scores were then calculated for each criterion and totalled for Mirvac's DDP.

The probity auditor attended all key meetings of the Evaluation Committee.

#### 3 Outline of Detailed Development Proposals Submitted

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DDPs were received from three (3) parties by 2.00 pm, Monday 23 August 2004 – Devine, Mirvac and Stockland.

No late DDPs were received. The opening of the DDPs was witnessed by Tim Peisker, and (probity auditor) as the Opening Committee.

The key elements of each of the proposals received by the TRD Project Office are outlined in detail below.

#### Devine proposal

Devine has proposed a \$51 million State Tennis Centre (STC) located on the Goprint site at Woolloongabba featuring a 6,700 permanent seat stadium, 16 match courts, two (rather than four) clay courts and two grass courts. The proposal includes an offer of \$8 million to the State to re-establish the Goprint facility and some of the Land Centre offices to another unidentified location.

Devine has proposed a \$210 million five stage mixed residential development on the Tennsyon Power Station (TPS) site, anticipated to include 484 residential units, 39 vacant residential lots and 25 townhouses. Devine's proposal stated that if the State also provides the Animal Research Institute (ARI) site to Devine for residential development, opportunities exist for creating a fully enclosed weather-proof stadium on the Goprint site for use by other court sports and entertainment.

Devine acknowledged that its DDP is non-conforming primarily because it proposed to locate the STC on the Goprint site at Woolloongabba.

#### Mirvac proposal

Mirvac has proposed a STC (\$49.64 million), transport and access infrastructure (\$7.28 million) and associated development (\$169.5 million) located predominantly on the TPS site. While Mirvac identified an alternative access route through the ARI site, it advised it could use the State's nominated access corridor, if required, but at a cost of \$8.5 million (including around \$2.5 million to re-profile Fairfield Road) and subject to reviewing its implementation program.

Mirvac's STC includes a counter-sunk centre court to increase the visible amenity of the development and enhance spectator viewing. The STC also features a stadium with 3,000 permanent seats and space for 4,000 temporary seats, 16 match courts, four clay courts, two grass courts and facilities for Tennis Queensland and venue management.

Mirvac has proposed a five stage residential development on the TPS site comprising 318 units in six residential buildings on the northern part of the site. Unit prices range from \$830,000 for a two bedroom unit to an average of \$2.565 million for penthouses. The associated development also includes retail outlets, cafés and a gymnasium intended for the use of associated development residents.

Mirvac has also included a number of bid enhancements at an additional cost totalling \$6.9 million. These are 5,500 permanent seats in the centre court (\$3.6 million), a sports science centre (\$0.5 million), a Legends Hall of Fame (\$1.5 million) and a City Cat Terminal (\$1.3 million).

#### Stockland proposal

Stockland has proposed to purchase both the TPS and ARI sites from the State for \$45 million paid in three installments. Stockland has proposed that the \$45 million would be sufficient for the State to fund and construct the STC on the ARI site and relocate the Department of Primary Industries and Fisheries' (DPIF) facilities.

Stockland has also proposed to construct a residential development on both the ARI and TPS sites. Stockland indicated it would construct an estimated 920 dwellings in a mix of housing lots, riverfront duplexes, terrace houses and one, two and three bedroom apartments in buildings from 4-8 storeys.

Stockland has proposed that the associated development component would incorporate a community building focused on health and lifestyle activities and sports administration and around  $1,000m^2$  for commercial / retail opportunities.

Stockland acknowledged that its DDP is non-conforming on the basis that the STC and part of the associated development would be located on the adjoining TPS site.

#### **3.1** Conformance and Preliminary Review

The DDPs were assessed for compliance with the submission requirements detailed in Section 6.4 of the *Request for Detailed Development Proposals* document.

A preliminary review was undertaken to determine whether the DDPs conformed with the Government's requirements for the TRD. Based on this review, only the Mirvac DDP demonstrated a high degree of conformance, with minor departures from the specified requirements. Two (2) of the DDPs were non-conforming as they incorporated significant departures and could not be assessed against the Stage 2 evaluation criteria. These were:

- Devine as it proposed to locate the STC on the Goprint site at Woolloongabba and included an offer of \$8 million to relocate the Goprint and some State Land facilities to a unidentified site; and
- Stockland primarily as it proposed to locate the STC on the ARI site and offered \$45 million to the State to fund and construct the STC.

A more detailed compliance review of the Mirvac DDP was conducted to determine if all of the material requested in the Stage 2 documents had been provided and any issues requiring clarification. The review highlighted that not all of the material was provided and some was of insufficient quality or detail to fully evaluate Mirvac's DDP.

The TRD Project Office subsequently developed a list of additional information required and issues that needed clarification from Mirvac to ensure a robust assessment could be undertaken of the Mirvac DDP. Mirvac was requested to provide this information by 3 November 2004.

Mirvac provided a response on 3 November 2004. While Mirvac provided information against the majority of areas, there were some areas where it did not fully respond such as the accommodation of temporary seating and some of the transport and access arrangements. Overall, however, the TRD Project Office considered Mirvac had provided sufficient information to allow a robust assessment of its DDP to be completed.

#### 3.2 Assessment of Mirvac's Detailed Development Proposal

The Evaluation Committee made the following conclusions with respect to each evaluation criterion for the Mirvac DDP. In undertaking its assessment against each criterion, the Evaluation Committee considered advice from its specialist advisors including Project Services and Queensland Treasury. The Evaluation Committee also considered the results of consultation with key stakeholders including ENERGEX, Powerlink, Tennis Queensland, Tennis Australia, Queensland Rail, Brisbane City Council (BCC) and DPIF.

| Criteria                              | Sub-Criteria                                                                         | Sub-Criteria<br>Weighting<br>(%) | Sub-Criteria<br>Overall Weighting<br>(%) | Weighted<br>Score |
|---------------------------------------|--------------------------------------------------------------------------------------|----------------------------------|------------------------------------------|-------------------|
| Total<br>development<br>& operational | <ul><li>State Tennis Centre</li><li>Associated Development</li><li>General</li></ul> | 60<br>30<br>10                   | 18<br>9<br>3                             | 9<br>6.3<br>1.8   |
| concept                               |                                                                                      |                                  | 30                                       | 17.1              |

*Total Development and Operational Concept* 

Mirvac has proposed a STC that is generally consistent with the State's objectives for the facility. It proposes a stand-alone facility, with a centre court that caters for 3,000 permanent and 4,000 temporary seats. The facility also provides 22 match and training courts covering acrylic hardcourt, clay and grass surfaces.

While Mirvac met a number of the minimum requirements for the STC, some facilities, equipment and performance standards have not been satisfied. These include the provision of a lower level of court lighting, absence of some court equipment, some temporary rather than permanent player facilities and insufficient measures to segregate various user groups.

In addition, there are areas where Mirvac has not provided adequate information in response to the STC requirements such as temporary seating, disability access, the methodology for the construction, testing and commissioning of the tennis courts and essential building services for example fire, telecommunications and audiovisual.

The roof and trellis structure for the centre court casts a slatted shadow, which could adversely impact the playability of the court and television broadcasting. Further, while the proposed location of the venue management facilities is appropriate for major event mode, advice from Tennis Queensland (TQ) indicates it will not allow optimal operation in normal mode.

There are other areas where the Mirvac proposal has not met the overall project requirements including construction of some project infrastructure over electricity easements (eg. tennis courts and transport access) and some courts built below the 1:100 year flood level. There is also concern about the extent to which the STC will have sufficient presence amongst the associated development and consideration would need to be given to the location of signage and artwork.

Mirvac has proposed a high quality, high density residential development staged over the period from July 2006 to December 2010. The development also includes commercial facilities such as cafés, retail outlets and a separate gymnasium (intended for unit residents only) to make the development an attractive precinct.

Mirvac has also provided good access to the Brisbane River through bicycle and pedestrian pathways, playgrounds and BBQs.

Mirvac scored 17.1 out of 30 for this criterion, which included a score of 9 out of 18 for the STC sub-criteria.

Transport and Access Arrangements

| Criteria      | Sub-Criteria        | Sub-Criteria<br>Weighting (%) | Sub-Criteria<br>Overall Weighting<br>(%) | Weighted<br>Score |
|---------------|---------------------|-------------------------------|------------------------------------------|-------------------|
| Transport and | State Tennis Centre | 30                            | 3                                        | 1.2               |
| access        | Animal Research     | 20                            | 2                                        | 1.2               |
| arrangements  | Institute           |                               |                                          |                   |
|               | Total Development   | 50                            | 5                                        | 2                 |
|               |                     |                               | 10                                       | 4.4               |

Mirvac did not use the State's transport and access corridor through the ARl site, but advised it could, if required, at a cost of \$6 million to reinstate the ARI buildings plus the costs of re-profiling Fairfield Road (nominally \$2.5 million) and subject to reviewing the implementation program.

Mirvac identified an alternative access corridor, which it believes provides a more direct route, minimises the impact on the ARI facilities and activities and provides a better "street address" for the TRD. Advice from Sinclair Knight Merz indicates that the alternative access corridor provides an effective route, subject to appropriate measures being implemented to reduce the potential for "rat-running" through the ARI and TPS sites. The alternative access route is also preferred by DPIF and it appears that BCC would also support this corridor. DPIF has also indicated it may seek compensation for any land made available for the TRD.

There are a range of deficiencies in Mirvac's proposed transport infrastructure and strategy that need to be addressed including:

- conflicts between pedestrians and vehicles at the plaza entry of the STC site and on the boulevard;
- remoteness of the carpark from the STC entry, particularly for patrons with a disability;
- disability access issues within the site and to/from the external public transport nodes, particularly Yeerongpilly Rail Station;
- Mirvac has advised that any costs associated with upgrading the rail stations to be Disability Discrimination Act compliant should be met by the responsible authority (that is, Queensland Transport);
- insufficient allocation of set-down bays for public buses and an associated marshalling and milling area;
- insufficient turnaround areas for coaches and buses within the STC site;
- minimal details in relation to passenger milling for coach and taxi operations post event mode; and
- the alignment and width of cycle and pedestrian pathways do not appear to be consistent with accepted standards, particularly for cyclists.

Mirvac also identified a secondary access route via a roundabout from Softstone Street, which is primarily designed to provide access for the residents of the associated development. While the BCC has previously indicated it supported pedestrian and bicycle access at Softstone Street, it has advised vehicular access would be subject to technical advice.

Mirvac scored 4.4 out of 10 for this criterion, which included a score of 1.2 out of 3 for the STC sub-criteria.

| Criteria              | Sub-Criteria                                              | Sub-Criteria<br>Weighting<br>(%) | Sub-Criteria<br>Overall<br>Weighting<br>(%) | Weighted<br>Score |
|-----------------------|-----------------------------------------------------------|----------------------------------|---------------------------------------------|-------------------|
| Project<br>management | Corporate and management<br>structure & key personnel     | 30                               | 4.5                                         | 3.6               |
| & resources           | <ul> <li>Implementation/approvals<br/>programs</li> </ul> | 40                               | 6                                           | 2.4               |
|                       | Tennis court methodology                                  | 30                               | 4.5                                         | 1.35              |
|                       |                                                           |                                  | 15                                          | 7.35              |

#### Project Management and Resources

Mirvac and its consultants have a strong track record of delivering developments of a comparable nature to the TRD. A number of the consultants engaged by Mirvac have extensive experience in their respective industries, including HOK Sport which is recognised as a world leader in the development of sports infrastructure.

Mirvac has not yet identified a building contractor with the intention being to put this work out to tender if Mirvac is appointed as the preferred developer. This raises risks for the State in terms of the availability of a quality contractor in a competitive building market and the ability to fix construction costs before executing a Development Agreement.

Mirvac has sought a number of changes to the approval and timing arrangements set out in the Development Agreement. These include:

- a request for the establishment of a State Project Team to facilitate the project approvals in a timely manner;
- a request for approval to undertake demolition and site remediation works prior to the satisfying the conditions precedent in the Development Agreement (to bring forward the completion of the STC from May 2009 to May 2008);
- extensions to the critical finish date for the STC from 18 months to 20 months (or 32 months if early works are not approved);
- a request that the State pass title for the land for associated development progressively based on the expenditure Mirvac has incurred on the STC rather than having the title transferred at the time the STC is handed over; and
- a requirement that the Mirvac DDP is conditional upon the receipt of satisfactory project approvals to Mirvac's absolute discretion.

Further, Mirvac has not provided adequate detail on the geotechnical design, testing and construction program for the tennis courts and has not guaranteed delivery of the court performance warranties requested by the State.

Mirvac scored 7.35 out of 15 for this criterion.

Financial Capability and Project Feasibility

| Criteria                   | Sub-Criteria                                                     | Sub-Criteria<br>Weighting<br>(%) | Sub-Criteria<br>Overall Weighting<br>(%) | Weighted<br>Score |
|----------------------------|------------------------------------------------------------------|----------------------------------|------------------------------------------|-------------------|
| Financial                  | • Financial soundness of the monoport                            | 25                               | 6.25                                     | 5                 |
| and project<br>feasibility | <ul> <li>Financial feasibility of<br/>the development</li> </ul> | 50                               | 12.5                                     | 7.5               |
| ,                          | • Funding confirmation                                           | 25                               | 6.25                                     | - 5               |
|                            |                                                                  |                                  | 25                                       | 17.5              |

Mirvac has a strong financial position and over 30 years experience in constructing, developing and financing projects comparable to the TRD (such as Cutters Landing, Arbour on Grey and Newstead River Park). Mirvac advised it has sufficient funding from its existing lenders to fund the total development.

Based on Mirvac's assumptions, the project is financially viable with a net present value (NPV) of around \$54.026 million (assuming 4.5% revenue and 3% cost escalation). Sensitivity analysis indicates the project is susceptible to changes in the number of units, the selling price and the assumptions on revenue escalation. It should be noted that the Evaluation Committee did not obtain specialist advice on the future conditions of the residential market as this is a risk primarily borne by Mirvac.

The sensitivity analysis shows changes in the degree of revenue escalation have the most significant impact on the value of the project. For example, if revenue escalation was 1% compared to the 4.5% assumed by Mirvac, the NPV would decline from \$54.026 million to \$23.275 million or by \$30.751 million.

The analysis indicates that the project would become unviable if 80 2-bedroom units were removed (assuming escalation), which could occur should BCC not approve the full extent of Mirvac's associated development. The project would also become unviable if selling prices decreased by 19% (assuming escalation).

Mirvac's proposal offers the State potential for financial payments in the form of a balance payment (of up to \$24.25 million) and the opportunity for a profit sharing arrangement (of \$10.7 million under one project outcome scenario).

There are concerns that some project costs may be underestimated such as contingency (\$9.15 million or only 2.97% of total project costs), construction of the STC (\$49.6 million or 11% less than Project Services' value check estimate), site demolition and remediation works (\$3.7 million) and transport and access works (\$7.28 million). The \$24.25 million balance payment offered by Mirvac will be eroded by any increases in these costs.

Given the revenue and cost pressures, there is no guarantee the Government will receive funds under the profit sharing arrangement offered by Mirvac. Mirvac has also requested that the GST Margin Scheme be applied and further consideration of this issue is required to determine whether the scheme can be applied. If the GST Margin Scheme cannot be applied, the balance payment reduces by \$4.63 million.

Mirvac scored 17.5 out of 25 for this criterion.

Impacts on State

| Criteria   | Sub-Criteria                 | Sub-Criteria<br>Weighting<br>(%) | Sub-Criteria<br>Overall Weighting<br>(%) | Weighted<br>Score |
|------------|------------------------------|----------------------------------|------------------------------------------|-------------------|
| Impacts on | • Implications for the State | 60                               | 12                                       | 4.8               |
| the State  | • Risk management & risk     | 40                               | . 8                                      | 2.4               |
|            | allocation                   |                                  |                                          |                   |
|            | Α                            |                                  | 20                                       | 7.2               |

Advice from Queensland Treasury indicates that the Mirvac DDP provides a positive value for money outcome for the State. In this regard, the gross value delivered to the State is around \$81.8 million compared to the value to Mirvac that has been estimated at \$13.03 million. These calculations have not been risk adjusted and are subject to the finalisation of negotiations on the Development Agreement with Mirvac.

The Mirvac DDP has the potential to provide flow-on benefits to the State, including stamp duty from the associated development and potential employment opportunities, not reflected in the financial modelling. Further, Mirvac offered a range of options to provide development programs such as a program for emerging locally-based artists.

Nevertheless, the project carries material risks for the State as demonstrated through over 70 departures to the Development Agreement identified by Mirvac, many of which seek to transfer significant risk to the State.

The key risks to the State include:

- the proposal to construct some of the project infrastructure over easements given the tight fit of the site (which the electricity GOCs advise cannot be done on safety grounds);
- the proposal to place a cap on the costs associated with constructing the STC and the transport and access works resulting in the strong probability the State will have to meet the costs for necessary access works (particularly the costs of required disability access);
- the proposal to delay the fixing of the target cost for the STC and transport and access works until completion of detailed design, engineering drawings and detailed specification;
- a \$4.63 million reduction in the balance payment if the State cannot adopt the GST Margin Scheme;
- the profit share is determined only after Mirvac has accounted for all costs and revenues associated with the project and only if the internal rate of return is 18% (post-interest);
- the proposal to seek approval from the BCC for the associated development based on a whole-of-site master plan approach, which requires the State to acquire the TPS site from Enertrade earlier than anticipated and bear any liabilities;
- a request to commence early demolition and site remediation works to bring forward the completion of the STC from May 2009 to May 2008;
- a request that the State pass title to the land for the associated development progressively based on the expenditure Mirvac has incurred on the STC rather than having the title transferred at the time the STC is handed over;
- a suggestion that the warranty period of 12 years for the acrylic hard courts is too long, although an alternative period has not been identified;

- a request for the State to provide a guarantee to Mirvac that the area for the associated development (that is, excluding the STC site) can be removed from the Environmental Management Register; and
- the assumption that the State will 'help' in the approvals process.

Further investigation is also required to understand the basis on which the lifecycle costs for the STC have been estimated by Mirvac. Mirvac has provided an estimate of \$7.8 million over a 20 year period in 2004 dollars, which is significantly lower than Project Services' value check of \$28.3 million over the same period. Without an understanding of the quality of the materials and finishes that Mirvac is proposing, it is difficult to draw definitive conclusions in respect of this matter.

In addition, while the TRD Project Office held preliminary discussions with BCC, in the absence of a concept plan, BCC could not provide definitive advice on whether it would approve the form and density of the proposal submitted by Mirvac.

Mirvac scored 7.2 out of 20 for this criterion.

#### Assessment Summary

The Evaluation Committee's overall assessment of the Mirvac DDP is summarised in the table below.

| <b>Evaluation Criteria (Weighted Scores)</b> |                        |                            |                       |                         |                         |                |
|----------------------------------------------|------------------------|----------------------------|-----------------------|-------------------------|-------------------------|----------------|
|                                              | Development<br>Concept | Transport<br>and<br>Access | Project<br>Management | Financial<br>Capability | Impacts on<br>the State | Total<br>Score |
| Mirvac                                       | 17.1                   | 4.4                        | 7.35                  | 17.5                    | 7.2                     | 53.55          |
| Weighting                                    | 30                     | 10                         | 15                    | 25                      | 20                      | 100            |

#### Table 1 – Assessment Summary

#### 4 Findings and Recommendations

The Evaluation Committee found that two (2) of the DDPs (from Devine and Stockland) are significantly non-conforming and could not be assessed against the Stage 2 documents primarily as they located the STC on alternative sites. In effect, these shortlisted proponents considered the development of the TRD on the TPS site to be non-commercial and sought to offer the State alternative proposals.

Based on a preliminary review the Evaluation Committee considered Mirvac's DDP is conforming in that it offers a STC and associated development predominately on the TPS site and could be assessed against the Stage 2 evaluation criteria.

The Evaluation Committee found that the Mirvac DDP has a number of key strengths including:

- an open design for the centre court to capture the sub-tropical environment of Brisbane;
- a counter-sunk centre court to increase the visible amenity of the development and enhance spectator viewing;
- an effective layout for an international-standard STC, with a centre court that provides for 3,000 permanent and 4,000 temporary seats and an additional 22 match and training courts covering hardcourt, clay and grass surfaces;
- high quality associated development, which includes commercial facilities such as cafés, retail outlets and a separate gymnasium (intended for unit residents only) to make the development an attractive precinct;
- community access to the Brisbane River through the inclusion of pedestrian and bicycle pathways and public parkland; and
- an offer the State of a number of financial payments including a balance payment (up to \$24.25 million) and profit sharing arrangements (of \$10.7 million assuming 4.5% revenue and 3% cost escalation).

However, the detailed evaluation identified a number of weaknesses and areas where the DDP did not satisfy the Stage 2 requirements. These included:

- Mirvac did not consult with ENERGEX and Powerlink about the easement terms and conditions on the TPS site, and perhaps in consequence provided a site plan which locates tennis courts, a maintenance shed and large trees on easements, this being unacceptable to ENERGEX and Powerlink for safety, reliability of supply and access reasons;
- Mirvac has not used the State's access corridor on the ARI site, preferring an alternative access corridor through the northern part of the ARI site, and located the STC car parking on the ARI site in the State's access corridor;
- Mirvac's roof and trellis structure for the STC centre court casts a slatted (rather than even) shadow, which may cause problems for playability and televising of events;
- the venue management offices are not located to allow optimal operation of the STC in normal mode;
- Mirvac did not provide adequate information on a number of STC requirements including temporary seating arrangements, the methodology for the construction, testing and commissioning of the tennis courts and essential building services such as fire, telecommunications and audiovisual;
- Mirvac did not provide the 12-year warranties for the tennis hard courts requested in the STC Project Brief;

- Mirvac's transport plan is inadequate and the access arrangements to Yeerongpilly Rail Station are not DDA compliant;
- Mirvac sought a number of changes to the project approval and timing arrangements including:
  - the establishment of a State Project Team to help facilitate project approvals;
  - a request to undertake early works on the TPS and ARI sites ahead of obtaining the project approvals (to bring forward the completion of the STC from May 2009 to May 2008);
  - extensions to the critical finish date for the STC from 18 months to 20 months;
  - staging of the associated development and STC;
  - a requirement that Mirvac's DDP is conditional upon the receipt of all necessary approvals to Mirvac's absolute discretion, but on the basis that the State could not withdraw from the agreement if proposed conditions were unacceptable to the State;
- Mirvac sought to cap the target costs for the STC and associated transport and access works with the final target costs not to be determined until the completion of detailed design, engineering drawings and a detailed specification, with any costs above the target cost to be deducted from the balance payment to the State;
- Mirvac has estimated lifecycle costs of \$7.8 million over a 20 year period, which is significantly lower than Project Services' assessment of \$28.3 million over the same period (noting it is difficult to draw definitive conclusions on this matter until details are provided by Mirvac on the quality and finishes of materials); and
- Mirvac sought over 70 departures to the Development Agreement which significantly shift the risk profile of the project to the State. These departures change the commercial parameters in Mirvac's favour, relax the time limits applicable to Mirvac's performance, expand Mirvac's control over design and quality and reduce Mirvac's exposure to legal and commercial liability.

While Mirvac has not used the access corridor identified by the State, it has identified an alternative access corridor which it believes provides a more direct route, minimises the impact on the ARI infrastructure and activities and provides a better "street address" for the development. Specialist advisors to the TRD Project Office (including Sinclair Knight Merz and Urbis JHD) advised that the alternative route is a more effective access solution, subject to the inclusion of traffic calming measures to prevent "rat running" through the ARI and TPS sites. DPIF has advised it supports the corridor and BCC is likely to support the corridor. DPIF has also indicated it may seek compensation for any land made available for the TRD.

Mirvac has included an offer to undertake early works to bring forward the delivery of the STC from May 2009 to May 2008, assuming a development agreement is executed in December 2004 (which cannot now occur). If access for early works is not possible, and a Development Agreement could be negotiated by mid 2005, a more likely timeframe for the STC is early 2010 (subject to no major delays). This timeframe would be unacceptable to TQ, Tennis Australia and SRQ. Further, there may be concerns raised by the local community in relation to the long construction timeframe for the development.

Based on the above, the Evaluation Committee concludes that Mirvac could not be appointed preferred proponent based on its existing DDP. However, the Evaluation Committee considers Mirvac's DDP could be adapted to be an effective DDP if the threshold issues outlined above are addressed and the State was to play a greater facilitation role in the TRD. In considering these issues, the Evaluation Committee considers Mirvac would be unlikely to want to commit the time and money required to significantly revise its DDP in the absence of a commitment from the State that Mirvac would be appointed preferred proponent if it modifies its DDP to the State's satisfaction.

Also, as outlined earlier, Mirvac has sought significant variations to the Development Agreement which changes the risk profile of the project in Mirvac's favour. The State and Mirvac would need to reach early agreement on whether a Development Agreement acceptable to both parties can be prepared. Otherwise, significant time and resources could be expended by both parties through a negotiation process without a successful outcome.

The Evaluation Committee considers that if the State wishes to progress Mirvac's DDP to identify whether it can be appointed preferred proponent and subsequently developer, the following approach should be adopted:

- 1. representatives of the State to meet with representatives of Mirvac to discuss the evaluation outcomes and the process for progressing consideration of Mirvac's DDP;
- 2. Mirvac to be provided with a paper outlining the outcome of the evaluation of its DDP, any changes proposed by the State to facilitate the project and changes Mirvac would need to make to its DDP in order to be appointed preferred proponent;
- 3. the State and Mirvac to agree on an approach to negotiating the terms of the Development Agreement to reflect an acceptable risk profile for both parties;
- 4. a Project Team to be established, chaired by SRQ, to advise Mirvac on project approval and infrastructure requirements, but with the clear understanding that Mirvac would be required to obtain all approvals; and
- 5. the negotiation process to be subject to oversight by the Probity Auditor and the TRD Project Office to have access to specialist advisers for what would be a complex negotiation process.

The TRD Project Office would envisage that steps 1 to 3 above could be managed within a timeframe of around two months to minimise the time and resources required from both parties to enter negotiations.

The negotiating framework should include the State's position on the threshold issues outlined above and a process for Mirvac to modify its DDP to be consistent with the State's position on the issues.

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In addition, the TRD Project Office should advise Devine and Stockland that it has entered into commercial-in-confidence negotiations with Mirvac in relation to its DDP and that they will be advised of the outcomes of this process.

Tim Peisker (Chair) Director Sport and Recreation Business Development Division

### Manager

Tennyson Riverside Development Project

Date: .....

Manager Business Development and Advice Unit

Date: .....

Date: .....

Reviewed by:

Executive Director Argyle Corporate Advisers Pty Limited

Date: .....

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## 5/04/01040

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#### DEPUTY PREMIER THROUGH DIRECTOR-GENERAL

#### SUBJECT

Tennyson Riverside Development – Letter to Mirvac

#### BACKGROUND

On 7 December 2004, you approved a brief from Sport and Recreation Queensland on the Tennyson Riverside Development (TRD) – Stage 2 Evaluation Process Outcomes (BN9405.04). In doing so, you noted the outcomes of the Stage 2 evaluation process for the TRD and endorsed a negotiation strategy to determine whether Mirvac can be appointed preferred proponent for the TRD.

COP

#### **CURRENT STATUS**

Subsequent to your endorsement of the negotiation strategy, the TRD Project Office has prepared a letter to Mirvac outlining the outcomes of the evaluation process and the negotiation strategy. The letter, which has been endorsed by the Tennyson Riverside Development Steering Committee, is attached for your information (Attachment 1). A summary of the key elements of the letter and the associated attachments are outlined below.

#### *(i)* Letter to Mirvac

The letter to Mirvac outlines the three (3) step negotiation process for determining whether Mirvac can be appointed preferred proponent and subsequently preferred developer for the TRD. The steps are as follows:

- Step 1 seeks a response in writing from Mirvac by 17 January 2005 that Mirvac will commit to address the threshold issues associated with Mirvac's Detailed Development Proposal (DDP) identified during the evaluation process and negotiate a revised Development Agreement with the State;
- Step 2 requires Mirvac to submit a revised DDP; and
- Step 3 the State and Mirvac to negotiate a revised Development Agreement.

The letter indicates that, subject to Mirvac's commitment to and cooperation in this process, the following indicative timelines are envisaged:

- written response from Mirvac on State's invitation 17 January 2005;
- Mirvac to submit revised DDP 28 February 2005;
- State to review and assess revised DDP March 2005;
- decision on whether or not Mirvac would be appointed preferred proponent 31 March 2005;
- if Mirvac is appointed preferred proponent, State and Mirvac to negotiate a Development Agreement April 2005;
- if a suitable Development Agreement is negotiated, decision on whether or not Mirvac would be appointed preferred developer May 2005.

#### (ii) Threshold Issues

Attachment A to the letter outlines the 19 threshold issues associated with Mirvac's DDP and the State's position on each of these issues.

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You have previously approved these threshold issues, noting that minor changes have been made to issue number 16 to reflect concerns held by Treasury about the need to ensure Mirvac is responsible for all costs of establishing the STC and transport and access works and for Mirvac to identify and lock in the costs of that infrastructure as early as possible and accept price risk from that time.

#### (iii) Departures to the Development Agreement

Attachment B to the letter outlines the State's response to 70 plus departures sought by Mirvac to the draft Development Agreement through its DDP. You have similarly previously approved this document.

#### (iv) Priority State Tennis Centre Issues

Attachment C to the letter outlines the main areas where Mirvac's DDP did not adequately address the Government's minimum requirements for the STC as set out in the *State Tennis Centre Project Brief.* Mirvac would need to address the priority State Tennis Centre issues in revising its DDP.

#### Timing

It is proposed to forward the letter to Mirvac in the week beginning 20 December 2004.

#### RECOMMENDATIONS

It is recommended that you note the information contained in this brief.

| Prepared by:<br>Tim Peisker<br>Director, Sport and Recreation<br>Business Development Division<br>Tel: 323 59582 | Endorsed by:<br>Executive Director<br>Sport and Recreation Queensland<br>Tel: 323 71356<br>Date: 21-12-2004, |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Cleared by:<br>Acting Manager, Executive Services<br>Office of the Director-General<br>Tel: 324 73642            | Endorsed by:<br>Dr Ted Campbell<br>Director-General<br>Tel: 323 93216                                        |
| Date:                                                                                                            | Date:                                                                                                        |
| Recommendation Approved:                                                                                         | 2.2 DEC 2004                                                                                                 |
| Date:                                                                                                            |                                                                                                              |

#### SO4/5824

#### 2 1 DEC 2004

Chief Executive - Queensland The Mirvac Group PO Box 5121 WEST END QLD 4101

Dear

I refer to the Detailed Development Proposal (DDP) submitted by Mirvac on 23 August 2004 and the additional information provided by Mirvac on 3 November 2004 under Stage 2 of the Tennyson Riverside Development (TRD) competitive bid process.

#### Stage 2 evaluation process outcomes

The evaluation process under Stage 2 of the TRD competitive bid process has now been completed with the following outcomes.

Mirvac's DDP presented a sound basis for the TRD with a number of strengths including:

- an open design for the centre court to capture the sub-tropical environment of Brisbane;
- a counter-sunk centre court to increase the visible amenity of the State Tennis Centre (STC), enhance spectator viewing and allow for bump-in of alternative court surfaces for major events;
- a centre court and an additional 22 match and training courts covering hardcourt, clay and grass surfaces;
- high quality residential development including commercial facilities such as cafés, retail outlets and a gymnasium (intended for unit residents only) to make the development an attractive precinct;
- an alternative access corridor through the Animal Research Institute (ARI) site to provide a more direct route to the development and less impact on ARI facilities and activities;
- community access to the Brisbane River through the inclusion of pedestrian and bicycle pathways and public parkland; and
- a financial offer to the State including a balance payment and a profit sharing arrangement.

However, Mirvac's DDP did not satisfy the Stage 2 requirements for the TRD in a number of critical areas including:

• the site plan involves the location of part of four tennis courts, a maintenance shed and large trees on easements to be held by ENERGEX and Powerlink. Both ENERGEX and

Powerlink are of the view this is unacceptable for safety, reliability of supply and access reasons;

- Mirvac did not use the access corridor identified by the State on the Animal Research Institute (ARI) site, and located the STC car parking in part of the access corridor identified by the State;
- potentially adverse impacts on court playability and television broadcasting of centre court matches due to the shadows cast from the centre court roof and trellis structures;
- concerns that the location of the venue management facilities will not allow optimal operation of the STC in day-to-day mode;
- inadequate information on some key STC requirements such as temporary seating, methodology for construction, testing and commissioning of the tennis courts and essential building services such as fire and telecommunications;
- Mirvac has said it will not provide the 12-year warranties for the hard courts as requested by the State in the *State Tennis Centre Project Brief*;
- the transport plan is inadequate and the access arrangements to Yeerongpilly Rail Station are not compliant with the requirements of the *Disability Discrimination Act 1992*;
- Mirvac is seeking approval to undertake early works ahead of satisfying the conditions precedent;
- Mirvac has proposed that there be a staged settlement with titles to the associated development being transferred to it based on the level of commitment in the STC and transport and access works;
- Mirvac has sought to cap the target costs for the STC and associated transport and access works, with final target costs not to be determined until the completion of detailed design, engineering drawings and detailed specifications, and with any costs above the target cost to be deducted from the balance payment to the State; and
- Mirvac has sought over 70 departures to the Development Agreement, which if agreed to in full would transfer significant risk to the State.

The evaluation concluded that Mirvac could not be appointed preferred proponent for the TRD based on its current DDP, given a number of critical Stage 2 requirements were not met including a number of the Government's requirements for the STC as set out in the *State Tennis Centre Project Brief*.

However, the evaluation process identified that Mirvac's DDP for the TRD could be adapted to become acceptable to the State if the important issues identified during the evaluation process can be satisfactorily addressed. To achieve this, Mirvac would need to:

- revise its DDP to address a number of threshold issues identified during the evaluation process (as outlined in **Attachment A**);
- negotiate a Development Agreement with the State (see the State's response to the departures sought by Mirvac to the draft Development Agreement in Attachment B); and
- address a number of priority and more detailed issues in its DDP in relation to the Government's minimum requirements for the STC (see Attachment C).

- 2 -

#### Three-step process

The following three-step process has been developed to determine whether Mirvac can modify its DDP to the State's satisfaction. Under this process, Mirvac would continue to be bound by the terms of the Process Deed with the State, which includes being responsible for all costs associated with modifying its DDP and not making public comments on the process.

The State recognises that this is a complex and significant project for Queensland and has allocated specialist and dedicated resources to the negotiation process with a view to working through the complex issues and determining whether an outcome can be achieved which is suitable to both parties.

#### Step 1 (Commitment to modify DDP and negotiate Development Agreement)

The State requires a written commitment from the Mirvac Group (from its Chief Executive) by 17 January 2005 that Mirvac is willing to commit to:

- address the threshold issues outlined in **Attachment A**, to be included in a revised DDP to be submitted to the Government for review and assessment; and
- negotiate a revised Development Agreement, using as a basis for negotiation, the State's response to Mirvac's departures to the draft Development Agreement outlined in Attachment B.

Step 1 has been designed with a view to minimising the costs associated with negotiations if it is evident early in the process that a satisfactory outcome is unlikely to be achieved. In this regard, should Mirvac's response be unsatisfactory, a decision can be made quickly not to continue this process.

Representatives of the Government will be available to meet with you in early January 2005 to discuss this process and clarify any issues if required. If you would like to arrange a meeting please contact Mr Tim Peisker, Project Director, Tennyson Riverside Development Project, on telephone The TRD Probity Auditor will attend the meeting.

Upon receipt and following consideration of Mirvac's response, the State will determine whether Mirvac will be invited to proceed to Step 2.

#### Step 2 (Submission of a revised DDP)

Under Step 2, Mirvac would be required to submit a revised DDP which addresses the threshold issues, outlines any departures sought to the draft Development Agreement and addresses the priority issues associated with Mirvac's response to the *State Tennis Centre Project Brief*.

The State is prepared to work closely with Mirvac to assist it to fully understand the State's requirements in relation to all of these issues, and to facilitate meetings with key stakeholders such as ENERGEX and Powerlink where this would assist Mirvac to address the issues required to revise its DDP for submission to the State. While the State is prepared to assist in this manner, any comments or suggestions by its officers or advisers during this process are not to be seen as acceptance of the modified DDP.

Upon receipt and following review and assessment of Mirvac's revised DDP, the State will determine whether or not the State will appoint Mirvac as preferred proponent, and if so, invite Mirvac to proceed to Step 3.

In undertaking an assessment of Mirvac's DDP, the State will use the existing evaluation criteria and project requirements outlined in the *Request for Detailed Development Proposals* document, except where modified by this invitation to Mirvac.

#### Step 3 (Negotiation of a Development Agreement)

If Mirvac is appointed preferred proponent, the State and Mirvac will negotiate the Development Agreement including all schedules, so it may be considered for approval by the State.

#### Timing

Subject to Mirvac's full commitment to and cooperation in this three-step process, the following indicative timelines are envisaged (noting the State reserves the right to alter these timelines if required and at its absolute discretion):

- written response from Mirvac on State's invitation for Mirvac to revise its DDP 17 January 2005;
- Mirvac to submit revised DDP for review and assessment by the State 28 February 2005;
- State to review and assess revised DDP March 2005;
- State decision on whether or not Mirvac would be appointed preferred proponent 31 March 2005;
- if Mirvac is appointed preferred proponent, State and Mirvac to negotiate a Development Agreement April 2005;
- if a suitable Development Agreement is negotiated, State decision on whether or not Mirvac would be appointed preferred developer May 2005.

If a response is not received from Mirvac by close of business on 17 January 2005, the State will consider that Mirvac has withdrawn its DDP for consideration for the TRD.
In the interim, if you have any questions, please do not hesitate to contact Mr Tim Peisker on the telephone number nominated above.

Yours sincerely

DR TED CAMPBELL Director-General

### ATTACHMENT A

# Threshold Issues Associated with Mirvac's Detailed Development Proposal for the Tennyson Riverside Development and the State's Position

### State Tennis Centre

1. <u>Issue</u> - Mirvac has located part of four tennis courts, a maintenance shed and large trees over electricity easements, which is unacceptable to Powerlink and ENERGEX on safety, reliability of supply and access grounds.

<u>Position</u> - Mirvac to redesign its site plan to remove the above infrastructure from the easements and consult with Powerlink and ENERGEX on the design of and obtain the approval of Powerlink and ENERGEX to the location of any other infrastructure (eg. access roads and parkland) located over easements.

2. <u>Issue</u> - Mirvac has not met a number of the key technical requirements and standards in the *State Tennis Centre Project Brief* and a number of issues relating to compliance require clarification. These are outlined in Attachment C.

<u>Position</u> - Mirvac to commit to meet the minimum requirements in the *State Tennis Centre Project Brief* except for any departures proposed by Mirvac in its Detailed Development Proposal (DDP) that the State supports and any other departures identified and agreed to during detailed negotiations.

3. <u>Issue</u> - There are concerns that the uneven shading on the centre court and adjoining courts from the slatted roof and trellis structure of the centre court could result in adverse impacts for playability of courts and television broadcasting.

<u>Position</u> - Mirvac, in consultation with the State, to review the design of its centre court roof and trellis structure to address the adverse shadowing impacts.

4. <u>Issue</u> - Mirvac has proposed to construct the centre court, six training courts, State Tennis Centre (STC) car park and maintenance facilities below the 1:100 year flood level, which is inconsistent with the specifications in the *State Tennis Centre Project Brief*.

<u>Position</u> - Mirvac to commit to redesign its site plan to ensure the six training courts are constructed above the 1:100 year flood level and that appropriate flood mitigation measures are implemented in the design of the centre court.

5. <u>Issue</u> - Mirvac has not provided adequate information on the temporary seating arrangements for the centre and show courts to demonstrate the proposal to bump-in 4,000 temporary seats on the centre court infrastructure is a cost effective model.

<u>Position</u> - Mirvac to provide information in relation to model and costs of the temporary seating for the centre and show courts to demonstrate that it is an effective model.

6. <u>Issue</u> - Mirvac has suggested the 12-year warranty to cover the acrylic hard courts requested by the State is too long and proposes to provide the warranties available from manufacturers and suppliers.

Position - Mirvac to agree to provide and underwrite 12-year warranties for hard courts.

# Transport and Access Issues

7. <u>Issue</u> - The transport strategy and plan provided by Mirvac is unclear in terms of the nature and number of services that will be required, particularly for major event mode. Also, proposed infrastructure, such as set-down facilities and associated milling areas, is likely to be inadequate.

<u>Position</u> - Mirvac to enhance its transport strategy and plan as well as provide and finance the infrastructure necessary to provide better public access to the STC including for people with disabilities.

8. <u>Issue</u> - Mirvac has not used the access corridor identified by the State on the basis that Mirvac identified an alternative access corridor it believes provides a more direct route, minimises the impact on Animal Research Institute (ARI) facilities and activities and provides a better "street address" for the development.

<u>Position</u> - State to allow Mirvac to use its alternative access corridor, subject to appropriate traffic calming measures being incorporated in its design.

9. <u>Issue</u> - Mirvac has located the STC car park on the ARI site within part of the access corridor identified by the State.

<u>Position</u> - State to allow Mirvac to locate the STC car parking on the ARI site within part of the access corridor identified by the State.

# **Project Timing and Approval Issues**

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10. <u>Issue</u> - Mirvac is seeking approval to undertake early demolition and site remediation works ahead of satisfying the conditions precedent to bring forward the completion of the STC from May 2009 to May 2008 (based on execution of a Development Agreement in December 2004). Assuming a Development Agreement was executed in May 2005, based on Mirvac's timetable this would deliver a STC in November 2009 (assuming no major delays). This timetable is unacceptable to Tennis Queensland and the State.

<u>Position</u> - The State to negotiate with Mirvac and the Brisbane City Council (BCC) to determine an appropriate works program to facilitate early delivery of the STC within a timeframe more acceptable to Tennis Queensland and the State.

11. <u>Issue</u> - Mirvac has sought an extension to the critical finish date to 20 months (from 18 months in the Development Agreement).

<u>Position</u> - State to extend the critical finish date for the STC and transport access works to 20 months (if early works is permitted) or 32 months (if early works is not achievable).

12. <u>Issue</u> - Mirvac has advised that its proposal is conditional upon the receipt of all necessary approvals to its absolute discretion, but on the basis the State could not withdraw from the project if the conditions were unacceptable to the State.

<u>Position</u> - Mirvac not to have absolute discretion to withdraw from the Tennyson Riverside Development (TRD) on grounds it does not receive its desired approvals and the State to retain the ability to withdraw from the project if conditions are found to be unacceptable to the State.

13. <u>Issue</u> - Mirvac has proposed that there be a staged settlement with titles to the associated development being transferred to it based on the level of commitment in the STC and transport and access works.

<u>Position</u> - Mirvac not be provided with title of the associated development site until after satisfactory completion of the STC and transport and access works.

14. <u>Issue</u> - Mirvac has requested the establishment of a State Project Team to assist in facilitating project approvals in a timely manner.

<u>Position</u> - State to establish a Project Team to advise Mirvac on project approval and infrastructure requirements with clear operating parameters, and with the clear understanding that Mirvac would be required to obtain all approvals.

15. <u>Issue</u> - Mirvac intends to submit a comprehensive master plan for the Tennyson Power Station site to obtain BCC support for the TRD project including the proposed plot ratio for its residential development.

<u>Position</u> - Mirvac to provide BCC with its development plans and provide preliminary advice to the State on whether the BCC would be likely to approve the TRD development.

### Financial and Risk Management Issues

16. <u>Issue</u> - Mirvac has advised that it will not finalise the construction costs for the STC and transport and access works until completion of detailed design, engineering drawings and a detailed specification. Mirvac has indicated these costs are capped and any increase would be taken from the balance payment offered to the State.

<u>Position</u> - Mirvac to be responsible for all costs of establishing the STC and transport and access works. Mirvac to commit to identify and lock in the costs for that infrastructure as early as possible and thereby from that time accept price transfer risk. Mirvac to confirm it will meet any additional costs identified by Mirvac during the detailed design phase that cannot be funded from the balance payment.

17. <u>Issue</u> - Mirvac proposed a profit sharing arrangement.

<u>Position</u> - Mirvac to provide further information on the likelihood of a distribution under the profit sharing arrangement being made to the State.

18. <u>Issue</u> - Mirvac has indicated that any costs to upgrade access to the Yeerongpilly Rail Station including compliance with the *Disability Discrimination Act 1992 (DDA)* should be met by the appropriate authority – in this case Queensland Transport.

<u>Position</u> - Mirvac to commit to meet the costs associated with upgrading the Yeerongpilly Rail Station to be an effective and DDA compliant access solution.

19. <u>Issue</u> - Mirvac has sought over 70 departures to the draft Development Agreement that was provided to proponents as part of Stage 2 of the TRD competitive bid process. These departures generally seek to avoid or limit Mirvac's overall liability by transferring the risk to the State.

<u>Position</u> - State and Mirvac to agree on an approach to negotiate a Development Agreement which reflects an acceptable risk profile for both parties using, as a starting point, the State's response to the 70 plus departures sought by Mirvac as set out in Attachment B.

| Ref     | Clause                                                                                          | Summary of Mirvac's issue                                                                                                                                                                                                 | State position                                                                                                                                                                                                                                     |
|---------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | Defined Terms -<br>Art Built in<br>Policy                                                       | Mirvac has proposed the Art Built in Policy should be the policy in place<br>as at the " <i>date</i> " of the Agreement as opposed to the " <i>time</i> " of the<br>Agreement.                                            | The proposed amendment is supported.                                                                                                                                                                                                               |
| 2       | Clause 1.1 -<br>Defined Terms -<br>Background<br>Intellectual<br>Property                       | Mirvac has requested the definition of " <i>Background Intellectual Property</i> " be expanded to specifically list the Developer's intellectual property,                                                                | The proposal is supported in-principle, noting the Developer will be requested to submit a list of items it considers to fall within Intellectual Property.                                                                                        |
| ىن<br>ا | Clause 1.1 -<br>Defined Terms -<br>Bank Guarantee                                               | Mirvac requires the term of the bank guarantee to be limited to a date which is 12 months after the Critical Finish Date.                                                                                                 | The proposal is not supported. The State requires adequate security in the form of a bank guarantee during the construction program, warranty period for the STC and transport and access works and to support the warranty for the tennis courts. |
| 4       | Clause 1.1 -<br>Defined Terms -<br>Certificate of<br>Classification                             | Mirvac has proposed the reference to "Access Works" in the definition of "Certificate of Classification" be substituted with "Transport and Access Works".                                                                | The proposed amendment is supported.                                                                                                                                                                                                               |
| ں<br>ا  | Clause 1.1 -<br>Defined Terms -<br><i>Conforming</i><br><i>Approvals</i>                        | Mirvac has proposed the approvals, referred to in the definition of<br>"Conforming Approvals, should be "generally" consistent with the<br>concepts for the State Tennis Centre Concept or the Associated<br>Development. | The proposed amendments are not supported.                                                                                                                                                                                                         |
| 6       | Clause 1.1 -<br>Defined Terms -<br><i>Environmental</i><br><i>Management</i><br><i>Register</i> | Mirvac has proposed the definition of "Environmental Management<br>Register" provide for any potential change in the name of the register.                                                                                | The proposed amendment is supported.                                                                                                                                                                                                               |

ATTACHMENT B TENNYSON RIVERSIDE DEVELOPMENT THE STATE'S RESPONSE TO MIRVAC'S DEPARTURES TO THE DRAFT DEVELOPMENT AGREEMENT

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| 10                                                                                                                                                                         | 9                                                                                                               | ) × (0)                                                                                           |                                                                                                                                | 8 (c)                                                                                                                                                                                                       | o (0)                                                                                                             | 0 (h)                                                                                         | 8 (a)                                                                                                                             | 1                                                                                                                                           | Mirvac<br>Ref             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Clause 1.1 -<br>Defined Terms -<br>Local Industry<br>Policy                                                                                                                | Clause 1.1 -<br>Defined Terms -<br>Handover                                                                     | Clause 1.1 -<br>Defined Terms -<br>Practical<br>Completion                                        |                                                                                                                                | Clause 1.1 -<br>Defined Terms -<br><i>Practical</i><br><i>Completion</i>                                                                                                                                    | Clause 1.1 -<br>Defined Terms -<br>Practical<br>Completion                                                        | Engineering<br>Practice                                                                       | Clause 1.1 -<br>Defined Terms -<br>Good                                                                                           | Clause 1.1 -<br>Defined Terms -<br><i>Final</i><br><i>Completion</i>                                                                        | Clause                    |
| Mirvac has proposed the Local Industry Policy should be the policy in place as at the " <i>date</i> " of the Agreement as opposed to the " <i>time</i> " of the Agreement. | Mirvac has proposed the definition of "Handover" be expanded to also refer to the "Transport and Access Works". | Mirvac has proposed the defined term "Tests" be used in the definition of "Practical Completion". |                                                                                                                                | Mirvac has indicated there is the potential for Practical Completion to be delayed as a result of minor omissions and defects and has proposed a third party issue the certificate of Practical Completion. | Mirvac has questioned the use of the term "fitness for intended use" in the definition of "Practical Completion". |                                                                                               | Mirvac has questioned the definition of "Good Engineering Practice" and the tests to be applied in application of the definition. | Mirvac has proposed the definition of " <i>Final Completion</i> " be amended so it is clear the State's representative must act reasonably. | Summary of Mirvac's issue |
| The proposed amendment is supported.                                                                                                                                       | The proposed amendment is supported.                                                                            | The proposed amendment is supported.                                                              | The proposal that the trigger for Practical Completion should be the issue of a certificate by a third party is not supported. | The definition of "Practical Completion" allows for Practical Completion to occur if the matters described in its definition are complete, except for "minor omissions and minor defects".                  | Amendment of the definition is not supported, as the definition reflects the State's requirements.                | The original drafting is usual and ensures that the Developer meets "world's-best" standards. | Amendment of the definition is not supported, as it reduces the overall standard of performance sought by the State.              | The proposed amendment is supported.                                                                                                        | State position            |

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| The proposed amendment is supported in-principle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | will vac has proposed the definition of " <i>State's Representative</i> " should be | Ciduse 1.1 -    |        |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |                 | 17     |
| on the Development Agreement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -                                                                                   |                 |        |
| Autoritations of the definition will be considered in the course of negotiations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                     | Centre          |        |
| A mondmonta to the definition will be sound and in the sound of the so | accordance with the design documentation                                            | State Tennis    |        |
| 1 ne proposed anienument is supported in-principle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | and should be referenced to a "tennis centre" constructed substantially in          | Defined Terms - |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Mirvac has indicated the definition of "Quate Tannie Contra" is too bood            | Clause 1.1 -    | 14     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |                 |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Aucoristed Development I of                                                         | Settlement Date |        |
| The proposed amendment is not acceptable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Mirvac has indicated the Development Agreement may need to be                       | Clause 1.1 -    | 13     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |                 |        |
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| The proposed amendment is not supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | services provided for in the design documentation.                                  | Defined Terms - | <br>   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Mirvar has monored the definition of "Convision" mode to be limited to them         | Clause 1 1 -    | 12     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     | Comptetion      |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     | Complation      |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | be "generally in accordance with the design documentation".                         | Defined Terms - |        |
| The proposed amendment is not supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Mirvac has proposed the delivery of the services and landscaping should             | Clause 1.1 -    | 11 (c) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |                 |        |
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| The proposed anicidation is supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | where it is required at law.                                                        | Defined Terms - |        |
| The monored smooth and is associated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Mitvac has proposed a Certificate of Classification should only be required         | Clause 1.1 -    | 11 (b) |
| on the Development Agreement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |                 |        |
| Amendments to the definition will be considered in the course of negotiations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     | Completion      |        |
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| the definition.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     | Defined Terms - |        |
| The State approache Minney's wassered that the 1 111                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Mirvac has questioned the definition of "Practical Completion"                      | Clause 1.1 -    | 11 (a) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     | (               | Ref    |
| State position                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Summary of Miryan's issue                                                           | Clause          | Mirvac |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----|
| Clause 4.1(d) -<br>Conditions<br>Precedent                                                                                                                                        | Clause 3.2 -<br>Project<br>components                                                                                                                   | Clause 3.1 -<br>Purpose of this<br>Agreement                                                                                                                                        | Clause 3.1 -<br>State's objectives                                                                                                                                                                                        | Clause 2.1 (g) -<br>References                                                                   | Clause 1.1 -<br>Defined Terms -<br>Variation Cost                                                                                              | Clause 1.1 -<br>Defined Terms -<br>Variation                                                                                                                                                               | ac Clause                 |     |
| Mirvac has proposed the State should " <i>act reasonably</i> " in determining whether it is satisfied with the resolution of any Native Title and Cultural Heritage Requirements. | Mirvac has proposed the Developer's use of " <i>reasonable endeavours</i> " in lieu of " <i>best endeavours</i> " in satisfying the project components. | Mirvac has sought to include the Developer's objectives in the Development Agreement's statement of purpose.                                                                        | Mirvac has indicated the State's objectives are too vague and subjective to constitute practical tests in determining if the State Tennis Centre (STC) and transport and access works are fit for their intended purpose. | Mirvac has proposed the clause's reference to "indemnify" should not include consequential loss. | Mirvac has proposed the definition of " <i>Variation Cosr</i> " should have a reasonable allowance for profit and overheads for the Developer. | Mirvac has proposed the definition of " <i>Variation</i> " should limit the exclusion changes sought by Authorities to changes known or reasonably knowable by the Developer at the time of the agreement. | Summary of Mirvac's issue | 4   |
| The proposed amendment is not supported.<br>Resolution of Native Title and Cultural Heritage requirements must be in<br>accordance with the regulatory requirements.              | The proposed amendment is not supported as it would transfer additional risk to the State.                                                              | The proposal to include the Developer's key objectives is not supported.<br>Mirvac's examples which form part of the development approval process would<br>be conditions precedent. | The proposal to amend clause 5.10(b) is supported in-principle by the State.<br>Reference to " <i>clause 3.1</i> " in clause 5.10(b) will be substituted with " <i>clause 3.1(a)</i> , (b) and (c)".                      | The proposal is not supported.                                                                   | The proposal is supported.                                                                                                                     | The proposed amendment is not acceptable.                                                                                                                                                                  | State position            | · ) |

| date                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                           | 23 Clau<br>Satis<br>cond<br>prece                                                                                                                                                                                           | 23 Clau<br>Satis<br>cond<br>24 Clau<br>Waiy                                                                                                                                                                                                                                                                                                                                                                                                                        | 23 Clau<br>Satis<br>cond<br>24 Clau<br>24 Clau<br>25 Clau<br>25 Clau<br>Effec<br>Fulfi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                           | se 4.3(d) - 1<br>faction of 1<br>itions 2<br>dent                                                                                                                                                                           | se 4.3(d) - 1<br>faction of 1<br>itions 2<br>dent 2<br>se 4.4 - 1<br>ver 1                                                                                                                                                                                                                                                                                                                                                                                         | se 4.3(d) - 1<br>faction of 1<br>itions sedent sedent se 4.4 - 1<br>se 4.5 - 1<br>hment c                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| · · · · · · · · · · · · · · · · · · ·                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                           | Airvac has questioned the requirement for a certificate signed by 2<br>Directors of the Developer following the Conditions Precedent being<br>atisfied.                                                                     | Airvac has questioned the requirement for a certificate signed by 2<br>Directors of the Developer following the Conditions Precedent being<br>atisfied.<br>Airvac has sought the sole right to waive the condition precedent obliging<br>ne Developer to obtain all approvals.                                                                                                                                                                                     | Arvac has questioned the requirement for a certificate signed by 2<br>Directors of the Developer following the Conditions Precedent being<br>atisfied.<br>Arvac has sought the sole right to waive the condition precedent obliging<br>the Developer to obtain all approvals.<br>The Developer to obtain all approvals.<br>Affirvac has sought extension of the period for satisfaction of Conditions<br>recedent relating to <i>Land Sales Act 1984</i> and bank guarantees from 60<br>ays to 120 days.                                                                                                                                                                                                                                                 |
| The State would support discussions with Mirvac and Brisbane City Council t<br>determine if an appropriate works schedule can be developed to facilitate early<br>delivery of the STC.<br>A request from the Developer for site access for non-destructive testing, subje<br>to the Developer accepting all related costs and risks, could be considered<br>subject to an assessment of the request and its implications on the site, the<br>project and the State. | Consultation would be required with Powerlink and Energex on the impact of testing on the electricity easements and with Enertrade on Tennyson Power Station site issues. | Consultation would be required with Powerlink and Energex on the impact of<br>testing on the electricity easements and with Enertrade on Tennyson Power<br>Station site issues.<br>The proposed amendment is not supported. | Consultation would be required with Powerlink and Energex on the impact of testing on the electricity easements and with Enertrade on Tennyson Power Station site issues.         The proposed amendment is not supported.         g       The proposed amendment is not acceptable. Clause 4.4 allows the condition precedent to be waived if agreed in writing by both parties.         The draft Development Agreement allows the Developer to terminate if the | Consultation would be required with Powerlink and Energex on the impact of testing on the electricity easements and with Enertrade on Tennyson Power Station site issues.         The proposed amendment is not supported.         g       The proposed amendment is not acceptable. Clause 4.4 allows the condition precedent to be waived if agreed in writing by both parties.         The draft Development Agreement allows the Developer to terminate if the conditions of approval are "materially prejudicial" to the Developer.         The condition precedent requiring the Developer to provide a bank guarantee (clause 4.1(e)) will be deleted. However, site access will be conditional on the Developer providing the required security. |

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|               | <b>1</b>                                                        |                                                                                                                                        |                                                                                                                                                     |
|---------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Mirvac<br>Ref | Clause                                                          | Summary of Mirvac's issue                                                                                                              | State position                                                                                                                                      |
| 26            | Clause 4.5 -<br>Effect of Non-                                  | Mirvac has proposed the Enertrade Deed of Release be provided after the Conditions Precedent have been satisfied.                      | The proposal is supported.                                                                                                                          |
|               | Fulfilment                                                      |                                                                                                                                        | The Development Agreement could be amended so site access is conditional on the Developer delivering to the State an executed Deed.                 |
| 27 (a)        | Clause 4.6(a) -<br>Approvals                                    | Mirvac has sought to remove the State's ability to terminate the<br>Development Agreement on account of the outcome of the approvals   | The proposal is not acceptable.                                                                                                                     |
|               |                                                                 | process.                                                                                                                               | The State to retain its right to terminate the Development Agreement in the event that conditions on approvals are not to the State's satisfaction. |
| (b)           | - Approvals                                                     | Mirvac has proposed the term "materially prejudicial" be quantified.                                                                   | The proposal is not supported.                                                                                                                      |
|               |                                                                 |                                                                                                                                        | Ultimately, it is a question of objective fact as to whether an approval condition is "materially prejudicial" to a party.                          |
| 27 (c)        | Clause 4.6 -<br>Approvals                                       | Mirvac has sought to suspend the Developer's right to terminate the Development Agreement for the duration of any Ministerial call in. | The proposal is not supported.                                                                                                                      |
| 28            | Clause 4.6(d)(i)<br>- Approvals                                 | Mirvac has sought to limit the circumstances in which a condition of approval may be materially prejudicial.                           | The proposed amendment is not supported.                                                                                                            |
| 29 (a)        | Clause 5.1 -<br>Submission of<br>Plans Drawings<br>and Diagrams | Mirvac has sought the State act reasonably and not delay consent in relation to the approval of plans, drawings and diagrams.          | The proposed amendment is not supported, as it would limit the circumstances in which the State is entitled to reject a plan, drawing or diagram.   |
| 29 (b)        | Clause 5.1 -<br>Submission of<br>Plans Drawings<br>and Diagrams | Mirvac has sought to limit the State's application of the conditions in clause 5(b) to (d) to a "material" increase or decrease.       | The proposal is not supported, as it would limit the circumstances in which the State is entitled to reject a plan, drawing or diagram.             |
| 30            | Clause 5.2(b) -<br>Design Program                               | Mirvac has proposed the State's Representative in accepting or commenting on the Design Program should "act reasonably".               | The proposed amendment is supported.                                                                                                                |

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| Mirvac<br>Ref | Clause                                                                                            | Summary of Mirvac's issue                                                                                                                                            | State position                                                                                                                                                                           |
|---------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 31 (a)        | Clauses 5.3 -<br>Design<br>documentation<br>and 5.4 -<br>Submission of<br>design<br>documentation | Mirvac believes there is a conflict between clause 5.3 and 5.4 in relation to the submission of design documentation.                                                | The State does not consider there is a conflict between the clauses. The intent of the clauses will be clarified during negotiations.                                                    |
| 31 (b)        | Clause 5.4 -<br>Submission of<br>design<br>documentation                                          | Mirvac has proposed the Developer submit design documentation<br>"generally" in conformity with the Design Program.                                                  | The proposed amendment is not supported.                                                                                                                                                 |
| 32            | Clause 5.5<br>State's response<br>to<br>documentation                                             | Mirvac has questioned the implications arising from the State's acceptance of design documentation.                                                                  | Amendment of the clause is not supported.                                                                                                                                                |
| 33 (a)        | Clause 5.6 -<br>Allowable<br>changes to<br>design<br>documentation                                | Mirvac has proposed the State should only require changes to the design documentation if there is a material inconsistency with the Prescribed Documents.            | The proposed amendment is not supported.                                                                                                                                                 |
| 33 (b)        | Clause 5.6 -<br>Allowable<br>changes to<br>design<br>documentation                                | Mirvac has questioned the State's requirement for changes to the design documentation if it is inconsistent with "any" of the Prescribed Documents.                  | The proposed amendment is supported.                                                                                                                                                     |
| 34            | Clause 5.7 -<br>Developer's<br>response to<br>State's changes                                     | Mirvac claims the 10 business days allowed for the Developer to amend<br>the design documentation may be too short a timeframe depending on the<br>changes required. | The proposed amendment is supported with respect to Clause 5.7(a) (changes to documentation). However, Clause 5.7(b) (issue of a dispute notice) should be retained in its current form. |

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| Mirvac<br>Ref | Clause                                                                   | Summary of Mirvac's issue                                                                                                                                                                       | State position                                                                                                                                                                                                                                                                     |
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| 33            | Clause 5.9 -<br>Extension of<br>response time                            | Mirvac has proposed the State should automatically extend the Practical<br>Completion and Critical Finish Date if it extends the timeframe within<br>which it responds to design documentation. | The proposal for the Practical Completion and the Critical Finish Dates to be extended if the State extends the timeframe within which it responds to design documentation is supported, subject to the Developer demonstrating that the State's actions have delayed the program. |
| 36 (a)        | Clause 5.12 -<br>Prescribed<br>documents                                 | Mirvac has queried the "order of precedence" in relation to the Prescribed Documents.                                                                                                           | The proposal to amend the "order of precedence" in relation to the Prescribed Documents is not supported.                                                                                                                                                                          |
| 36 (b)        | Clause 5.12 -<br>Prescribed<br>documents                                 | Mirvac has requested the Developer's objectives be included as a Prescribed Document.                                                                                                           | The proposal to include the Developer's objectives is supported in-principle.<br>Inclusion of the Developer's objectives as a prescribed document is subject to<br>their acceptance by the State.                                                                                  |
| 37            | Clause 6 -<br>Tennis Court<br>Design                                     | Mirvac has requested the State and the State's Representative "act reasonably" in accepting a geotechnical Test Statement or Model Results.                                                     | The proposed amendment is supported.                                                                                                                                                                                                                                               |
| 80            | Clause 6.5 -<br>Submission of<br>court design<br>documentation           | Mirvac has proposed the Developer submit court design documentation "generally" in conformity with the Design Program.                                                                          | The proposed amendment is not supported.                                                                                                                                                                                                                                           |
| 39            | Clause 6.6 -<br>State's response<br>to court design<br>documentation     | Mirvac has questioned the implications arising from the State's acceptance of court design documentation.                                                                                       | Amendment of the clause is not supported.                                                                                                                                                                                                                                          |
| 40 (a)        | Clause 6.7 -<br>Allowable<br>changes to court<br>design<br>documentation | Mirvac has proposed the State should only require changes to the design<br>documentation if there is a material inconsistency with the Prescribed<br>Documents.                                 | The proposed amendment is not supported.                                                                                                                                                                                                                                           |

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| Mirvac<br>Ref | Clause                                                              | Summary of Mirvac's issue                                                                                                                                                                       | State position                                                                                                                                                                                                                                                                     |
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| 40 (U)        | Allowable<br>changes to court<br>design<br>documentation            | Mitvac has questioned the State's requirement for changes to the design documentation if it is inconsistent with "any" of the Prescribed Documents.                                             | The proposed amendment is supported.                                                                                                                                                                                                                                               |
| 41            | Clause 6.8 -<br>Developer's<br>response to court<br>State's changes | Mirvac claims the 10 business days allowed for the Developer to amend<br>the design documentation may be too short a timeframe depending on the<br>changes required.                            | The proposed amendment is supported with respect to Clause 6.8(a) (changes to documentation). However, Clause 6.8(b) (issue of a dispute notice) should be retained in its current form.                                                                                           |
| 42            | Clause 6.10 -<br>Exteusion of<br>response time                      | Mirvac has proposed the State should automatically extend the Practical<br>Completion and Critical Finish Date if it extends the timeframe within<br>which it responds to design documentation. | The proposal for the Practical Completion and the Critical Finish Dates to be extended if the State extends the timeframe within which it responds to design documentation is supported, subject to the Developer demonstrating that the State's actions have delayed the program. |
| 43            | Clause 6.13 -<br>Prescribed Court<br>documents                      | Mirvac has requested the Developer's objectives be included as a Prescribed Document.                                                                                                           | The proposal to include the Developer's objectives is supported in-principle.<br>Inclusion of the Developer's objectives as a prescribed document is subject to<br>their acceptance by the State.                                                                                  |
| 44<br>4       | Clause 7.2(a) -<br>Applications for<br>approvals etc                | Mirvac has proposed the Developer only use "reasonable endeavours" in applying for approvals.                                                                                                   | The proposed amendment is not supported as it would transfer additional risk to the State.                                                                                                                                                                                         |
| 45            | Clause 7.2(a)(iii)<br>- Applications<br>for approvals etc           | Mirvac has sought to limit the associated activities necessary to obtain an approval to those needed to resolve native title or contamination issues.                                           | The proposed amendment is supported.                                                                                                                                                                                                                                               |
| 46            | Clause 7.2(b) -<br>Applications for<br>approvals etc                | Mirvac has proposed the State agree to the lodgement of any application<br>for a conforming approval within 3 business days.                                                                    | The proposed amendment is not supported.                                                                                                                                                                                                                                           |
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| 50 (b) Clau<br>Dev<br>Leas                                                                                              |                                                                                                                | Leas                                                                                    | 50 (a) Clau<br>Dev                                                                                                                  | 49 Clat<br>Key                                                                                    |                                                                             |                                                                                                                                                                                                                                                   | 48 (b) Clau<br>Proș<br>metl                                                                                                                                                                                                                                                                                                                                                                   | 48 (a) Clau<br>Prog<br>met                                                                                                               | 47 Clar<br>Stat<br>to D<br>App                                                                                                                                                 | Mirvac Cla<br>Ref         |
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| ise 9 -<br>elopment<br>.e                                                                                               |                                                                                                                | ě ,                                                                                     | lse 9 -<br>elopment                                                                                                                 | ıse 7.6(b) -<br>Personnel                                                                         |                                                                             |                                                                                                                                                                                                                                                   | rse 7.4 -<br>pram and<br>nodology                                                                                                                                                                                                                                                                                                                                                             | tse 7.4 -<br>gram and<br>nodology                                                                                                        | tse 7.3(b) -<br>e's consent<br>levelopment<br>rovals                                                                                                                           | nse                       |
| Mirvac has proposed the development lease allow the Developer to receive title to the Associated Development in stages. |                                                                                                                |                                                                                         | Mirvac has sought to be protected from any additional stamp duty and<br>GST liabilities arising from the use of a development lease | Mirvac has questioned the State's ability to assign liquidated damages for the loss of personnel. |                                                                             |                                                                                                                                                                                                                                                   | Mirvac has sought an extension of time to the Practical Completion and<br>the Critical Finish Dates for delays resulting from planning approval<br>appeal processes, which it considers are Force Majeure Events.                                                                                                                                                                             | Mirvac has proposed the Developer's use of "reasonable endeavours" in lieu of "best endeavours" in complying with the approvals program. | Mirvac has proposed the certification from the Developer should state that the plans, drawings and specifications are "generally" in accordance with the Design Documentation. | Summary of Mirvac's issue |
| The proposed amendment is not acceptable.                                                                               | On receipt of a formal submission from the Developer, the State's position on stamp duty relief be determined. | The GST implications of the development lease are issues for the Developer to consider. | The proposed amendment is not supported.                                                                                            | Amendment of the clause is not supported.                                                         | It is the State's expectation that the Developer will obtain all approvals. | Clause 4.6 be amended to include a requirement for the parties to give 14 days notice of their intention to terminate and oblige the parties to negotiate to ascertain if an extension can be granted before they can terminate under the clause. | Provided the Developer has complied with clauses 18.1, 18.2 and 18.3, then to<br>the extent that a catastrophic event outside the control of and not occasioned by<br>a breach by the Developer actually delays the Developer in achieving Practical<br>Completion by the Critical Finish Date, the State will consider an extension, at<br>Developer's request, to the Critical Finish Date. | The proposed amendment is not supported as it would transfer additional risk to the State.                                               | The proposed amendment is not supported.                                                                                                                                       | State position            |

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| 52 (b)                                                                                                                                  |                                                                                                                                                                        | (a)                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                       | S1 (h)                                                                                                                                                                                                                                    | 50 (c)                                                                                                                                                                                    | Mirvac<br>Ref             |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Clause 10 -<br>Construction                                                                                                             |                                                                                                                                                                        | Construction                                                                                                                                                                  | Easements                                                                                                                                                                                                                                                                                                     | Easements                                                                                                                                                                                                                             | Easements                                                                                                                                                                                                                                 | Clause 9 -<br>Development<br>Lease                                                                                                                                                        | Clause                    |
| Mirvac has proposed the State's ability to approve construction contracts should not apply where the contractor is a Mirvac subsidiary. |                                                                                                                                                                        | contract negotiations is unreasonable.                                                                                                                                        | easements should be designed and constructed so as to not adversely impact on the project or its amenity.                                                                                                                                                                                                     | without the consent of the dominant tenement owner.                                                                                                                                                                                   | on the easements.                                                                                                                                                                                                                         | Mirvac has indicated that the termination provisions and terms of the development lease must be acceptable to its financiers.                                                             | Summary of Mirvac's issue |
| The proposal is not supported.                                                                                                          | The State may require an accurate précis of the proposed contractual arrangements and a statement that they comply with the requirements of the Development Agreement. | The proposal is not supported.<br>The State to retain its right to review the contractual arrangements to ensure its interests under the Development Agreement are protected. | The proposal is not acceptable.<br>The Developer is required to accept the entities' (ie. Energex and Powerlink)<br>obligations to the land owner, as stated in the Minimum Terms and Conditions<br>of Easements. The Developer can negotiate alternative terms and conditions<br>directly with the entities. | I ne proposal is not acceptable.<br>It is a requirement that the Developer complies with the Minimum Terms and<br>Conditions of Easements and obtains consent for works on easements from<br>entities, such as Energex and Powerlink. | I ne proposal is not acceptable.<br>It is a requirement that the Developer complies with the Minimum Terms and<br>Conditions of Easements and obtains all approvals, including Energex and<br>Powerlink's consent for works on easements. | It is noted that further issues may be raised during negotiations with the Preferred Proponent, including compensation arrangements in the event the Development Agreement is terminated. | State position            |

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|                                         | SUMALINALY OF FALL FAC S ISSUE                                                                                                                                                                                                                         | State position                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Construction                            | NITVAC has proposed the Developer use " <i>reasonable endeavours</i> " or some other such expression rather than " <i>all proper diligence and expedition</i> " in carrying out the works.                                                             | The proposal is not acceptable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Clause 11 -<br>Changes                  | Mirvac has proposed the restrictions on the Developer's right to change design documentation without the State's consent be relaxed.                                                                                                                   | The proposal is not supported, as it would reduce the State's ability to consider and comment on all proposed changes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Clause 11.1 (m)<br>- Variations         | Mirvac has proposed the Developer should be paid for variations in the normal course of the works.                                                                                                                                                     | The proposal is supported in-principle. Alternative payment arrangements could be considered in the course of negotiations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Clause 11.1 -<br>Variations             | Mirvac has sought an automatic extension of time to the Practical<br>Completion and the Critical Finish Dates for State caused delays.                                                                                                                 | The proposal is not supported.<br>Clause 11.1(e)(iii)(A) allows the Critical Finish Date to be extended where the<br>State, as the contracting party, directs the Developer to carry out a variation<br>where the variation will adversely impact on the Developer's ability to<br>complete the STC and transport and access works.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Clause 13 -<br>Project Control<br>Group | Mirvac has questioned the Project Control Group's procedures.                                                                                                                                                                                          | It is noted specific issues may be raised during negotiations with the Preferred Proponent.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Clause 13 -<br>Project Control<br>Group | Mirvac has questioned why the Project Control Group should meet monthly.                                                                                                                                                                               | The proposal for less frequent meetings is not supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Clause 14 -<br>Completion of<br>Works   | Mirvac has proposed the Developer's reporting requirements to the State should be reduced.                                                                                                                                                             | The proposal is not supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Completion of<br>Works                  | forming an opinion as to whether or not works are to be re-executed.                                                                                                                                                                                   | The proposal is supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|                                         | Clause10 -Clause10 -ConstructionClause11 -ChangesClause11.1 VariationsClause13 -Project ControlGroupClause13 -Project ControlGroupClause13 -Project ControlGroupClause13 -Project ControlGroupClause14 -Completion ofWorksClause14 -Completion ofWorks | Clause         Summary of Mirvac's issue           Clause 10 -<br>Construction         Mirvac has proposed the Developer use " <i>reasonable endeavours</i> " or some<br>earrying out the works.           Clause 11 -<br>Changes         Mirvac has proposed the restrictions on the Developer's right to change<br>design documentation without the State's consent be relaxed.           Clause 11.1 (m)         Mirvac has proposed the Developer should be paid for variations in the<br>normal course of the works.           Clause 11.1 -<br>Variations         Mirvac has sought an automatic extension of time to the Practical<br>completion and the Critical Finish Dates for State caused delays.           Clause 11.1 -<br>Variations         Mirvac has questioned the Project Control Group's procedures.           Clause 13 -<br>Project Control<br>Group         Mirvac has questioned the Project Control Group is procedures.           Clause 14 -<br>Completion of<br>Works         Mirvac has proposed the Developer's reporting requirements to the State<br>should be reduced.           Clause 14 -<br>Completion of<br>Works         Mirvac has proposed the State's Representative should "act reasonably" in<br>forming an opinion as to whether or not works are to be re-executed. |

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| e 17 - Mirvac<br>ts and supplie<br>nties supplie                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                       | 517 -<br>117 -<br>Inties                                                                                                                                                                                                                                                                                                                                                                                                                                                          | s 17 -<br>ts and<br>nties<br>s 17 -<br>ts and<br>ts and<br>nties                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| be limited to compliance with the STC Project Brief rather than the prince of the state of the s | orks be limited to compliance with the STC Project Brief rather than the svelopment Agreement generally.<br>Invac intends to provide back to back warranties from its contractors / ppliers and the warranty periods which reflect those provided by the ppliers / contractors.                                                                       | orks be limited to compliance with the STC Project Brief rather than the<br>evelopment Agreement generally.<br>irvac intends to provide back to back warranties from its contractors /<br>ppliers and the warranty periods which reflect those provided by the<br>ppliers / contractors.<br>irvac has proposed the Latent Defects warranty period should be capped.                                                                                                               | orks be limited to compliance with the STC Project Brief rather than the<br>evelopment Agreement generally.<br>irvac intends to provide back to back warranties from its contractors /<br>ppliers and the warranty periods which reflect those provided by the<br>ppliers / contractors.<br>irvac has proposed the Latent Defects warranty period should be capped.<br>irvac has proposed the Developer should only be required to refund the<br>sts and expenses "reasonably" incurred by the State where the State<br>pairs a defect at the Developer's cost.                                             |
| ion to the The proposed amendments are not supported.<br>ther than the The Developer is required to fully comply with the Development                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ion to the       The proposed amendments are not supported.         ther than the       The Developer is required to fully comply with the Developmen         ntractors /       The proposal is not acceptable as it does not satisfy the State's we are unrements.                                                                                   | on to the<br>ther than theThe proposed amendments are not supported.The Developer is required to fully comply with the Development<br>ntractors /<br>ed by theThe proposal is not acceptable as it does not satisfy the State's v<br>requirements.Id be capped.The proposal is not acceptable.                                                                                                                                                                                    | on to the<br>ther than theThe proposed amendments are not supported.<br>The Developer is required to fully comply with the Development<br>ntractors /<br>ad by theThe proposal is not acceptable as it does not satisfy the State's v<br>requirements.Id be capped.The proposal is not acceptable.o refund the<br>the StateThe proposal is not acceptable.                                                                                                                                                                                                                                                  |
| Developer's obligations in relation to the<br>ice with the STC Project Brief rather than the<br>nerally.The proposed amendments are not supported.The Developer is required to fully comply with the Developer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Developer's obligations in relation to the ce with the STC Project Brief rather than the nerally.       The proposed amendments are not supported.         It is contractors / ck to back warranties from its contractors / riods which reflect those provided by the       The proposal is not acceptable as it does not satisfy the Strequirements. | Developer's obligations in relation to the ce with the STC Project Brief rather than the nerally.       The proposed amendments are not supported.         Ck to back warranties from its contractors / sriods which reflect those provided by the strong the provided by the strong the provided by the strong the proposal is not acceptable.       The proposal is not acceptable.         Int Defects warranty period should be capped.       The proposal is not acceptable. | Developer's obligations in relation to the<br>ce with the STC Project Brief rather than the<br>erally.The proposed amendments are not supported.ck to back warranties from its contractors /<br>riods which reflect those provided by the<br>ent Defects warranty period should be capped.The proposal is not acceptable as it does not satisfy the State<br>requirements.eloper should only be required to refund the<br>ly" incurred by the State where the StateThe proposal is not acceptable.eloper's cost.The proposal is not acceptable.                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | s to provide back to back warranties from its contractors / The proposal is not acceptable as it does not satisfy the State's we the warranty periods which reflect those provided by the tractors.                                                                                                                                                   | s to provide back to back warranties from its contractors / The proposal is not acceptable as it does not satisfy the State's v the warranty periods which reflect those provided by the tractors. requirements.                                                                                                                                                                                                                                                                  | s to provide back to back warranties from its contractors /       The proposal is not acceptable as it does not satisfy the State's v         the warranty periods which reflect those provided by the tractors.       The proposal is not acceptable.         oposed the Latent Defects warranty period should be capped.       The proposal is not acceptable.         oposed the Developer should only be required to refund the rass "reasonably" incurred by the State where the State       The proposal is not acceptable.         st at the Developer's cost.       The proposal is not acceptable. |

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| Mirvac<br>Ref | Clause                                                      | Summary of Mirvac's issue                                                                                                                                                                     | State position                                                                                                                                                                                                                                                                                                                                                                                |
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| 59 (a)        | Clause 18 -<br>Time                                         | Mirvac is concerned that the Critical Finish Date cannot be extended for an act of Force Majeure.                                                                                             | Provided the Developer has complied with clauses 18.1, 18.2 and 18.3, then to the extent that a catastrophic event outside the control of and not occasioned by a breach by the Developer actually delays the Developer in achieving Practical Completion by the Critical Finish Date, the State will consider an extension, at Developer's request, to the Critical Finish Date.             |
|               |                                                             |                                                                                                                                                                                               | Clause 4.6 also be amended to include a requirement for the parties to give 14 days notice of their intention to terminate and oblige the parties to negotiate to ascertain if an extension can be granted before they can terminate under the clause.                                                                                                                                        |
| 59 (b)        | Clause 18 -<br>Time                                         | Mirvac has proposed the State should be obliged to extend time if the Developer is delayed for a breach by the State.                                                                         | The amendment is supported in principle.                                                                                                                                                                                                                                                                                                                                                      |
| 59 (c)        | Clause 18 -<br>Time                                         | Mirvac has proposed the State should be obliged to extend time if the Developer is delayed for a breach of an obligation by the State.                                                        | The proposal is supported in-principle.                                                                                                                                                                                                                                                                                                                                                       |
|               |                                                             |                                                                                                                                                                                               | The dates in the Program will be extended if the Developer demonstrates that the State's breach, as a contracting party, has delayed the Program.                                                                                                                                                                                                                                             |
| 59 (d)        | Clause 18 -<br>Time                                         | Mirvac has proposed the Developer should only be required to "use all reasonable endeavours to avoid delay" and to ensure that the works proceeds "generally" in accordance with the program. | The proposed amendment is not supported as it would transfer additional risk to the State.                                                                                                                                                                                                                                                                                                    |
| 00            | Clause 18.4 -<br>Extensions of<br>time for force<br>majeure | Mirvac has sought an extension of time to the Critical Finish Date for<br>Force Majeure events.                                                                                               | Provided the Developer has complied with clauses 18.1, 18.2 and 18.3, then to<br>the extent that a catastrophic event outside the control of and not occasioned by<br>a breach by the Developer actually delays the Developer in achieving Practical<br>Completion by the Critical Finish Date, the State will consider an extension, at<br>Developer's request, to the Critical Finish Date. |
|               |                                                             |                                                                                                                                                                                               | Clause 4.6 also be amended to include a requirement for the parties to give 14 days notice of their intention to terminate and oblige the parties to negotiate to ascertain if an extension can be granted before they can terminate under the clause.                                                                                                                                        |

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|   | 64 (a)                                                                                                                                        | . 63                                                                                                                                                                                                                                                    | 62 (b)                                                                                                                     | 62 (a)                                                                                                                                                                                         | 61 (d)                                                                    | 61 (c)                                                                                                                                                                                      | 61 (b)                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                     | 61 (a)                                                                                                                                      | Mirvac<br>Ref             |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| · | Clause 23 -<br>Developer's<br>Warranties and<br>Statements                                                                                    | Clause 22 -<br>Goods and<br>Services Tax                                                                                                                                                                                                                | Clause 20 -<br>Vesting Land                                                                                                | Clause 20 -<br>Vesting Land                                                                                                                                                                    | Clause 19 -<br>Handover                                                   | Clause 19 -<br>Handover                                                                                                                                                                     | Clause 19(1)(i) -<br>Requirements of<br>handover                                                                                                                       |                                                                                                                                                                                                                                                                                                     | Clause 19 -<br>Handover                                                                                                                     | Clause                    |
|   | Mirvac has sought to limit its obligations to the State when engaging and retaining a builder to using its "reasonable endeavours".           | To ensure that the State can adopt the Margin Scheme, Mirvac has<br>proposed the Development Agreement should provide that the State will<br>acquire the associated development land from Enertrade either GST free or<br>subject to the Margin Scheme. | Mirvac has requested the right to be able to nominate a transferee (other than itself) for the associated development lot. | Mirvac is seeking the right not to accept the State's changes to plans of subdivision if the changes requested are considered by the Developer to be prejudicial to the Developer's interests. | Mirvac is seeking to limit the warranties to those provided in Clause 17. | Mirvac is requesting for the warranties to be qualified so that they are made in the best of the Developer's knowledge and any actual knowledge of the State or the State's representative. | Mirvac has proposed the Development Agreement be amended to allow<br>the site to remain on the Environmental Management Register subject to a<br>site management plan. |                                                                                                                                                                                                                                                                                                     | Mirvac is seeking not to be required to warrant that claims by builders or subcontractors for which the Developer is liable have been paid. | Summary of Mirvac's issue |
|   | The proposal is not acceptable as it does not satisfy the State's requirement that the builder and consultants are competent and experienced. | The proposal is supported in principle, subject to Enertrade's agreement and a binding ruling from the Australian Taxation Office acceptable to the State.                                                                                              | The proposal is not supported as it raises concerns about multiple nominees and may have GST and stamp duty implications.  | The proposal is not acceptable.                                                                                                                                                                | The proposal is not acceptable.                                           | The proposal is not acceptable.                                                                                                                                                             | The proposal is supported in principle, subject to the conditions of any site management plan being acceptable to the State.                                           | (f) a statutory declaration sworn by a director of the DEVELOPER stating<br>that all payments due and owing to the Builder and to Subcontractors<br>have been paid, or, if payment has not been made, that the non payment is<br>due to the existence of a bona fide dispute under the subcontract. | The proposal is not supported. However, the State would be prepared to amend Clause 19.1(f) in the following manner:                        | State position            |

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|               | 1 a a a                                                    |                                                                                                                                                                                                                    |                                                                                                                                                                                                                            |
|---------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mirvac<br>Ref | Clause                                                     | Summary of Mirvac's issue                                                                                                                                                                                          | State position                                                                                                                                                                                                             |
| 04 (D)        | Clause 23 -<br>Developer's<br>Warranties and<br>Statements | Mirvac has proposed that the Developer's obligations in relation to the execution and completion of the works be limited to compliance with the STC Project Brief rather than the Development Agreement generally. | The proposed amendments are not supported.<br>The Developer is required to fully comply with the Development Agreement.                                                                                                    |
| 64 (c)        | Clause 23 -<br>Developer's<br>Warranties and<br>Statements | Mirvac has sought to limit its obligations to the State in relation to the supply of documents and examination of the site.                                                                                        | The proposed amendments are not supported.<br>The Developer is required to fully comply with the Development Agreement.                                                                                                    |
| 65 (a)        | Clause 24 -<br>Risks Accepted<br>by the                    | Mirvac is seeking not to be exposed to the risks associated with errors or omissions in the Project Brief.                                                                                                         | The proposal is not supported.                                                                                                                                                                                             |
|               | Developer                                                  | Mirvac does not want to be exposed to risks caused or contributed to by the State's negligence or default.                                                                                                         |                                                                                                                                                                                                                            |
| 65 (b)        | Clause 24 -<br>Risks Accepted<br>by the<br>Developer       | Mirvac is seeking to ensure that its rights under the Development<br>Agreement are not inconsistent with the Heads of Agreement between<br>Enertrade and the State.                                                | The State notes Mirvac's concerns and will ensure the terms and conditions on which the site is acquired from Enertrade are not "inconsistent with the Developers rights and obligations under the Development Agreement". |
| (c) (c)       | Clause 24 -<br>Risks Accepted<br>by the<br>Developer       | Mirvac has requested that the Deed of Release and Indemnity only be<br>provided after all other Conditions Precedent have been satisfied.                                                                          | The proposal is supported.                                                                                                                                                                                                 |
| (b) C0        | Clause 24 -<br>Risks Accepted<br>by the<br>Developer       | Mirvac has requested that Clause 24.1(e) be deleted to avoid it being<br>exposed to risks associated with ambiguities, errors and omissions in the<br>STC Project Brief.                                           | This amendment is not supported.                                                                                                                                                                                           |
| 65 (e)        | Clause 24 -<br>Risks Accepted<br>by the<br>Developer       | Mirvac is seeking to limit its exposure to risks when losses and expenses are caused by the State's negligence.                                                                                                    | This amendment is not supported.                                                                                                                                                                                           |

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|                                                                                                                                                                                                                                                        | 67 (B)                                                                                                                                                                                                                                                                                                                                                                                                                          | 67 (a)                                                                                                                                     | 66 (c)                                                                                                                    | 66 (b)                                                                                                                                                                                     | 66 (a)                                                                                                                                                                        |                                                                                                                               | 65 (f)                                                                                                                                                                                                                                                                                                                                                                | Mirvac<br>Ref             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                                                                                                                                                                                                                                                        | Clause 26 -<br>Default and<br>Termination                                                                                                                                                                                                                                                                                                                                                                                       | Clause 26 -<br>Default and<br>Termination                                                                                                  | Clause 25 -<br>Assignment                                                                                                 | Clause 25 -<br>Assignment                                                                                                                                                                  | Clause 25 -<br>Assignment                                                                                                                                                     |                                                                                                                               | Clause 24.2 -<br>Release of<br>Enertrade                                                                                                                                                                                                                                                                                                                              | Clause                    |
|                                                                                                                                                                                                                                                        | Mirvac is seeking to minimise the likelihood of default if it cannot achieve<br>Practical Completion and Critical Finish Date by making the clause subject<br>to Force Majeure provisions.                                                                                                                                                                                                                                      | Mirvac is seeking similar or identical provisions in favour of the<br>Developer which will apply in the event of the default of the State. | Mirvac is seeking to nominate an entity (other than itself) to take the title to the associated development lot.          | Mirvac is seeking an express acknowledgement that the entity to whom the State novates the Development Agreement will accept the obligations of the State under the Development Agreement. | Mirvac is seeking the right to assign its interests in the Development<br>Agreement without the State's consent if the State will not be in a worse<br>position.              |                                                                                                                               | Mirvac has proposed the Enertrade Deed of Release is provided only after<br>further testing of the site has determined the site can be removed from the<br>Environmental Management Register.                                                                                                                                                                         | Summary of Mirvac's issue |
| Clause 4.6 also be amended to include a requirement for the parties to give 14 days notice of their intention to terminate and oblige the parties to negotiate to ascertain if an extension can be granted before they can terminate under the clause. | The proposal is not supported.<br>Provided the Developer has complied with clauses 18.1, 18.2 and 18.3, then to<br>the extent that a catastrophic event outside the control of and not occasioned by<br>a breach by the Developer actually delays the Developer in achieving Practical<br>Completion by the Critical Fiuish Date, the State will consider an extension, at<br>Developer's request, to the Critical Finish Date. | The proposal is not supported, as the Developer will have common law rights to damages.                                                    | The proposal is not supported as it raises concerns about multiple nominees and may have GST and stamp duty implications. | The proposal is not supported, as this is the effect at law of novation.                                                                                                                   | The proposed amendment is not acceptable to the State as it limits the State's control over the works and there is no indication how the State's position will be determined. | The Development Agreement be amended so site access is conditional on the Developer delivering to the State an executed Deed. | The proposal that the Deed will only be provided after it can be determined the site can be removed from the Environmental Management Register is not supported. However, the Development Agreement could be amended to allow the site to remain on the Environmental Management Register subject to a site management plan, with conditions acceptable to the State. | State position            |

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| <br>08                                                                                                                                                                                                                                     | 60<br>01 (5)                                                  | 67 (h)                                                                                                                                                                                                                                                                          | ري رو<br>(ع) رو                                                                                                                       | 67 (A)                                           | 67 (A)                     | 67 (u)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 67 (d)                                                                                                                                   | Mirvac<br>Ref             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| <br>Indemnities                                                                                                                                                                                                                            | Default and<br>Termination                                    | Clause 26 -<br>Default and<br>Termination                                                                                                                                                                                                                                       | Clautse 20 -<br>Default and<br>Termination                                                                                            | Default and<br>Termination                       | Default and<br>Termination | Default and<br>Termination                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Default and<br>Termination                                                                                                               | Clause                    |
| Mirvac is seeking to include a clause that requires the State to provide<br>Mirvac with an indemnity to it for losses/claims arising as a result of<br>personal injury or loss/damage of property caused by or incidental to the<br>Works. | completion of works rather than upon the demand of the State. | Mirvac wants to provide for the Developer to commence diligently to comply with a default notice rather than remedy it within 10 days.                                                                                                                                          | MIrvac has requested that a time limit be established to ensure it does not trigger an Event of Default for 3 minor defaults notices. | perform a "material" provision in the Agreement. | work.                      | Mirror is configured to ensure that it has sooned to be a solution of the solu | Mirvac is seeking to ensure that an Event of Default could not be<br>considered where it lawfully repudiates a builder or subcontractor. | Summary of Mirvac's issue |
| The proposal is not supported.                                                                                                                                                                                                             | The proposal is not supported.                                | The proposal is supported. Amend clause 26.3(b) and 26.4(c) by in each case omitting paragraph (i) and amending the existing paragraph (ii) (to become paragraph (i)) to read "Developer to diligently commence to correct and complete the correction in the Even of Default". | The proposal is supported.                                                                                                            | The proposal is not supported.                   | The proposal is supported. | The proposed amendments are uot supported.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | The proposal is not supported.                                                                                                           | State position            |

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| 69 (e) Clause 28 -<br>Disputes<br>69 (f) Clause 28 -<br>Disputes<br>70 (a) Clause 29 -<br>Confidentialit<br>and Intellectul<br>Property | 69 (e) Clause 28 -<br>Disputes<br>69 (f) Clause 28 -<br>Disputes                                                                                                                      | 69 (e) Clause 28 -<br>Disputes                                                     |                                                                                                       | by (d) Clause 28 - Disputes                                                                                                                                                           | Disputes                        | 60 (c) Clause 20 -                        | 0 (A) 03                                                              |                                                                                                                                                                                                                                   | 69 (a) Clause 28 - Disputes                                                                                                                   | Mirvac Clause<br>Ref      |
|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Mirvan has sought an amendment to the close on that the State in the                                                                    | Mirvac is seeking to ensure that the intellectual property granted to the<br>State under an irrevocable licence can only be used on the Tennyson site.                                | Mirvac is seeking to use the phrase "error of law" as opposed to "manifest error." | Mirvac is seeking the amendment to ensure that the parties are bound by the rules of natural justice. | Mirvac is seeking to amend the clause to ensure that the expert discloses<br>all information on which the expert bases its decision and which is not in<br>either parties submission. | a dispute to an expert.         | of dispute or for executive negotiations. |                                                                       | dispute which is resolved in favour of the Developer.                                                                                                                                                                             | Mirvac has sought an automatic extension of time to the Practical<br>Completion and the Critical Finish Dates for the time taken to resolve a | Summary of Mirvac's issue |
| The proposal is not acceptable.                                                                                                         | The proposal is supported, subject to the licence being site specific.<br>Amend Clause 29.6(c) and Clause 29.7(b) by adding at the end of it the words<br>"within the Tennyson Site". | The amendment is not supported.                                                    | The amendment is not supported.                                                                       | The amendment is not supported.                                                                                                                                                       | The amendment is not supported. | The amendment is supported.               | Deletion of clause 28.9 (certain decisions binding) is not supported. | Clause 18 be amended to allow for the State to consider an extension to the Date for Practical Completion and the Critical Finish Dates for the time taken to resolve a dispute, where it is resolved in favour of the Developer. | The proposed amendment is supported in principle.                                                                                             | State position            |

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| Mirvac<br>Ref | Clause<br>Schedule 1 -                         |
|---------------|------------------------------------------------|
|               |                                                |
|               | Schedule 2 -<br>State Tennis<br>Centre Project |
|               | Brief                                          |
| -             | Schedule 6 -<br>Warranty Deed                  |
| 71            | Schedule 7 -<br>Access Licence                 |
|               |                                                |
|               | Schedule 7 -<br>Access Licence                 |
| 72 (a)        | Additional<br>Comments                         |
| 72 (b)        | Additional<br>Comments                         |

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| 72 (c)                                                                                                                                                            | Mirvac<br>Ref             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Additional<br>Comments                                                                                                                                            | Clause                    |
| Mirvac is seeking to include a clause that acknowledges that the Development Agreement is not an infrastructure agreement under the Integrated Planning Act 1997. | Summary of Mirvae's issue |
| The proposal is not supported.                                                                                                                                    | State position            |
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| 14.3.1                                                                                                       | 13.2                                                                                                         | 12.13                                                                  | 11.2.8                                                                                                                            | 8.1                                                                                                            | 7.1                                                                                                            | 6.6                                                                                                                                                                                    | 6.                                                                                                                                                   | 6                                                                                                                          |                                                                                                                                                                                                | ر.<br>ب                                 | Clause                    |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|---------------------------|
| Outside<br>Broadcast<br>Compound                                                                             | Items Supplied<br>by Developer                                                                               | Shade Coverage                                                         | Function Rooms                                                                                                                    | Training Courts                                                                                                | Match Courts                                                                                                   | Public<br>Concourse                                                                                                                                                                    | Scoreboard                                                                                                                                           | Centre Court                                                                                                               |                                                                                                                                                                                                | Quality                                 | Requirement               |
| The extent of parking will be per Mirvac proposal.                                                           | Furniture, fit-out and equipment supplied will be per Mirvac proposal.                                       | The extent of shade coverage will be according to the Mirvac proposal. | Mirvac's proposal for the function rooms provides for 2 adjoining spaces capable of seating 200 people in a dining configuration. | Warranties for court base and surface will be as offered by ITA accredited contractors.                        | Warranties for court base and surface will be as offered by ITA accredited contractors.                        | Provision of infrastructure and equipment to be per Mirvac proposal and excludes requirements of venue manager e.g. compactor to be negotiated by Venue Manager with waste contractor. | Mirvac will provide the necessary infrastructure to allow for the supply, installation and dismantling of temporary video-wall scoreboard by others. | Warranties for court base and surface will be as offered by International Tennis Association (ITA) accredited contractors. |                                                                                                                                                                                                | Mirvac is not ISO 9001:2000 accredited. | Summary of Mirvac's issue |
| The proposal is not acceptable. Mirvac to comply with requirements of the State Tennis Centre Project Brief. | The proposal is not acceptable. Mirvac to comply with requirements of the State Tennis Centre Project Brief. | Mirvac to provide further details of shade coverage.                   | The proposal is not acceptable. Mirvac to comply with requirements of the State Tennis Centre Project Brief.                      | The proposal is not acceptable. Mirvac to comply with requirements of the Development Agreement Warranty Deed. | The proposal is not acceptable. Mirvac to comply with requirements of the Development Agreement Warranty Deed. | Mirvac to provide further details of infrastructure and equipment it has proposed it will not provide.                                                                                 | The proposal is not acceptable. Mirvac to comply with requirements of the State Tennis Centre Project Brief.                                         | The proposal is not acceptable. Mirvac to comply with requirements of the State Tennis Centre Project Brief.               | Contractor and all sub-consultants, services subcontractors and significant building subcontractors shall be third party certified to ISO 9001:2000 Quality management systems - Requirements. | The proposal is not supported.          | State position            |

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MIRVAC'S PROPOSED DEPARTURES TO THE STATE TENNIS CENTRE PROJECT BRIEF

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| 17.2                                                                                                                                                                               | 16.8.5                                                                                                       | Clause                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------|
| Legislative<br>Compliance                                                                                                                                                          | Earthworks                                                                                                   | Requirement               |
| The proposal has been designed in an attempt to minimise the impacts on the site and external environment.                                                                         | The earthworks have been designed in accordance with the Mirvac proposal.                                    | Summary of Mirvac's issue |
| Mirvac to confirm it will comply with the provisions of all relevant<br>Commonwealth, State and Brisbane City Council requirements and relevant<br>Australian Standards and Codes. | The proposal is not acceptable. Mirvac to comply with requirements of the State Tennis Centre Project Brief. | State position            |

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# **Tennyson Riverside Development**

# **State Tennis Centre Project Brief - Priority Issues**

to be addressed by Mirvac in revising its DDP. It is not an exhaustive list and the State reserves the right to advise Mirvac of additional requirements in the State Tennis Centre Project Brief (Brief) except for any departures proposed by Mirvac in its DDP that the State supports priority STC issues should they arise during the negotiation process or the assessment of Mirvac's revised DDP. Tennis Centre Project Brief is set out on the second last page of Attachment B. This document (Attachment C) sets out the priority STC issues and any other departures identified and agreed to during negotiations. The State's response to the departures sought by Mirvac to the State (DDP) including in relation to the State Tennis Centre (STC). Threshold issue number 2 states that Mirvac is to commit to meet the minimum Attachment A to the State's letter to Mirvac outlines a number of threshold issues associated with Mirvac's Detailed Development Proposal

| I ransport and Access                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Facility Accommodation                                                                                                                                                                                                                                                                                                                                                                                | Issue                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| 33                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1.3                                                                                                                                                                                                                                                                                                                                                                                                   | STC<br>Project<br>Brief<br>Reference                                     |
| <ul> <li>The transport strategy and plan has been identified as inadequate. Specific concerns are:</li> <li>proposed infrastructure, such as bus bays and associated marshalling and milling areas are inadequate;</li> <li>the width of pathways, bikeways and connections with external infrastructure may not accommodate safe and convenient pedestrian and bicycle access to the STC during major event mode;</li> <li>the lack of detail on pedestrian and bicycle access to</li> </ul>                                | All facilities required for players during major events are<br>not provided using dedicated permanent facilities and/or<br>the reconfiguration of flexible permanent facilities as<br>required.<br>Some key overlay facilities such as broadcast, media,<br>officials, major sponsors hospitality and VIPs lounge and<br>hospitality have not been located in close proximity to the<br>centre court. | Comment                                                                  |
| <ul> <li>Revise the transport strategy and plan to include the following:</li> <li>an appropriate number of bus bays (4 as opposed to the 3 offered);</li> <li>sufficient marshalling and milling areas adjacent to coach bus and taxi set-down and pick-up areas;</li> <li>internal pathways, bikeways and connections to external infrastructure of sufficient size to accommodate safe and convenient access during major event mode; and an internal roundabout sized to accommodate large vehicles ~d buses.</li> </ul> | Review the overlay design to provide the required players'<br>facilities as permanent facilities and locate key overlay facilities<br>in close proximity to the centre court.                                                                                                                                                                                                                         | Issues to be addressed in revised Detailed Development<br>Proposal (DDP) |

|   | 3.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3.3                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 | <ul> <li>Specific concerns about access arrangements are:</li> <li>pedestrian, bicycle and vehicle movements have not<br/>been clearly separated, particularly at the plaza entry;</li> <li>the location of the pedestrian pathway on the northern<br/>side of the boulevard will result in conflicts of<br/>movements between vehicles and pedestrians<br/>accessing the Yeerongpilly Rail Station during major<br/>events;</li> <li>the width of the pathways within the site and<br/>connections to external infrastructure may not be<br/>adequate for major event mode; and</li> <li>the recreational bikeway is too narrow (it should be at<br/>least 3 metres).</li> </ul> | The alignment of the alternative access route to the substation is unsnitable and the gradients appear to be too steep for access by large vehicles with heavy loads. | <ul> <li>the riverfront from the plaza;</li> <li>the conflict of pedestrian and vehicle movements at<br/>the plaza entry and throughout the site;</li> <li>possible rat running from the west to the east may<br/>conflict with safe pedestrian use of the plaza; and</li> <li>large vehicles with heavy loads accessing the<br/>substation and centre court may potentially damage<br/>electrical cables within the easement on the Animal<br/>Research Institute boundary.</li> </ul> |
|   | <ul> <li>Revise the design of pedestrian and bicycle access to provide separation and/or other safety measures to protect pedestrians and cyclists.</li> <li>Provide details on the estimated extent of usage of the riverfront bikeway and bicycle corridor identified along the boulevard and the links to existing bikeways.</li> <li>Increase the width of major pedestrian pathways and revise the location of the pedestrian pathway to Fairfield Road to resolve conflicts of movements.</li> </ul>                                                                                                                                                                        | Provide information on gradients and access arrangements to the substation.                                                                                           | <ul> <li>Provide information on the effectiveness of:</li> <li>segregation of pedestrian and vehicle movements at the plaza; and</li> <li>vehicle access to the substation and measures proposed to avoid damage to electrical cabling.</li> <li>The internal roundabout is to be adequately sized to accommodate large vehicles including buses and semitrailers.</li> </ul>                                                                                                           |

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|   | Administrative Facilities 11.2                                                                                                                                                                           | Tennis Queensland State 10.1<br>Office                                                                                                                                                                                                    | Tennis Court Seating and 9<br>Shade                                                                               | 7.1,<br>and<br>8.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.1 e<br>7.2                                                                                                                                                                                    | 6.6                                                                                                                                                                                                                                                                                                                      |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | The location of the venue management facilities may not<br>be optimal for overseeing the day-to-day operations of the<br>STC (e.g. limited ability to view courts from the venue<br>management offices). | Mirvac has included items for the State Office that are not<br>required under the Brief, noting Tennis Queensland is to<br>provide, for the State Office, the loose furniture,<br>workstations and loose equipment outlined in the Brief. | Details for the shaded seating for 6 spectators for each of the match and training courts have not been provided. | <ul> <li>7.2 Specific concerns regarding the show, match and training courts include:</li> <li>some court equipment has not been scheduled;</li> <li>it is not clear if walkways between courts are to be provided with shading;</li> <li>access to courts for maintenance; and</li> <li>details on all court services, data, communication, power and water outlets as well as all necessary infrastructure and head-end equipment for the Public Address and CCTV systems have not been provided.</li> </ul> | <ul> <li>and Specific concerns with the centre and show courts are:</li> <li>lighting does not comply with the Brief requirements; and</li> <li>wet weather covers are not provided.</li> </ul> | A public concourse is provided to service all vomitories,<br>concessions and toilets, however not all necessary<br>infrastructure and equipment required by the Brief has<br>been provided.<br>Mirvac states the provision of infrastructure and<br>equipment excludes the requirements of the venue<br>manager.         |
|   | Review the location and amenity of the venue management<br>facilities and provide information on how the location of the<br>facilities will allow the STC to operate effectively in normal<br>mode.      | Items for the Tennis Queensland State Office that are not required by the Brief should be removed from the DDP.                                                                                                                           | Provide information on the shaded seating for 6 spectators for each match and training court.                     | Commit to provide court eqnipment and provide a<br>comprehensive cost schedule of court equipment including<br>number, type and quality of all items.<br>Provide details of shading to walkways.<br>Clarify how courts will be accessed to undertake maintenance.<br>Provide details of services and systems provided to all courts.                                                                                                                                                                           | Provide lighting and wet weather covers in accordance with the Brief.                                                                                                                           | <ul> <li>Coufirm all infrastructure and equipment required by the Brief will be provided.</li> <li>Provide further details on the design of the public concourse and its capacity to cater for: <ul> <li>a crowd of 7000; and</li> <li>the bump in of facilities for events (including services).</li> </ul> </li> </ul> |

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|   |                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                       | Support Facilities                                                                                                                                                    |                                                                                                                                                                                                                                                                                          |                                                                                                            |                                                                                                                                                                                                 |                                                                                                                                                                       |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | 12.8                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12.7                                                                                                                                                                                  | 12.2.1                                                                                                                                                                | 11.3.2                                                                                                                                                                                                                                                                                   | 11.2.12                                                                                                    | 11.2.10                                                                                                                                                                                         | 11.2.3                                                                                                                                                                |
| 5 | Insufficient details have been provided regarding the maintenance/grounds keeping facilities.                                                                                                                                                                                                                                                                                                                                                 | The loading area is located at the rear of STC, which may<br>not be appropriate for some STC needs. It is unclear how<br>the loading area can service all areas of the STC.           | No reference made to camera and lighting gantry.                                                                                                                      | <ul> <li>Specific concerns with the café are:</li> <li>40 m<sup>2</sup> is not considered sufficient to meet the requirements of the Brief;</li> <li>it is unclear if the café is capable of being extended in major event mode; and</li> <li>there is no indoor eating area.</li> </ul> | Details of all electronic management systems required to assist in operations have not been provided.      | It is unclear if the medical and emergency services room<br>has direct access to an emergency vehicle parking area<br>with clear passage for a wheeled stretcher without<br>intervening stairs. | The user interface area has been located one floor above<br>entry level and therefore may not be an effective<br>arrangement for daily operations such as court hire. |
|   | <ul> <li>Confirm the provision of all the facility and equipment requirements of the Brief and provide further information on the following:</li> <li>office;</li> <li>store;</li> <li>ventilated parking;</li> <li>separate drive in bin area;</li> <li>chemical shower;</li> <li>locker/shower/toilet room for staff;</li> <li>maintenance area;</li> <li>maiutenance storage; and</li> <li>yarate secure chemical storage room.</li> </ul> | Provide details of how the loading area will cater for the service delivery requirements for all areas of the STC including the café, Tennis Queensland and venue management offices. | Confirm provision of and provide details on the camera and lighting gantry including the means to install, access and service cameras and lights in the centre court. | Provide information on the ability of the café to expand in event<br>mode and how the café meets the requirements of the Brief.                                                                                                                                                          | Commit to provide the required systems, infrastructure and equipment and include in the schedule of costs. | Provide details of access arrangements in accordance with the Brief.                                                                                                                            | Review the location of the user interface area to ensure it is practical for daily activities such as court hire.                                                     |

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|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
|   | 14.3.1                                                                                                                                                                                                                                                                                                                                                                                                                               | 14.2.1 and<br>14.2.2                                                                                                                                                     | 14.1.2                                                                            | 13.2                                                                                                                                | 12.16                                                                               | 12.12 and<br>1.3                                                                                                                                           | 12.11                                                                                                                                                                                                                                                                                                                                            | 12.9                                                          |
| 6 | <ul> <li>Insufficient details have been provided on the outside<br/>broadcast vehicle compound, including;</li> <li>the cable route from the compound and parking areas<br/>into centre court and media areas;</li> <li>location of the temporary standby power generation or<br/>secure alternative power source;</li> <li>parking; and</li> <li>interference from electromagnetic fields with<br/>broadcast capability.</li> </ul> | Overlay for ball persons area and officials room is located<br>in the car park, however no information has been<br>provided on the provision of services to these areas. | A drug testing area is provided however there is no dedicated access to a toilet. | Mirvac proposes to supply the majority of furniture,<br>fittings and equipment items, however not all items have<br>been scheduled. | The main waste disposal areas have not been detailed.                               | Details of the services to be provided to temporary<br>overlay facilities have not been provided.                                                          | <ul> <li>There are a number of concerns regarding the permanent toilets including;</li> <li>no field toilets adjacent to match and training courts;</li> <li>toilets not conveniently located for café patrons;</li> <li>security arrangements for public toilets during normal mode; and</li> <li>no dedicated toilet for officials.</li> </ul> | Details of access controls have not been provided.            |
|   | Clarify the overlay design for the broadcast area including<br>access to services.<br>Comment on the potential for electromagnetic interference on<br>broadcast capability from electrical cabling in the area<br>identified.                                                                                                                                                                                                        | Provide further information on what facilities are proposed for ball persons and officials and how these will be serviced.                                               | Provide dedicated access to a toilet as it is a requirement for drug testing.     | Commit to provide all the required equipment and include in the schedule of costs.                                                  | Confirm and provide specific details on the waste disposal strategy and facilities. | Confirm that overlay areas and facilities are adequately<br>serviced with water, electricity, lighting, drainage and facilities<br>for cable reticulation. | Address the concerns regarding the provision of permanent toilets around the STC.                                                                                                                                                                                                                                                                | Provide information on the extent of access control measures. |

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|   | Environmental                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Civil Engineering                                                                                                                                                                                                                                                                                                                                           |                                                         | Electrical Services                                                                                                          |                                                                                                                                                                                                                                       |                                                                                                            |                                                                                                                                                                                    |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | 17.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 16.8.5                                                                                                                                                                                                                                                                                                                                                      | 16.5.4                                                  | 16.2                                                                                                                         | 14.4<br>.3                                                                                                                                                                                                                            | 14.4.2                                                                                                     | 14.3.3<br>and<br>14.4.4                                                                                                                                                            |
| 7 | No commitment has been made nor conceptual<br>arrangements provided on Ecologically Sustainable<br>Development principles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | The departure schedule indicates that earthworks have<br>been designed in accordance with the DDP and not the<br>Brief. Information provided regarding earthworks is not<br>adequately detailed.                                                                                                                                                            | Details of the CCTV surveillance has not been provided. | Provision of spare capacities and flexibility in the electrical service elements has not been detailed.                      | The photographers facilities area is identified as overlay<br>however no details have been provided.                                                                                                                                  | The location of the media workroom is not clear.                                                           | Services for the television and radio broadcast booths, television presentation studio and the press conference area have not been detailed.                                       |
|   | <ul> <li>Provide details of the following:</li> <li>strategy for water conservation, harvesting and recycling, including costs, ownership and control and timing for installation;</li> <li>stormwater discharge quality standard;</li> <li>recycling of demolition materials, particularly masonry rubble;</li> <li>energy efficiency and if there is a commitment to achieving an environmental standard such as the green star rating or equivalent; and</li> <li>the measures proposed to prevent floating debris and rubbish from collecting below the boardwalk and in the 'ngroves.</li> </ul> | <ul> <li>Show that:</li> <li>the STC will withstand the adverse impact from storms up to a minimum of 100 year flood event;</li> <li>no ponding of stormwater will occur over any part of the proposed development platforms; and</li> <li>overland stormwater flows are adequately catered for and are directed away from bnildings and courts.</li> </ul> | Provide details on the extent of the CCTV measures.     | Provide details of spare capacity in the electrical service elements and how this will provide flexibility for major events. | <ul> <li>Provide information on:</li> <li>the location of the photographers facilities;</li> <li>centre court photographer and camera positions; and</li> <li>services infrastructure and access to broadcast connections.</li> </ul> | Provide information on where the media workroom is located<br>and the services provided for this facility. | Confirm that required services infrastructure for the television<br>and radio broadcast booths and television presentation studio<br>and press conference area are to be provided. |

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|   | Building Fabric                                                                        | Materials and Durability                                                                                                                                                                                                                                                                                                                                                                                |  |
|---|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|   | 20.                                                                                    | <b>19</b>                                                                                                                                                                                                                                                                                                                                                                                               |  |
| ∞ | A short schedule of materials and finishes for internal spaces only has been provided. | <ul><li>The lifecycle costs proposed for the STC appear conservative with optimistic design lives for some building elements.</li><li>In addition, some materials may be inappropriate (e.g. plasterboard finishes are not suitable for heavy use areas).</li></ul>                                                                                                                                     |  |
|   | Provide further details on the type and quality of materials and finishes proposed.    | <ul> <li>Provide further details of the lifecycle costs including:</li> <li>quality of the materials and finishes; and</li> <li>the proposed lifecycle planning procedure that ensures the required design lives will be achieved with maintenance costs minimised.</li> <li>Provide comment on the appropriateness of the materials and finishes proposed in view of their function or use.</li> </ul> |  |
i je je e 51004/128



13 January 2005

Dr Ted Campbell Director-General Department of Local Government, Planning, Sport and Recreation PO Box 1531 CITY EAST QLD 4002

Dear Dr. Campbelle L,

Thank you for your letter of 22 December 2004 in relation to the Mirvac bid on the Tennyson Riverside Development.

Mirvac agrees with you that it is important to determine expeditiously and costeffectively whether Mirvac and the State can develop a Detailed Development Proposal (DPP) that meets both the State's needs, and our need for a commercially viable project, and I wish to thank you for your commitment to a process that can achieve that outcome.

I am pleased to advise that, in accordance with your proposal to progress the tender process, Mirvac is willing to enter into negotiations on the issues outlined in Appendix A of your letter with a view to developing a revised DPP. We are also willing to enter into negotiations with a view to agreeing on a revised Development Agreement using Appendix B of your letter as a basis to commence discussions.

There are, however, a number of other important policy and procedural issues which will determine whether the project is viable, and which need to be resolved between us. As these are fairly high-level decisions, I believe their early resolution will both establish a firm understanding of our respective needs, and facilitate settlement of many of the issues in Appendices A and B

Consequently I suggest it makes good sense for both of us to deal with them as threshold issues, before seeking to resolve individual items from those appendices.

These threshold issues are:

• Whether the State is dealing exclusively with Mirvac while the process outlined in your letter proceeds

The Mirvac Group Mirvac Limited ACN 003 280 699 Mirvac Property Trust ARSN 086 780 645 Level 2, 164 Grey Street, South Bank QLD 4101 Australia PO Box 5121, West End QLD 4101 Tel 61 7 3859 5888 Fax 61 7 3010 1600 www.mirvac.com.au Mirvac's Privacy Policy is on our website or contact our Privacy Officer on 61 2 9080 8000

- The need to ensure that both parties maximise capture and benefit from the synergies that are possible from an integrated approach to the project;
- An understanding that any discussion you may have with other tenderers, before any confirmation that Mirvac are the successful tenderer, will be conducted in a competitively neutral environment, and will remain consistent with the terms and conditions you have proposed for Mirvac;
- The need for parties to work together cooperatively and collaboratively in a climate of trust and goodwill, respecting and accommodating one another's perspectives, rights, constraints and interests;
- Once the Development Agreement is settled, the need to afford one another natural justice, for each of us to act reasonably and in good faith, for each of us to protect the other from risks caused or contributed by each, and for each of us to apply our reasonable and expeditious endeavours towards successful completion of the project
- Allocation of risk between the parties must recognise commercial reality as well as the State's needs;
- The discretion that the State proposes to allow itself, to reject the development once Council and State approvals are known makes the project commercially unviable. No honest developer, committed to the project, could accept this risk;
- The site work commencement conditions mandate severe delays and are inconsistent with the Government's required timeframes we believe the issues associated with these conditions can be resolved, with commitment;
- The Tennis Courts bank guarantee requirement is well beyond normal commercial requirements and unnecessary;
- Application of normal and current property development practice in allowing the developer staged title to the associated development;
- Involvement of Tennis Queensland, as the key beneficiary likely to inherit responsibility for the site, in our further discussions; and
- The ongoing obligations of the State and Mirvac to respective stakeholders and shareholders.

I believe that reaching agreement on these threshold issues has the capacity to bring your proposed timetable significantly forward.

In closing I wish to stress that Mirvac is deeply committed to achieving an outcome that will not only generate a reasonable return (consistent with market expectations)

Dr Ted Campbell Director-General Department of Local Government, Planning, Sport and Recreation

on our shareholder's capital, but also provide a piece of important State infrastructure that will be another of the City's defining public spaces. We have applied all our resources and engaged world class consultants to support our bid.

Having met the conditions of your letter of 22 December, I look forward to an early commencement of further discussions.

Yours sincerely.

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C R FREEMAN Chief Executive – Queensland

CC:

Deputy Premier, Treasurer and Minister for Sport Queensland Government GPO Box 611 BRISBANE QLD 4001



ZOF

SO5/3827

16 JUN 2005

Mr C Freeman Chief Executive - Queensland The Mirvac Group PO Box 5121 WEST END QLD 4101

Dear Mr Freeman

Thank you for your revised Detailed Development Proposal submitted on 29 April 2005 and your letter of 20 May 2005 outlining your revised financial offer for the Tennyson Riverside Development (TRD).

I am pleased to advise that the State has determined that Mirvac be appointed preferred developer for the TRD subject to the following conditions:

- the State's financial contribution to the TRD will be \$10 million capped, payable to Mirvac upon completion of the State Tennis Centre (STC);
- the State's total contribution to Mirvac's Goods and Services Tax liability for the TRD will not exceed \$6 million and will be paid progressively as residential unit sales occur;
- the profit share arrangement will commence upon completion of the TRD at Mirvac's internal rate of return shown in its letter of 20 May 2005 (17.5 percent) and will be on the basis the State receives the first \$10 million and the State and Mirvac share in additional profits above that on a 50/50 basis;
- that no further financial claims be made on the State, apart from State requested variations to the State Tennis Centre specifications;
- that Mirvac agrees to build the STC in accordance with the State's specifications as outlined in the STC Project Brief which will form a schedule to the development agreement; and
- that Mirvac continues to make the necessary resources available to finalise a development agreement and early works agreement, for execution by no later than 29 July 2005. To achieve this timeline, these documents will need to be completed and all the necessary plans and drawings supplied to and endorsed by the State by no later than 8 July 2005.

Could you please advise me in writing by close of business on 23 June 2005 of Mirvac's acceptance of the preferred developer appointment for the TRD.

The Government wishes to announce this appointment in the near future and I understand representatives of the TRD Project Office and Mirvac are consulting on the necessary announcement arrangements. It should be noted that Mirvac continues to be subject to a Confidentiality Agreement with the State and as such, no public statements about this appointment are to be made until after the announcement has been made by the Government. If you have any questions in relation to this matter, please do not hesitate to contact Mr Tim Peisker on telephone number

I look forward to receiving your favourable response to this matter.

Yours sincerely

Dr Ted Campbell <u>Director-General</u>



24 June 2005

Dr Ted Campbell Director-General Department of Local Government Planning, Sport and Recreation PO Box 1531 CITY EAST QLD 4002

Dear Dr Ted Campbell

Thank you for your letter of 16 June 2005 advising the State has determined that Mirvac be appointed preferred developer for the TRD subject to various conditions.

We acknowledge those conditions that we summarise below:

- 1) States financial contribution
- 2) States contribution to Mirvac's Goods and Services Tax Liability
- 3) Profit share arrangement
- 4) States position in respect to further financial claims, excluding variations
- 5) The requirements to build the STC to the Project Brief (Which we are currently amending in consultation with the TRD Project Team to reflect Mirvac's concept plans and room data sheets)
- 6) Mirvac making the necessary resources available to finalise the Development Agreement within the States timeframes

It should be noted that there are a number of contractual issues that are yet to be agreed between the parties. Mirvac's Project Team informs me that they have presented solutions to a number of those outstanding issues and are awaiting feedback from the State on the acceptance of those solutions. This relates primarily to termination provisions within the contract.

There are also a number of contractual drafting issues that need to be resolved, some of which relate to the conditions that are outlined in your letter. We will attempt to agree with your Project Team next week conditions that incorporate both the State's and Mirvae's requirements.

We look forward to the public announcement of Mirvac's preferred development status on Monday 27 June 2005.

Yours sincercly

Chris Freenan Chief Executive Mirvac Queensland Pty Limited A.C.N. 060 414 207

The Mirvac Group Mirvac Limited ABN 92 003 280 699 Mirvac Property Trust ABN 29 769 181 534 Level 2, 164 Grey Street, South Bank QLD 4101 Australia PO Box 5121, West End QLD 4101 Tel 61 7 3859 5888 Fax 61 7 3010 1600 M:New Business/Tennyson - 5170CORRESPONDENCE CONTROL CONTROL CONTROL VIEW OF 10 10 1000 1000 000 Mirvac's Privacy Policy is on our website or contact our Privacy Officer on 61 2 9080 8000

#### Development Agreement 'drafting issues' and outstanding commercial issues

The matters raised by Mirvac's legal advisers are of strategic importance to the project and should be considered by the Steering Committee in conjunction with advice from Minter Ellison and Treasury.

1) Mirvac still want to be able to get an extension of time if it is delayed in obtaining the development approval. It sees this as the best 'lever' to encourage the Minister to exercise "call in powers" if there is a delay.

#### **Initial position:**

The risk of delay during the development approval process is more likely to relate to the associated development component of the project. If the State were to allow Mirvac an automatic extension of time for such a delay, the State would not have the option to terminate the contract and proceed with construction on the STC itself to meet its required timeframes.

The Minister should not be put in the position of effectively being forced to exercise discretionary "call in" powers to ensure delivery of the Tennis Centre within the required time frames, ie give Mirvac the opportunity to indulge in 'gaming' behaviour in its dealings with the Council.

2) Presently, if the State terminates (either for default or failure to satisfy the conditions precedent), the State is entitled to acquire Mirvac's intellectual property 'at cost'. Mirvac also want to be paid an as yet undisclosed margin on that cost.

**Initial position:** A petty request. The cost of developing the useable intellectual property will in the main be fees paid to design consultants. There is likely to be an argument with Mirvac about its internal costs in developing the IP. The State should not also have to pay Mirvac a margin.

3) At present Mirvac get an extension of time if delayed by industrial trouble unless it is "site specific". Mirvac is concerned that the proposed Federal IR changes may make this a project to be targeted, and therefore want to get IR relief generally.

**Initial position:** State Government projects have previously been the target of specific action, even when the industrial action relates to a state-wide issue.

The State has some sympathy for this issue and may consider giving Mirvac's some relief, ie for strikes unless they arise out of the management by Mirvac or its contractor of their workforce. If the State secures events for the STC, and these are publicised, it may become a target for such action.

#### 8) Mirvac do not want to have to indemnify Enertrade in relation to contamination claims.

**Initial position:** Any existing contamination will almost certainly result from the State's use of the site as a power station. It is almost unreasonable in that case to expect Mirvac to indemnify Enertrade for claims arising out of activities which are in no way Mirvac's fault. However, Enertrade have consistently maintained the position that it does not want any residual liability after it disposes of the land. A compromise position may be for Mirvac to release Enertrade from liability (but not indemnify it) and the State to give Enertrade an indemnity. As the State is almost certainly presently liable for such a claim (arising out of existing contamination), such an approach will not materially alter the State's liability profile.

### 9) Mirvac have suggested that if the cost of cleaning up existing contamination is likely to exceed \$1M, it be entitled to terminate unless the State agrees to pay the excess cost, ie include this as a further CP.

**Initial position:** The basis of this project is that the Developer takes the risk of construction, including site remediation. Having said this, it is not reasonable to ask Mirvac to meet the expense of a remediation bill for totally unforseen contamination (which would almost certainly be due to the State's operation of the power station). A compromise might be to provide that if the cost of remediation is to exceed \$1M, the State has the option of directly meeting the extra cost or terminating the Development Agreement.

Should the State agree to compensate Mirvac if the cost of the works exceed a nominated figure, the nominated amount of \$1M appears conservative. Any costs above an agreed figure should be shared on the basis both parties had access to the same information.

10) C & K had not been instructed on the finer points of the "money deal", and were unable to comment other than on the drafting, and their comments were not to be treated as accepting the effect of the provisions on behalf of Mirvac. A particular issue they raised was the effect of the increase in the price upon which stamp duty would be paid when Mirvac acquire the Associated Development Lot by virtue of the GST 'gross up', and the fact this had the effect of 'reducing' the \$10M payment (ie, if the total price of the ADL was \$50M, the additional amount on which stamp duty would be paid by virtue of the gross up is approx \$5M, giving an additional amount of s/d of \$188,000).

**Initial position:** Matters appear to have moved on in that the State and Mirvac have now resolved that the State will pay Mirvac \$10M on handover as an "all up" payment, with a 'claw back opportunity' (and possible profit share) if Mirvac's internal rate of return exceeds 17.5%.

| r ,                   |                            | Sport and Recreation Queensland            | - |       |
|-----------------------|----------------------------|--------------------------------------------|---|-------|
| AWLOR John            |                            | Document # <u>505  5037</u><br>SRQ 03  361 |   |       |
| From:<br>Sent:<br>To: | Tuesdav. 6 September 2005  | 5 10:16 AM                                 |   | DPILF |
| Subject:              | Tennyson Riverside Develor | oment - Removal of marine plants           |   |       |

Lennyson Riverside Development - Removal of marine plants

Rowan

I am employed by the Department of Local Government, Planning, Sport and Recreation (DLGPSR) as the Project Manager for the Tennyson Riverside Development (TRD) which will be located on the site of the former Tennyson Power Station in Brisbane's southern suburbs. The site has a frontage of approximate half a kilometre to the Brisbane River and the river bank is heavily vegetated with mangroves.

DLGPSR has lead agency status for the Tennyson Riverside Development which is a partnership between the State and Mirvac, as developer. The Premier, as the Minister responsible for the project, will this week seek approval of the Cabinet Budget Review Committee for the State to execute the contractual agreements with Mirvac for the TRD.

To bring forward the delivery of the State Tennis Centre component of the TRD from May 2009 to December 2008, the State has agreed with Mirvac to advance demolition of the Tennyson Power Station building and site remediation (Early Works), which are exempt or self assessable development under the Integrated Planning Act 1997 (IPA) and berefore not subject to the development approval process. This work is expected to commence in late November 5

While Mirvac is required to obtain all required approvals for the TRD, the State has agreed to establish a group with membership drawn from Government agencies to facilitate the approval processes. While this group is yet to be established, Mirvac has indicated it is urgently seeking the State's support with the approvals required for the removal of marine plants (mangroves).

I am aware that Section 3.2.2A of the IPA requires that an application for a material change of use or reconfiguring a lot lodged after 1 March 2005 is taken to include an application for the operational work for the removal, destruction or damage of marine plants, requiring assessment by the Department of Primary Industries and Fisheries (DPI&F) as a concurrence agency if -

· removal, destruction or damage of marine plants on or near the premises or lot, the subject of the application, is proposed; and

· there is no valid development permit for the operational works; and

• approval for the operational works has not been applied for in the application or in a separate application.

Mirvac intends lodging its application for development approval with the Brisbane City Council later this year. It is succerned that the Brisbane City Council's assessment of its development application, may be impacted or delayed by F's assessment of an application to remove marine plants. Mirvac has sought the State's urgent advice if it would be possible for its application for removal of marine plants to be lodged and assessed in advance of its development application so the removal of marine plants can form part of the Early Works component of the project which are expected to commence in late November 2005.

I have spoken with from your Deception Bay office regarding this matter. Bob suggested I contact you to obtain advice on the options available to Mirvac and the State.

As I will be meeting with Mirvac's Development Director on Friday regarding this matter I would appreciate your advice on the options available to Mirvac by Thursday 8 September.

For your information, an overview of the project is provided below and more details can be found on Mirvac's project website http://www.tennisattennyson.com.au.

- On 27 June 2005, the former Deputy Premier and the Premier announced Mirvac Queensland as the preferred developer for the TRD.
- The project will comprise an international-standard State Tennis Centre and associated development on the former Tennyson Power Station site in Brisbane. The associated development will include approximately 385 residential apartments and a gymnasium to be developed on a staged basis over the period 2008 to 2011.
- The State Tennis Centre is scheduled to be completed by the end of 2008 and operational in early 2009.

Démolition of the existing power station and site remediation are planned to commence in late 2005.

- The State Tennis Centre will be the first purpose-built state tennis facility in Australia with all three "Grand Slam" surfaces (that is, grass, clay and acrylic hard courts). The centre court's stadium will have 5,500 permanent seats and capacity to accommodate 1,500 temporary seats (total capacity of 7,000 seats) allowing it to attract and host state, national and international tennis events such as Davis Cup and Fed Cup ties.
- The State Tennis Centre will be important for the development of future tennis champions and will provide impetus for the development of tennis state-wide.
- The Tennyson Riverside Development will incorporate a riverfront park which will provide public access to the Brisbane River through pedestrian and bicycle paths.

Regards

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Manager Tennyson Riverside Development Sport and Recreation Queensland Level 5, 160 Mary Street Brisbane QLD 4000 PO Box 15187 City East QLD 4002

| FLASH  | BRIEF                                               | Sport and Recreation Queensland                                          |
|--------|-----------------------------------------------------|--------------------------------------------------------------------------|
| TO:    | DIRECTOR-GENERAL                                    | Document #: <u>3229</u><br>Container #: <u></u> 5 <u>R Q 03]35 1-</u> 06 |
| FROM:  | EXECUTIVE DIRECTOR, SPORT, RECREATI                 | ON AND RACING                                                            |
| Title: | Tennyson Riverside Development (TRD) - amendment to | Data: 28 Eabruary 2007                                                   |

Tracking No. FB07 15

| l itle: | Tennyson Riverside Development (TRD) – amendment to | Date: 28 February 2007 |
|---------|-----------------------------------------------------|------------------------|
|         | development approval to accommodate State Tennis    | •                      |
|         | Centre roof height.                                 |                        |
|         |                                                     |                        |

#### 1. Issues

- On 31 July 2006, Mirvac lodged a changed application for development approval with the Brisbane City Council (BCC) reflecting design changes to the State Tennis Centre (STC) approved by CBRC including the provision of an open-sided roof. On 9 October 2006, BCC issued its negotiated decision notice for development approval for the TRD. As there were no appeals, the development permit took effect on 15 November 2006.
- Mirvac has advised that it recently detected an error in the architectural drawings prepared by HOK design architects in May last year for the STC. When the drawings were developed by HOK, there was a miscalculation of the pitch of the STC stadium roof, which Sinclair Knight Merz architects have subsequently identified.
- The miscalculation means that the height of the STC stadium roof (as constructed) would be 1.105 metres above the requirements contained in the BCC development approval conditions.
- Mirvac has investigated the potential to redesign the roof so that it falls within the development
  approval requirement but has advised this is not achievable in terms of cost and time. A lower roof
  height would require more structural steel to support the roof at potentially significant additional cost
  and necessitate re-engineering and re-documentation of design resulting in an estimated four month
  delay in the project.
- The State's Representative, Mr Peter Hockley, has advised that Mr Chris Freeman, Chief Executive Officer (CEO), Mirvac, recently met with Ms Jude Munro, CEO, BCC, to discuss this matter. BCC has requested that Mirvac urgently submit for Council's consideration, an application for a minor amendment to its development approval to accommodate the roof height (as recalculated) and revised roof drawings.
- Early consideration of the minor amendment application by BCC is critical to ensuring STC construction proceeds on time so as not to place at risk the completion date. BCC has requested this application be lodged on 28 February 2007 to enable it to undertake its consideration by 12 March 2006. Thereafter, a referral coordination process of up to 60 days will be triggered before final approval can be provided.
- Mirvac has advised this should not present a problem to its construction timetable if the minor amendment application is lodged today and the BCC approval is achieved in the above timeframe. Furthermore, advice received from Mirvac'c planning consultants is that the recalculated building height should not generate significant concerns from State agencies during the referral coordination process as the increase is quite small and the STC will still be of a lower height than the riverfront apartment buildings.
- BCC has indicated to Mirvac it is willing to approve a minor amendment application increasing the allowable height of the stadium roof.
- The Department's consent for the minor amendment application is required as the Department is trustee of the sport and recreation reserve on which the TRD is being constructed.
- Mirvac has prepared the attached minor amendment application and will lodge it by close of business today, subject to the Department providing its consent (Attachment A).
- The State's Representative has reviewed the minor amendment application and has recommended the Department provide its consent.
- Under the Department's Financial Delegations (FIN.06.002), only you have authority to provide owner's consent to the changed application.

#### 2. Recommendation

 $\left( \begin{array}{c} \\ \\ \\ \\ \end{array} \right)$ 

 That you sign the attached application for minor amendment of the development approval for the Tennyson Riverside Development providing land owner's consent to the lodgement of the application with Brisbane City Council (Attachment A).

| Executive Director<br>Sport, Recreation and Racing |
|----------------------------------------------------|
| oport, Recreation and Racing                       |
|                                                    |
|                                                    |
| 281 21 2007                                        |
| NOTED / APPROVED / NOT APPROVED:                   |
| D-G'S COMMENTS:                                    |
|                                                    |
|                                                    |

Level 2, 164 Grey Street South Bank QLD 4101 Australia

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28 February 2007

Department of Local Government, Planning, Sport, Recreation and Racing Level 5, Forestry House 160 Mary Street Brisbane QLD 4000

Dear Karen

#### RE: **TENNYSON STATE TENNIS CENTRE** OWNER CONSENT FOR MINOR AMENDMENT APPLICATION

Further to discussions, please find enclosed our application for minor amendment to the State Tennis Centre.

The application is required to amend the Material Change of Use (Development Permit) for the State Tennis Centre to accommodate a modification to the roof design (height) of the centre court stadium and will be submitted to Brisbane City Council.

The application documentation comprises:

- Completed IDAS Form 2 Request to Change an Existing Approval
- HPA Amended Application Plans (A3 Package)

Accordingly, we request owners consent by signing Section 21 of the attached form. Upon completion, please contact lain Knight on 3859 5887 to arrange collection.

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Please contact me on 3859 5873 should you have any queries.

Vourscripcondly

Matthiew Wallace **Development Director** 

PS: We thank you for your prompt assistance in this matter.

#### INTEGRATED PLANNING ACT 1997

#### Form 2 Development Application



## Request to change an existing approval

|                                                  | Description of land                                                                                                                                                                                                      | 1.  | Street address (including house number, street name, suburb/locality name & postcode) (if applicable)                                                                                  |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  | All land the subject of the application must be identified.                                                                                                                                                              |     | 21 Softstone Street, Tennyson                                                                                                                                                          |
|                                                  | Advice for completing Q1<br>A description of the land is not required in<br>relation to a mobile or temporary<br>environmentally relevant activity.                                                                      | 2.  | Number on existing development permit or preliminary approval sought to be changed:       3. Date issued:         DRS/USE/H05-933802       9 October 2006                              |
| $\left( \begin{array}{c} \\ \end{array} \right)$ | Advice for completing Q2 and Q3<br>Provide the information from the existing<br>proval that is the subject of this request for<br>mange                                                                                  | 4.  | Name of water body or watercourse, within which the development is proposed: (if applicable) N/A                                                                                       |
|                                                  | Advice for completing Q4                                                                                                                                                                                                 | 5.  | Lot on plan description (eg. Lot 123 on RP 4567) / GPS coordinates                                                                                                                     |
|                                                  | Q4 applies if development is proposed in a<br>water body or watercourse                                                                                                                                                  |     | lot 566 SP104107 and lot 1 on SP164685                                                                                                                                                 |
|                                                  | Advice for completing Q5                                                                                                                                                                                                 | 6.  | The above description is for: (tick applicable box)                                                                                                                                    |
|                                                  | Most land can be identified by a lot on plan<br>description. These details can be obtained from<br>title documents or through the local<br>government.                                                                   |     | <ul> <li>(i) the land on which the development is proposed; or</li> <li>(ii) the land adjoining the water body or watercourse, within which the development is proposed; or</li> </ul> |
|                                                  | However, if the land on which the development<br>is proposed does <u>not</u> have a lot on plan<br>description ( <i>i.e. the development is proposed in</i><br>a water body or watercourse) –                            | 7.  | [] (iii) the water body or watercourse.         Shop / tenancy number; (if applicable)       8. Storey / level: (if applicable)         N/A                                            |
|                                                  | <ul> <li>(i) provide the lot on plan description for the adjoining/adjacent land; or</li> <li>(ii) provide GPS coordinates where there is no adjoining/adjacent land <i>(i.e. in Moreton Bay)</i>.</li> </ul>            |     |                                                                                                                                                                                        |
|                                                  | Advice for completing Q9                                                                                                                                                                                                 | 9.  | Total area of land: (m²/ha)                                                                                                                                                            |
| C                                                | Q9 does not apply if the development is<br>proposed within a water body or watercourse                                                                                                                                   |     | 11.9042ha                                                                                                                                                                              |
|                                                  | vice for completing Q10<br>Q10 only applies if development is proposed<br>within a local government area.<br>Tidal areas are below high water mark and are<br>not within a local government's area.                      | 10. | Local government area in which the land is situated (eg. Brisbane, Esk, Hervey Bay, Woocoo etc.) (if applicable)<br>Brisbane City                                                      |
|                                                  | Advice for completing Q11<br>Q11 only applies if development is proposed on<br>strategic port land or a strategic port land tidal<br>area.                                                                               | 11. | Port authority for the strategic port land or strategic port land tidal area on which the development is proposed (eg. Port of Brisbane, Port of Townsville) (if applicable) N/A       |
|                                                  | For more information refer to <u>Guide 11</u><br><u>Development on strategic port land</u><br><u>Note:</u> These details will be included in the<br>original decision notice for the approval you<br>now wish to modify. |     | · · · · · · · · · · · · · · · · · · ·                                                                                                                                                  |

|                                  | INTEGRATED PLANNING ACT 1997                                                                                                                           |              |                                                                                                  |                                                      | Form 2, Version 3.3, 29 May |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------------------|
|                                  | Approant details                                                                                                                                       | 12           | . Name:                                                                                          |                                                      |                             |
|                                  | The applicant need not be the owner of the                                                                                                             | •            | Mirvac Queensland Ltd, c/- Brannoc                                                               | k and Associates, Planning Co                        | onsultants                  |
|                                  | when signing and lodging this application                                                                                                              | 13           | Postal address:                                                                                  |                                                      |                             |
|                                  | The applicant is responsible for ensuring the                                                                                                          | 2            | GPO Box 552, Brisbane QLD 4001                                                                   |                                                      |                             |
|                                  | assessment manager, any referral agency ar                                                                                                             | nd 14        | Signature:                                                                                       | 15                                                   | Date:                       |
|                                  | the Chief Executive (where applicable) will re<br>on this information when assessing and                                                               | ly           |                                                                                                  | 10.                                                  |                             |
|                                  | deciding the application.                                                                                                                              |              |                                                                                                  |                                                      |                             |
|                                  | A contact person must be shown. All                                                                                                                    | 16.          | Contact person:                                                                                  |                                                      | L                           |
|                                  | correspondence will be mailed to this address                                                                                                          | S.           |                                                                                                  |                                                      | ····                        |
|                                  |                                                                                                                                                        | 17           | Telephone number:                                                                                | 40 H 13                                              | ·····                       |
|                                  |                                                                                                                                                        |              | 07 3229 5322                                                                                     | 18. MODIE number: /if applic                         | able)                       |
|                                  |                                                                                                                                                        | 10           |                                                                                                  |                                                      | ······                      |
|                                  |                                                                                                                                                        | 13.          | 07 3229 5488                                                                                     | 20. Email address: (if applica                       | ble)                        |
|                                  |                                                                                                                                                        |              |                                                                                                  |                                                      |                             |
| ÷.,                              | Lang owner/s consent (if applicable)<br>Section 3.5.24(3) of the IPA requires that the                                                                 | 21.          | Land owner's consent:                                                                            |                                                      |                             |
| •                                | land owner's consent must be provided if the                                                                                                           |              | Name in Full                                                                                     | Signature                                            | Date                        |
| S                                | existing approval is not the land owner.                                                                                                               |              | (i) Lot 1 - Reserve for the purposes                                                             |                                                      | 5 6<br>2 6<br>5 6           |
|                                  | For information about land owners refer to                                                                                                             |              | of Sport and Recreation (Trustee -                                                               |                                                      |                             |
|                                  | application.                                                                                                                                           |              | Director General, Dept LGF3&R                                                                    | · · · · · · · · · · · · · · · · · · ·                |                             |
|                                  | Land owner's consent is <u>not</u> required for a mobile or femporary <b>FRA</b>                                                                       |              | (ii) Lot 566 - Reserve for the                                                                   |                                                      | 6 H 6<br>4 F<br>2 E 2       |
|                                  | If an owner has signed this form as                                                                                                                    |              | purposes of Animal Health Station                                                                |                                                      | -                           |
|                                  | applicant, their signature is not required again in this section.                                                                                      |              | Corporation)                                                                                     |                                                      | 4                           |
|                                  | If there are multiple owners, the consent of                                                                                                           |              | (iii)                                                                                            |                                                      |                             |
|                                  | each owner is required.                                                                                                                                |              | (11)                                                                                             |                                                      |                             |
|                                  |                                                                                                                                                        |              | (iv)                                                                                             |                                                      |                             |
| 2                                | Resource entitlement (if applicable)                                                                                                                   | 22           | At the time of the result of the time                                                            |                                                      |                             |
|                                  | Sections 3.5.22(4) & (5), 3.5.24(3B) & (3C),                                                                                                           | 22.          | evidence of resource entitlement?                                                                | velopment application for the                        | approval have require       |
|                                  | and 3.5.33(3B) & (3C) of the IPA may require<br>the written agreement of a resource manager if .                                                       |              | NO - go to Q24                                                                                   | YES - go to 023                                      |                             |
|                                  | the request involves a prescribed State resource, if when the request was made a                                                                       | 23.          | s this request accompanied by the writte                                                         | D arreement of the chief oxog                        | tive from when the          |
| •                                | development application for the approval would                                                                                                         | (            | evidence is required? (tick the applicable box)                                                  | )                                                    | Take from whom the          |
| /                                | under section 3.2.1(5) of the IPA.                                                                                                                     |              | NO – the written agreement of the chief exec                                                     | utive must accompany this request                    |                             |
|                                  |                                                                                                                                                        |              |                                                                                                  |                                                      |                             |
|                                  | Nature of the request                                                                                                                                  | 24. 1        | his request is for:                                                                              | · · · · · · · · · · · · · · · · · · ·                |                             |
| ,<br>č                           | approval.                                                                                                                                              |              | L An extension of the relevant period for                                                        | or the development approval (s                       | 3.5.22)                     |
|                                  |                                                                                                                                                        |              | $\bowtie$ To change or cancel conditions (s 3.5.                                                 | .33)                                                 |                             |
|                                  |                                                                                                                                                        |              | I contained the development approva                                                              | (other than a change of a condition)                 | (s 3.5.24)                  |
|                                  |                                                                                                                                                        | י ב <u>ר</u> |                                                                                                  | approval given under the P&E                         | Act (s 6.1.35A)             |
|                                  |                                                                                                                                                        | 20. H        | Provide details of, & justification for, the p                                                   | roposed modification                                 | <u></u>                     |
|                                  |                                                                                                                                                        |              | Centre to accommodate a modification t                                                           | of Use (Development Permit) to                       | or the State Tennis         |
|                                  |                                                                                                                                                        |              |                                                                                                  | o mercor design of the centre                        | court stadium.              |
|                                  |                                                                                                                                                        |              |                                                                                                  | 4 y <sup>6</sup>                                     |                             |
|                                  | 66019000044 65                                                                                                                                         |              |                                                                                                  |                                                      |                             |
|                                  | veruerrence agencies                                                                                                                                   | 26. D        | d the previous application involve concu                                                         | rrence agencies or building ref                      | erral agencies?             |
| C                                |                                                                                                                                                        | 1            | _] NO                                                                                            | -                                                    | -                           |
|                                  | opy of this request must be forwarded to each                                                                                                          | L<br>*       |                                                                                                  |                                                      |                             |
| C<br>UI<br>cc<br>ap              | ppy of this request must be forwarded to each<br>oncurrence agency for the previous<br>oplication prior to lodgement of this form with                 | ]            | YES - list the concurrence agencies who have                                                     | e been sent a copy of the request for n              | nodification                |
| C<br>UI<br>cc<br>ap<br>the       | opport this request must be forwarded to each opcurrence agency for the previous oplication prior to lodgement of this form with e assessment manager. |              | YES - list the concurrence agencies who have<br>i) DMR                                           | e been sent a copy of the request for r              | nodification                |
| C<br>Ul<br>cc<br>ap<br>the<br>ch | opposite solutions of a rezoning approval given                                                                                                        |              | YES - list the concurrence agencies who have<br>i) DMR<br>ii) EPA -Coastal Unit and Contaminated | e been sent a copy of the request for r<br>Land Unit | nodification                |

| Plans and documents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 27. | Plans/drawings/reports accompanying this an     | Fom   | 12, Version 3.3, 2 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------------------------------------------------|-------|--------------------|
| An application should be accompanied by<br>details to support the proposal & enable the<br>assessment manager, referral agencies and<br>any person viewing the application during<br>public scrutiny or public notification to<br>understand the scope of the proposal and any<br>patentic impact of the proposal and any<br>patentic impact of the proposal and any<br>patentic impact of the proposal and the scope of the proposal and any<br>patentic impact of the proposal and the scope of the proposal and any<br>patentic impact of the proposal and the scope of the proposal and any<br>patentic impact of the proposal and the scope of the proposal and any<br>patentic impact of the proposal and the scope of the proposal and th |     | Plan / Drawing / Report Number                  | Title | Dat                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     | HPA amended application plans A3 package        |       |                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     | Covering letter from Brannock and<br>Associates |       |                    |

| OFFICE USE ONLY (applicable to assessment m | anager)            |
|---------------------------------------------|--------------------|
| DATE RECEIVED                               | REFERENCE NUMBER/S |
|                                             |                    |

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#### BN11288.03 S03.3074

#### SUBJECT

10.0

Tennyson Power Station redevelopment - Meeting with Brisbane City Council (Council)

#### BACKGROUND

**DEPUTY PREMIER** 

THROUGH ACTING DIRECTOR-GENERAL

Officers from Sport and Recreation Queensland (SRQ) met with Council Administration Officers Mr Michael Kerry, and and on 18 June 2003 to discuss in general terms the Council's potential planning and development controls for the Tennyson Power Station site (the site).

#### **CURRENT STATUS**

Although the nature of the Government's interest could only be discussed in general terms (i.e. the Government's interest in a State Tennis Centre (STC) and an Expressions of Interest (EOI) process was not disclosed) the meeting with the Council was necessary to assess the risk of calling for EOI to develop the site and the likelihood of a functional working relationship with the Council administration during the EOI process and beyond.

The meeting was useful with some positive outcomes and good information expected to result. A summary of issues discussed is as follows:

- For the Development Application (DA) process, no issue with a material change of use application is anticipated. However, the nature of the development and the site will require impact assessment under the Integrated Planning Act 1997. The decision on the DA is open to appeal to the Planning and Environment Court from parties who make submissions in response to the public notification of the DA.
- Council noted comprehensive engagement with the local community would be expected.
- Some key concerns of SRQ with the site are its propensity for flooding and what Council restrictions this may impose on a development. Council was unable to comment on this matter, until the nature of the development can be discussed but has agreed to provide its hydrological modelling information for the site to SRQ. This is expected to clarify how much of an impact the flooding factor will have on the scope and design of development.
- In reference to traffic and people movements to and from the site, Council stated it would consider development of the site and the adjacent Animal Research Institute site as one development. SRQ was silent on the ARI site plans, but noted there was liaison with the Department of Primary Industries with regard to traffic and people flows to Fairfield Road.
- Council also noted it would expect significant transport upgrades with the major access and egress to be oriented toward Fairfield Road. The development would also be required to fund upgrades to local trunk infrastructure.

- Council noted the local area plan prescribed community access to the river and open space. Council identified the inclusion of a ferry terminal as a potentially attractive option.
- Council noted there was a role for consideration of development approvals prior to a preferred tenderer being selected. If the short-listed or final preferred tenderer's scheme was found to be unlikely to gain development approval and a new development concept was needed, then the tender evaluation and selection process would effectively be compromised, *post hoc.* The preferred tenderer would have been selected (and others excluded) on the basis of an invalid concept. This situation was also undesirable for putting Council in a position of appearing to halt a significant State project.
- Council expressed gratitude for being engaged at an early stage in the development process and nominated Mr Hanisch as a contact point for project working group matters.

#### RECOMMENDATION

That you note:

• general discussions have commenced in relation to development assessment issues on the site between SRQ and Council without disclosure of the intent to develop a STC or call for EOI.



Prepared by: Paul Nelson Principal Project Officer Major Projects Unit Tel: 323 59439

Date: 24 June 2003

Cleared by:

A/Director Policy and Strategic Co-ordination Tel: 323 54307

Date: .....

Recommendation Approved:

Date:

Endorsed by: Ian Whitehead Acting Executive Director Sport And Recreation Queensland Tel: 300 62606

24.06.03 Date:

Endorsed by:

Acting Director-General () Tel: 323 54311

J Z

Date: 25/06/03

#### DEPUTY PREMIER THROUGH DIRECTOR-GENERAL

s/04/20074 369

BN12621.04 S04/8

#### SUBJECT

Tennyson Riverside Development Project - Consultation with Brisbane City Council

#### BACKGROUND

On 26 September 2003, the Cabinet Budget Review Committee (CBRC) approved the Department of Innovation and Information Economy, Sport and Recreation Queensland commence a two stage competitive bid process for the Tennyson Riverside Development (TRD) project comprising a State Tennis Centre and associated development. As part of this decision, CBRC requested consultation occur with the Brisbane City Council (the Council).

On 8 January 2004, you announced that Devine Limited, Mirvac Queensland Pty Ltd and Stockland Development Pty Limited have been shortlisted to develop more detailed proposals for the project. At the same time, you announced that the Government would ensure there was access to the TRD site via nearby Fairfield Road.

Sport and Recreation Queensland (SRQ) has advised the shortlisted proponents that work is continuing on the development of Stage 2 documentation (request for detailed development proposals document, works specifications for the State Tennis Centre and development agreement) and arrangements for the data room which will provide information to shortlisted proponents on the Tennyson Power Station site and the decommissioned power station. Based on current timelines, and subject to Government approval, it is proposed that the data room would be ready to open in mid-March and the Stage 2 documents will be ready for release in the first week of April (ie. before Easter).

This brief seeks your approval for SRQ to commence consultation with Council officers and outlines the matters intended for discussion.

#### ISSUES

t is proposed that SRQ brief Council officers on the nature and status of the TRD project. This briefing would include the following:

- the rationale for and scope of the State Tennis Centre;
- the two-stage competitive bid process being undertaken for the TRD project;
- the current status of the project, including the outcome of Stage 1 and the progress of Stage 2 preparations;
- the decision by Government to ensure access to the TRD site through the adjoining Animal Research Institute site; and
- the responsibility of proponents to develop a transport strategy and plan for major events, undertake community consultation and obtain all necessary project approvals.

Given the successful proponent will be required to obtain all approvals for the project, including Council development approval, consultation will also provide an opportunity for Council to advise SRQ on its development approval process and any issues it considers important to the site and the project. Project issues Council is likely to consider important include the following:

- Planning and development issues Council has no specific Development Control Plan for the TRD site and it is therefore likely to assess development proposals in the context of the City Plan and the Stephens District Local Area Plan. In making its assessment, Council is likely to ensure the TRD project is sympathetic to the surrounding area, in terms of the form and density of the development. Issues such as the height of building structures, the density of any residential component, open space requirements and the level of community access to the Brisbane River are therefore likely to be important.
- Transport and access arrangements The successful proponent will be required to develop a transport strategy and plan for the State Tennis Centre that will address issues including vehicle and pedestrian movements and arrangements for major events. As this strategy will form part of the Council development approval process, the successful proponent will be required to demonstrate to Council that its proposed transport and access arrangements are adequate and would not adversely impact on the local area.
- Council's views on transport and access arrangements may also impact upon the configuration and density of the proposed development, especially if it seeks to impose significant access constraints for the site. The decision by Government to allow vehicular, pedestrian and bicycle access for the TRD project through the adjoining Animal Research Institute site will, however, significantly improve the connectivity of the TRD site to the local transport network and the development potential of the site.
- Community consultation While a wide ranging community engagement strategy has been established for the TRD project, Council is expected to require public consultation as part of its development approval process. It will therefore be important for SRQ to obtain an understanding of the nature and possible implications of any additional community consultation Council may require.

#### Specific issues to raise with Council

While the above matters will be the responsibility of the preferred proponent, it is proposed that SRQ raise the following specific issues with Council:

- the planning and development requirements Council will apply to the TRD site and any specific consultation required from a preferred developer to obtain development approval for the project;
- the Council approvals that would be required for an access corridor (to allow vehicular, pedestrian and bike access) through the adjoining Animal Research Institute site and the implications (for local traffic arrangements) from the location of the corridor; and
- whether Council would be willing to provide preliminary views on the project concepts being developed by shortlisted proponents and whether it would agree to any such views being submitted to Government with proponents' detailed development proposals.

Subject to your approval, it is proposed that Mr Craig Matheson, Executive Director, SRQ and Mr Tim Peisker, Acting Director, Sport and Recreation Business Development Division, meet with relevant Council officials once a meeting can be arranged. You will be briefed on the outcomes of discussions.

#### RECOMMENDATION

That you approve of Sport and Recreation Queensland undertaking preliminary consultation with Brisbane City Council on the Tennyson Riverside Development project on the issues outlined in this brief.

Prepared by: Endorsed by: Tim Peisker Director, Business Development **Executive Director** Sport and Recreation Queensland Sport and Recreation Queensland Tel: 323 59582 Tel: 323 71356 Date: 20 02 04 Date: ..... Endorsed by: Dr Ted Campbell Director-General -Tel: 323 93216 Date: 23/2/04 Recommendation Approved: 23-02-04 Date: ......

#### DEPUTY PREMIER THROUGH DIRECTOR-GENERAL

s/04/20074 369

BN12621.04 S04/8

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|                   | Prepared by:<br>Tim Peisker<br>Director, Business Development<br>Sport and Recreation Queensland<br>Tel: 323 59582 | Endorsed by:<br>Executive Director<br>Sport and Recreation Queensland<br>Tel: 323 71356 |
|-------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
|                   | Date:                                                                                                              | Date: 20/02/04.                                                                         |
| 14<br>14<br>14 14 | Endorsed by:<br>Dr Ted Campbell<br>Director-General ~                                                              |                                                                                         |
|                   | Tel: 323 93216                                                                                                     | · · · · · · · · · · · · · · · · · · ·                                                   |
|                   | Date:                                                                                                              |                                                                                         |
|                   | Recommendation Approved.                                                                                           |                                                                                         |
|                   | Date:                                                                                                              | 02-04                                                                                   |
|                   |                                                                                                                    |                                                                                         |





#### **Brisbane City Council**

| ········ |                                 |                                                            |
|----------|---------------------------------|------------------------------------------------------------|
| то       | Manager City Planning           | Waterways Program<br>Urban Management Division             |
| FROM     | Barry Ball<br>Manager Waterways | Level 5 69 Ann Street<br>Brisbane Qld 4000<br>GPO Box 1434 |
| DATE     | 02 July 2003                    | Brisbane Qld 4001                                          |
| SUBJECT  | TENNYSON POWERHOUSE SITE        | Telephone 3403 4981<br>Facsimile 3403 9456                 |

I refer your request requiring information on flooding relating to the Tennyson Powerhouse site.

#### Depth of flooding on site

The property ground levels vary from 5.0m AHD to 11.0m AHD. This is based on the current BIMAP contours. The Brisbane River Q100 level is given below for the Powerhouse site.

| Q <sub>100</sub> flood level | % of site inundated |
|------------------------------|---------------------|
| 7.8m AHD                     | 50%                 |

#### Development impacts on drainage / flooding

The site has a very small external catchment. This would not pose many difficulties in designing the stormwater drainage system.

#### Effects of significant filling of site

There would be no restrictions for reasons of impact on river flooding due to filling the above site to the required design level. However any development will need to address the relevant City Plan 2000 Codes such as Filling and excavation Code, Waterway Code, Stormwater Management Code and River Corridor Planning Scheme Policy.

There will be some existing overland flow paths within the property for which some provisions to be made during the development of site.

Please contact Siva Sivaananthan on ext. 34789 if you have any other queries on the above information.

Barry Ball Manager Waterways

Our Business - A Better Brisbane

Report on State Tennis Centre Project

#### Prepared for: Sport & Recreation Queensland March 2004

Currie & Brown (Australia) Pty Ltd

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#### **1** INTRODUCTION

Sport and Recreation Queensland sought advice on the following from Currie & Brown through:

- Undertaking an independent review of the State Tennis Centre cost estimates prepared by Project Services, Department of Public Works; and
- Commenting on area or functionality issues arising from the State Tennis Centre Project Brief which may be inconsistent with a facility designed to provide sporting excellence.

In undertaking this review Currie & Brown have relied on the following information provided by the Sport and Recreation Queensland:

- Tennyson Power House Site drawings received 3.3.04. (Six layout drawings and one section drawing).
- Tennyson Riverside Development State Tennis Centre Project Brief reference 04 02 27 STC –
   Project Brief Version 10 received 3.3.04.
- Tennyson Riverside Redevelopment State Tennis Centre Indicative Cost prepared by Project Services dated 3.3.04.

In undertaking a cost review the following key areas of risk should be highlighted:

- In discussions with Sport & Recreation Queensland, Currie & Brown were advised that due to potential flooding problems from the Brisbane River, Project Services were of the view that it would be necessary to construct the Plaza Level above existing ground level and that the Plaza would, therefore be required to be constructed as a structural slab. The area to the west of the site is higher than to the east and consequently the extent to which the site would require to be raised at the western end may not be too extensive. As it is unknown what the existing ground levels are it is not possible to say to what extent imported fill will be appropriate to make up levels and at what point formwork will be required to support construction of this slab. This is clearly an issue which will impact on the final cost.
- The existing ground conditions are also unknown. The area is low and is adjacent to the Brisbane River. There is, therefore, a risk that extensive piling will be required. Without soil survey information it is impossible to say that this is the case and many sites adjacent to the river are on rock or a combination of rock and silt. If ground conditions are poor and extensive piling is required a cost provision of \$1,500,000 would be appropriate. This is not included in the cost breakdown provided.
- In their indicative costing, Project Services have made an allowance of \$210,000 for site decontamination. We understand that this allowance may refer to works required over the whole site. In discussion with Sport & Recreation Queensland, it was agreed that an allowance of \$100,000 would be included at this stage. We have assessed that the area of the footprint of this site (which excludes access roads, the Plaza Park and the area of the existing power station delineated by the "pedestrian promenade") as 35,758m2. We are not aware of the extent of anticipated contamination; however, if it is to prove to be extensive, the above cost allowance may well prove to be insufficient.
- The sections provided appear to indicate that the Centre Court will be constructed at the existing ground level. This appears to be at odds with our discussions which indicated that Project Services believed that courts would need to be at a higher level due to the risk of flooding. The area of the administration building in the Project Services Cost Plan is 2,543m2 and the area of the Centre Court is 840m2. Design information provided identifies an area of 7,840m2 for offices, stores, setdown areas and services areas. This area appears to be excessive given the foregoing. In undertaking our independent costing exercise, we have included provision to construct the 7,840m2 space, allowing for a slab on ground, columns, perimeter walls and a suspended slab over. In addition we have allowed for the construction of a 2,543m2 building and for the Centre Court with permanent seating for 3,000 people. If the whole or part of the area in question were not required there would be a substantial saving in our costings. This saving could be in the order of up to \$1,500,000.



#### 2 COST REVIEW

#### 2.1 Summary

Our cost estimate is summarised as follows:

| Siteworks                              | 1,970,000    |
|----------------------------------------|--------------|
| Site Decontamination                   | 100,000      |
| Car Park and Adjoining Area            | 3,950,000    |
| Driveway                               | 275,000      |
| Plaza Level                            | 12,500,000   |
| Facilities and administration Building | 4,700,000    |
| Centre Court Grandstand                | 4,500,000    |
| Tennis Courts                          | 2,900,000    |
| Builders Preliminaries and Profit      | 5,165,000    |
| Contingency                            | 3,615,000    |
| Escalation to August 2005              | 3,250,000    |
| Sub Total                              | \$42,925,000 |
| Furniture Fittings and Equipment       | 2,500,000    |
| Sub Total                              | \$45,425,000 |
| Professional Fees                      | 5,000,000    |
| Artwork                                | 900,000      |
| Other Project Costs                    | 470,000      |
| Sub Total                              | \$51,795,000 |
| GST                                    | 5,179,500    |
| Total Project Cost                     | \$56,974,500 |

In their communication dated 3 March 2004, Project Services were projecting a Gross Project Cost of \$51,194,000. This cost was built up in a different manner from the methodology employed by Currie & Brown and consequently it is not possible to undertake a detailed comparison to identify areas of difference.

#### 2.1.1 Exclusions

The following items have been excluded from the foregoing estimate.

- Works external to the site boundary
- Site decontamination beyond the defined \$100,000 allowance nominated
- Piling
- Staging/Phasing Costs
- Items excluded from the Project Services Indicative Cost Estimate dated 3 March 2004.

#### 2.2 Site Works

We have assessed an overall site area for the State Tennis Centre of 35,758m2. Allowance has been included to strip the site and remove any sundry structures, old footings, paved areas, trees and vegetation and general areas of obstruction existing in the footprint and for dewatering. An allowance of \$1,553,720 has also been included for diversion of services including stormwater, sewer, water, gas, fire services, electrical and external security. This allowance matches the allowance made by Project Services in their estimate of cost.



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#### 2.3 Site Decontamination

It is not known whether or not site decontamination will be an issue on this site, however, given the proximity of the existing power station and the unknown previous use of the site, it is probable that some work may be required. Whilst the allowance of \$100,000 has been included, if the work entails the removal in accordance with prescriptive requirements of existing soil across the area and its replacement with approved material, the end cost could grow substantially.

#### 2.4 Car Park and area comprising Office, Stores, Setdown and Service Area

The Ground Level (New Development) plan received on 3rd March 2004 indicates the following areas to be constructed under the Plaza Level tennis courts:

| Car park area                                                               | 6,517m2 |  |
|-----------------------------------------------------------------------------|---------|--|
| Adjoining area comprising offices and stores, setdown area and service area | 7,840m2 |  |

The final level of these facilities will be defined by reference to the final level of the Plaza Level. At this point it has been assumed that works will entail some bulk excavation, the construction of a structural reinforced concrete slab on ground with basecourse, geotextile fabric and all footings to the car park and other adjoining areas. It will also include the construction of columns to support the Plaza Level above, stairs linking the two levels and hydraulic lifts providing for vertical transportation. Provision is also included for all specialist services within the space created, including mechanical services, electrical services, fire services, etc.

#### 2.5 Driveway

Provision has been included to construct a driveway within a tunnel space linking the proposed road from Fairfield Road with a new access roadway to Softstone Street. No provision has been included for the construction of either of these roads.

#### 2.6 Plaza Level

It has been assumed that the plaza level will comprise the construction of a reinforced concrete slab over the entire area. Over the area of car park and adjacent space, allowance has been included for the slab to be wholly suspended. Over the balance of the area allowance is included to either fill the area of natural ground to the required level with imported fill or to suspend the proposed slab on formwork. The final design decision will be dependent on design levels to relieve risk of flooding.

Allowance has also been included in the costs associated with the Plaza to create paved and landscaped areas around and between the new tennis courts and structures to be constructed.

#### 2.7 Facilities and Administration Building

Whilst identifying the planning requirements for this structure, the State Tennis Centre brief does not definitively classify the actual area of building required to be constructed. In cost breakdowns provided, prepared by Project Services and dated 3 March 2004, the Facilities and Administration building is identified as being a 2,543m2 building. In assessing the cost of this structure we have utilised square metre costs derived from the tender of the new Administration Building at Ballimore which is currently under construction. To these costs we have added a further allowance of \$500,000 to cover the cost of constructing other undefined structures around the tennis centre including toilets, change rooms, retail outlets, etc.

#### 2.8 Centre Court Grandstand

In addition to the above building, provision has been included to construct a 3,000 seat grandstand. This structure may be constructed integrally with the facilities and administration building. The costs identified for this structure do not include for the tennis court, lighting, scoreboards, etc which have been dealt with separately.

#### 2.9 Tennis Courts

Allowance for all defined works to be undertaken on the Plaza Level structure as defined in the State Tennis Centre Project Brief in sections 6.0 Centre Court, 7.0 Match and Show Courts, 8.0 Training Courts and 9.0 Tennis Court seating and shade has been identified separately. There



may be issues associated with constructing these facilities in a structural slab and grass courts will require a minimum of 600mm depth for roots, whilst clay courts will also require setdowns of up to 500mm to permit proper construction.

#### 2.10 Builders Preliminaries and Profit

All of the above costs are identified net of the main contractors on and off site overhead costs and profit.

#### 2.11 Contingency

At this stage we consider it prudent to include a contingency allowance of 10% of identified construction costs.

#### 2.12 Escalation

Currie & Brown are predicting ongoing escalation on construction projects in South East Queensland of from 5 to 8% per annum. This may slow to 5% in the next calendar year. An allowance has been included to cover anticipated increased costs up until August 2005.

#### 2.13 Furniture Fittings and Equipment

An allowance of \$2,500,000 has been included for the supply and installation of furniture fittings and equipment to the Centre. A broad indication of furniture, fittings and equipment required to enable operations to commence in the Tennis Centre is provided in the State Tennis Centre Project Brief. This has formed the basis for assessing costs.

#### 2.14 Professional Fees

An allowance of 12% on construction costs has been utilised at this time for assessment of professional fees for this project. An allowance of \$150,000 is also included for a Clerk of Works.

#### 2.15 Artwork

An allowance is included for artwork in accordance with the requirements of Public Art Built in legislation.

#### 2.16 Other Project Costs

The other project costs identified in the Project Estimate prepared by Project Services have been included. These include the following:

| Supply charges                   | \$40,000  |
|----------------------------------|-----------|
| Local Authority headwork Charges | \$250,000 |
| Relocation Costs                 | \$20,000  |
| Building Act Compliance          | \$23,000  |
| Water and Sewerage Compliance    | \$7,000   |
| Fire Service Levy                | \$3,000   |
| Geotechnical Fees                | \$20,000  |
| Contour Survey Fees              | \$15,000  |
| Environmental Compliance Fees    | \$5,000   |
| QBSA Financial Review            | \$1,000   |
| Portable Long Service Leave      | \$32,000  |
| Workplace Health & Safety Fees   | \$54,000  |

#### 2.17 GST

An allowance of 10% for GST has also been included in this estimate to match the provision included by Project services.



#### 3 REVIEW OF PROJECT BRIEF

Currie & Brown have overviewed the Confidential Draft State Tennis Centre Project brief. Our comments are as follows (utilising headings from the aforementioned document).

#### 3.1 Overview

 User group numbers in major event mode appear low in the following categories: contractors; security, police, medical and emergency service personnel; catering and beverage; merchandising.

#### 3.2 Site Planning

- No comment on day/night matches.
- There may be a requirement to provide a separate secondary road for service deliveries, VIPs, emergency vehicles (refer plans).
- The final level of the plaza should be nominated to reflect the necessity to construct the structural slab above the flood zone.

#### 3.3 Disability Access

- Equitable access seating should be allowed for.
- Emergency egress means not identified.

#### 3.4 Government Policies

- ISO 9001: 2000 supersedes all others and should be nominated.
- The Environmental management code is not mentioned. (This may be ISO 14001).

#### 3.5 Centre Court

- Shade effects governed by time of year and hours of play.
- Is specified slab finish consistent with court playing surface? Our understanding is that suspended slabs can be a cause of problems on the effectiveness of tennis courts constructed thereon.
- Permanent shade roof structures, providing sun and rain protection to all permanent seating without impeding sightlines to centre court, is to be provided. If the four thousand temporary seats are, as seems likely, to be positioned nearer to the court, any weather protection thus provided will be for the poorer seats. It then becomes questionable what level of protection is really required and the impact this protection will have on shade to the court.
- Row and aisle numbers should be provided for ticketing purposes.
- Will provision for external video screens be necessary?
- Dedicated Players' Facilities should include drop-off and pick-up.
- Public concourse infrastructure should include First Aid; Police Rooms; Information; toilets; cleaning rooms; waste management rooms.



| Sport and Recreation Queensland |
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#### STRICTLY CONFIDENTIAL

#### **TENNYSON RIVERSIDE DEVELOPMENT**

#### Meeting details:

Wednesday 16 February 2005 10:15 am – 2:00 pm Level 5 Conference Room, Forestry House, 160 Mary St, Brisbane.

#### Briefing for Tennis Queensland (TQ) and Tennis Australia (TA)

#### Issues to be covered:

- 1. General briefing on proponent's DDP
- 2. Briefing on STC proposals
- 3. Strategic issues requiring resolution
  - Centre court seating capacity
  - Flooding to centre court
  - Construction over easements
  - 1:100 or 1:20 year flood level for training courts (and implications on design)
  - Minimum number of hard courts required
  - Suitability of non-ladder layouts
  - Warranties
  - Administration building
  - Roofing and shading
- 4. Priority STC issues (Attachment C)
  - General briefing
  - Issues requiring advice from TQ/TA
- 5. Process for workshop with proponent
- 6. Information on use of Rebound Ace tennis courts in Queensland (and other similar climates)
- 7. Transport issues
  - Proponent's proposal
  - Disability access issues
- 8. Any questions from TA/TQ

Tennyson Riverside Development – Briefing on strategic STC issues - 16 February 2005

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Attendees: Stephen Ayles, Maurice Philp (TQ), Mike Daws (TA) TRD Project Office Representatives – TP, DH, JL, HD, TH, KS (SRQ).

## Queensiand Government Sport and Recreation

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# Key Notes and Actions

| Issuc                         | TA / TQ Key Points                                                                  | Proposed Position                                                 | Actions                                     |
|-------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------|
| Centre court seating capacity | • 5,500 seats would be sufficient for a Davis                                       | Capacity of the centre court would ideally                        | Mirvac to identify any structural changes   |
|                               | Cup quarter tinal, however more than 5,500 (possibly 7.000) would be required for a | be 5,500 permanent seats with the capacity to bump in 1.500 seats | to the centre court required to             |
|                               | Davis Cup semi final.                                                               |                                                                   | • Identify off-the-shalf termorant contine  |
|                               | • The chances of securing a Davis Cup semi                                          |                                                                   | models that may be suitable for the centre  |
|                               | final are limited due to the rotating nature of                                     |                                                                   | court.                                      |
|                               | the event and the competition from other<br>venues such as Svdnev.                  |                                                                   | • Identify the maintenance costs of         |
|                               | Temporary bumn in model (for 4 000 seats)                                           |                                                                   | additional seating.                         |
|                               | proposed by Mirvac would require purpose                                            |                                                                   | • Ascertatin it 5,500 model impacts on roof |
|                               | built seats and is expensive.                                                       |                                                                   |                                             |
|                               | • Total cost of seats, including maintenance                                        | -                                                                 |                                             |
|                               | costs needs to be considered to make an                                             |                                                                   |                                             |
|                               | informed decision.                                                                  |                                                                   |                                             |
|                               | <ul> <li>Some potential to secure annual</li> </ul>                                 |                                                                   |                                             |
|                               | tournaments (eg a joint mens/womens hard                                            |                                                                   | <u>.</u>                                    |
|                               | court in January) but nothing firm can be<br>offered at this stage.                 |                                                                   |                                             |
| Flooding to centre court      | <ul> <li>Centre court would need to comply with</li> </ul>                          | Centre court should incorporate                                   | Nil.                                        |
|                               | 1:100 flood immunity. Subject to the                                                | appropriate bunding to minimise the                               |                                             |
|                               | planned flood mitigation arrangements                                               | impact of possible flooding to the centre                         |                                             |
|                               | being effective, they should achieve this                                           | court. Access for service vehicles (to                            |                                             |
|                               | (from an engineering perspective).                                                  | bump in surfaces) must be ensured.                                |                                             |
|                               | <ul> <li>Additional temporary puttips could be</li> </ul>                           |                                                                   |                                             |
|                               | utilised to remove rain water.                                                      |                                                                   |                                             |

TQ and TA meeting 16 February 2005 with TQ and TA comments5

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| Construction over easements<br>and site fit<br>1.100 or 1.20 year flood level |            | Courts constructed over easements would<br>have an adverse cost impact and would<br>cause inconvenience and interruption<br>should they be excavated by Energex or<br>Powerlink.<br>Mirvac offered an option whereby a rotation<br>of 3 degrees of courts east of north allowed<br>for all training courts to be retained without<br>encroaching over easements.<br>3 degrees rotation of courts east of north<br>would not impact on playability.<br>Grass and clay courts on a suspended slab<br>could pose problems such as wind erosion<br>ind drainage issues. Visual amenity and<br>apacity of the slab to accommodate the<br>oad of the courts would also need to be | Courts not to be constructed over<br>easements unless required and subject to<br>consultation with TQ (through the TRD<br>Project Office) and Energex and<br>Powerlink approval. | TRD Project Office to obtain advice (surveyor / engineering adviser) on whether the STC fits on site and in the area identified in Mirvac's drawings.                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| for training courts                                                           |            | (deally the training courts should be at a<br>1:100 level to minimise possible flood<br>damage. Grass courts are effected less by<br>flood than clay courts.<br>Raising to 1:100 may adversely impact on<br>the playability of courts due to wind<br>relocity.<br>I built at 1:20 the potential damage to the<br>flay courts could be minimised by ensuring<br>the base is constructed to be resilient to a<br>1:20 year flood event.<br>Dependent on levels and fill requirements<br>onsideration could be given to constructing<br>ourts to 1:50 as an alternative option.                                                                                                | Consideration could be given to constructing the training courts at 1:20 (or 1:50) subject to appropriate base and drainage provisions.                                          | <ul> <li>Mirvac to provide information on:</li> <li>the difference in fill levels from 1:20 to 1:50;</li> <li>measures to be implemented by Mirvac to ensure court base is resilient to 1:20 flood; and</li> <li>design solution for 1:20, 1:50 and 1:100.</li> <li>Mirvac to advise whether these solutions involve construction on or over easements.</li> </ul> |
| withing number of nard<br>courts required                                     | • •<br>• • | Reluctant to reduce the number of courts<br>mless it is an absolute deal breaker.<br>Retaining 16 hard courts (plus centre court)<br>is the preferred position.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 16 hard courts (plus centre court) are<br>required to run tournaments.                                                                                                           | Nil.                                                                                                                                                                                                                                                                                                                                                               |

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TQ and TA meeting 16 February 2005 with TQ and TA comments5

Page 2
|    | Cluster of courts (3 tiers to the south as shown in Mirvac drawing) would be a suitable arrangement.                               | nvestigate how common levels can<br>be achieved for the hard courts |                                                                                                                           | ar warranty on hard court base and Mirvac to be advised of the warranty<br>ce to be provided (or underwritten) requirements outlined in the STC Project Briel<br>irvac. | necessarily the market) to provide the<br>warranty.                                                             |                                                                                  | sign of the existing administration Consultation to occur between the TRD ing to address operational and Project Office TO/TA and Mirvac on design | ional issues for day to day / normal sistues and solutions. |                                                                                                                                            |                                 |                                                                                   |                                                                                  | and trellis structure be redesigned to Mirvac to conduct a shadow analysis over the | ivers and officials.                  |                                                                                      |  |
|----|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------------------------------|--|
|    | •                                                                                                                                  | •                                                                   |                                                                                                                           | 12 ye<br>surfac<br>by Mi                                                                                                                                                |                                                                                                                 |                                                                                  | Redes                                                                                                                                              | functi                                                      | anom                                                                                                                                       |                                 |                                                                                   |                                                                                  | Roof                                                                                | to pla                                |                                                                                      |  |
| ζ. | Ladder design specifically suggested to<br>address site constraints (ie long site).<br>Varying levels / gradient of hard courts is | likely to pose significant operational and<br>maintenance problems. | Access for service vehicles along the spine<br>of hard courts for a one-ton truck is required<br>for maintenance reasons. | TQ acknowledges that developers may not<br>be able to provide supplier-backed<br>warranties of 12 years, however the                                                    | intention was that the proponent must<br>underwrite the performance of the base and<br>surface for this period. | Warranties on hard court surfaces (5 or 8 years) can form part of that warranty. | Additional building for court bookings /<br>management to the west of the centre court                                                             | would be useful for management and                          | supervision, nowever the preference is for<br>the administration building to be redesigned<br>to address onerational and functional issues | for day to day and normal mode. | The booking office needs to be on ground level and easily available to STC users. | Preferably patrons would access the café<br>and pro shop to make court bookings. | Curved roof shading patterns on the centre                                          | players and perceived ball movements. | Light / shading variations (such as those<br>caused by a trellis or translucent roof |  |
|    | ÷.                                                                                                                                 |                                                                     | •                                                                                                                         | •                                                                                                                                                                       |                                                                                                                 | 8                                                                                | •                                                                                                                                                  |                                                             |                                                                                                                                            |                                 | 8                                                                                 | 0                                                                                | 9                                                                                   |                                       | •                                                                                    |  |
|    | Suitability of non-ladder<br>layouts                                                                                               |                                                                     |                                                                                                                           | Warranties                                                                                                                                                              |                                                                                                                 |                                                                                  | Administration building                                                                                                                            |                                                             |                                                                                                                                            |                                 |                                                                                   |                                                                                  | Roofing and shading                                                                 |                                       |                                                                                      |  |

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TQ and TA meeting 16 February 2005 with TQ and TA comments5

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| Further analysis on merits of road and<br>overpass solution.                                                                                                                            | <ul> <li>TQ to provide information on use of rebound ace in Queensland and any information on its suitability and performance in Queensland (previous A Cooper report).</li> <li>KS to provide SA with details of rebound ace court in Port Douglas.</li> </ul>                                                                                                                                                                                    | <ul> <li>Mirvac to identify an alternative clay<br/>surface to replace Boral Nuclay which is<br/>no longer available in consultation with<br/>TO/TA.</li> </ul> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| While Mirvac's road level solution<br>appears to be workable, overpass access<br>for pedestrians over Fairfield Road would<br>be preferred primarily for safety and<br>access reasons.  | Further investigation is required into the suitability of Rebound Ace in Queensland.                                                                                                                                                                                                                                                                                                                                                               | Further investigation is required to<br>identify a suitable replacement surface                                                                                 |
| A minimum of 150 car parks would be<br>required for the STC.<br>In event mode, due to the volume of traffic<br>on Fairfield Road, an overpass would<br>provide safer pedestrian access. | Rebound Ace may not be the most desirable<br>surface in Brisbane due to its capacity to<br>maintain heat. Its high thermal capacity can<br>cause the surface to become soft. Care<br>should be taken during design and<br>construction to avoid the possibility of<br>moisture being trapped under the playing<br>surface which may cause bubbling.<br>A cushioned hard court is required (not too<br>thick) especially over a hard concrete base. | Boral Nuclay is no longer available.                                                                                                                            |
| 6 6                                                                                                                                                                                     | 8 9                                                                                                                                                                                                                                                                                                                                                                                                                                                | •                                                                                                                                                               |
| Transport and access                                                                                                                                                                    | Rebound Ace tennis courts in<br>Brisbane                                                                                                                                                                                                                                                                                                                                                                                                           | Boral Nuclay                                                                                                                                                    |

TQ and TA meeting 16 February 2005 with TQ and TA comments5

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# Tennyson Riverside Development Issues for Tennis Queensland and Tennis Australia Consultation

| Stratepic Issue                | Tennyean Diverside Navelenment /TDD) D.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| D                              | Requirement (1100) r roject                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Mirvac's Kesponse                                                                                                                                                                                                           | Other Considerations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Centre court<br>seating        | <ul> <li>Seating is to meet the requirements of Section 6.2 of the STC Project Brief. This includes:</li> <li>The full seating capacity is to be 7,000, of which 3,000 shall be permanent and 4,000 temporary;</li> <li>permauent shade roof structures providing sun and rain protection to all permanent seating without impeding sightlines and lighting to the centre court;</li> <li>optimise viewing conditions for spectators and minimise interference to sightlines due to pedestrian movement in front of seated spectators;</li> <li>all permanent seats to be tilt-up seats, individually numbered; and</li> <li>all seat fixings shall be low maintenance and vandal resistant.</li> </ul> | Mirvac seeks confirmation of the State's preferred seating model e.g. 3,000 permanent and 4,000 temporary or 5,500 permauent or some other combination of seats.                                                            | <ul> <li>The State has requested Mirvac provide<br/>information on model and costs of temporary<br/>seating for centre and show courts to<br/>demonstrate effectiveness</li> <li>Minimum of 7,000 seats required to attract<br/>desired events</li> <li>Likelihood of attracting events</li> <li>Frequency of having to "bump in" seats</li> <li>Impact on site fit</li> <li>Impact on roof design</li> <li>Cost effectiveness of various seating models</li> <li>Impact on public facilities (e.g. catering and<br/>toilets)</li> </ul> |
| Flooding to<br>centre court    | All functional facilities shall be designed within the STC 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.<br>The centre court is to allow access to forklifts to deliver and install 2.4m x 2.4m pallets containing alternative surface.                                                                                                                                                                                                                                                                                                                                                      | Mirvac has proposed a bunding solution to<br>the centre court to ensure 1:100 flood<br>protection.                                                                                                                          | • Further information is required to<br>demonstrate how alternative centre court<br>surfaces will be installed without<br>compromising the flood mitigation strategy                                                                                                                                                                                                                                                                                                                                                                     |
| Construction over<br>easements | Construction of infrastructure upon the easements is to be<br>in accordance with the minimum terms and conditions<br>which includes seeking written consent from Energex and<br>Powerlink to erect any infrastructure over easements.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Mirvac requires advice on whether<br>construction over easements through the use<br>of bridging structures or conduits is<br>acceptable to Energex and Powerlink and<br>would be suitable from a management<br>perspective. | <ul> <li>Maximum allowable fill over easements is 1<br/>metre</li> <li>Management implications and risk issues<br/>associated with construction of courts over<br/>easements</li> <li>Approval is required from the Government<br/>Owned Corporations' Shareholding Ministers<br/>and the relevant Boards/CEOs</li> </ul>                                                                                                                                                                                                                |

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| ¢., |                                                              | to<br>are<br>e<br>court<br>is 1<br>ir<br>nd<br>nd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | red<br>:ourt<br>ssist                                                                                                                                                                                                                                                               |                                                                                                                                                                                                              | osed                                                                                                                                                                                                                                                                                                                                                                |
|-----|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     | Other Considerations                                         | <ul> <li>The State has requested Mirvac commit-<br/>redesign its site plan so 6 training courts<br/>constructed above 1:100 year flood level<br/>appropriate flood mitigation measures ar<br/>implemented in the design of the centre of<br/>Maximum allowable fill over casements<br/>metre</li> <li>Cost impacts associated with raising cou</li> <li>Visual impacts on the STC</li> <li>Any effect on court warranties</li> <li>Potential for increased maintenance/repa<br/>costs</li> <li>Ability to construct and maintain grass a<br/>clay tennis courts on a raised structure</li> <li>Benefit of additional car parks</li> </ul> | <ul> <li>Number of courts required to attract desi events</li> <li>Can the centre court be used as a match of the meet tournament requirements</li> <li>If one less court was required, this may a to alleviate site fit issues.</li> </ul>                                         | • Proximity to site boundaries                                                                                                                                                                               | <ul> <li>Potential for an increase in future maintenance and repair costs borne by th State</li> <li>Willingness to accept any conditions imp by the warranty</li> <li>Current research refers only to the acrylic surface; this may not cover the court base</li> </ul>                                                                                            |
| Ċ   | Mirvac's Response                                            | Mirvac seeks confirmation of the<br>requirement to raise the training courts<br>above its proposed 1:20 flood level.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Mirvac seeks confirmation of the minimum<br>number of hard courts that is acceptable.                                                                                                                                                                                               | Mirvac seeks confirmation that another<br>"arrangement" of tennis courts outside the<br>traditional ladder of courts is acceptable.                                                                          | Mirvac's current market research shows a 5-<br>year warranty for the acrylic surface<br>(Rebound Ace) on the hard courts is<br>available and this can be extended up to<br>possibly 8 years if the courts are maintained<br>by the supplier. Confirmation is required on<br>whether the State is prepared to accept hard<br>court warranties of less than 12 years. |
|     | Tennyson Riverside Development (1.kD) Project<br>Requirement | All functional facilities shall be designed within the STC 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.                                                                                                                                                                                                                                                                                                                                                                                                                       | Sixteen match courts are required, of an International<br>Tennis Federation standard with surfaces identical to the<br>cushioned acrylic hardcourt surface at centre court. Two<br>of the match courts are also to have the capability of<br>temporary conversion into show courts. | The STC must respond to the functional and technical<br>requirements outlined in the STC Project Brief and must<br>be of an international standard capable of attracting and<br>hosting major tennis events. | The warranty period for match court bases and surfaces will be 12 years.                                                                                                                                                                                                                                                                                            |
|     | Strategic Issue                                              | Training courts<br>1:100 flood level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Minimum<br>number of hard<br>courts required                                                                                                                                                                                                                                        | Suitability of<br>non-ladder layout                                                                                                                                                                          | Match court<br>warranties                                                                                                                                                                                                                                                                                                                                           |

|   | <u>ه</u>                                                     |                                                                                                                                                                                           |                                                                                                                             |                                                                                                                                                                                                                                        | ·····                                                                                                                                                                                                           | ······                                                                                                                                                                                                                                             |                                                                                                               |
|---|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| , | Other Considerations                                         | • The location of the venue management<br>facilities may not be optimal for overseeing<br>the day-to-day operations of the STC<br>(including court hire)                                  |                                                                                                                             | • The State has requested Mirvac review, in consultation with the State, the design of its centre court roof and trellis structure to address the adverse shadowing impacts                                                            | • The State has requested Mirvac commit to<br>meet the minimum requirements in the STC<br>Project Brief with the exception of any<br>agreed departures                                                          | <ul> <li>Cost implications</li> <li>Linkages with internal access arrangements within the STC</li> <li>Effects of transport solution on event and community operations</li> </ul>                                                                  | <ul> <li>Impacts on patrons</li> </ul>                                                                        |
|   | Mirvac's Response                                            | Mirvac has proposed a 3 storey<br>administration building located on the<br>northern end of the centre court. The user<br>interface area has been located one floor<br>above entry level. | Mirvac is willing to resolve STC issues with<br>the relevant stakeholders to improve the<br>functionality of this building. | Mirvac will work with the State and<br>appropriate tennis design professionals to<br>review its DDP in order to address any<br>adverse shadowing impacts of the proposed<br>design of the slatted court roof and trellis<br>structure. | Mirvac is willing to work through all the<br>omissions of its DDP and seeks to resolve<br>these issues with each of the relevant<br>stakeholders.                                                               | Mirvac seeks to review the scope of<br>disability access works and determine who<br>is responsible for the approval, construction<br>and costs of works to the Yeerongpilly Rail<br>Station to meet existing regulatory                            | statituatus for disabled access.                                                                              |
|   | Tennyson Riverside Development ( مرل) Project<br>Requirement | The STC Project Brief requires administrative facilities to<br>assist in the effective, efficient and economical<br>management of the STC.                                                |                                                                                                                             | The STC Project Brief requires permanent shade roof<br>structures providing sun and rain protection to all<br>permanent seating without impeding sightlines and<br>lighting to the centre court.                                       | The STC Project Brief details the Government's<br>requirements for the State Tennis Centre and covers<br>aspects such as site planning, transport and access<br>arrangements, facilities, fit-out and handover. | The transport and access infrastructure for the STC shall comply with the <i>Disability Discrimination Act 1992</i> and other applicable legislation which includes providing barrier free access to public transport infrastructure and services. | A safe and convenient connection shall be provided between Yeerongpilly Rail Station and the access corridor. |
|   | Strategic Issne                                              | Administration<br>building                                                                                                                                                                |                                                                                                                             | Roofing and shading                                                                                                                                                                                                                    | STC Project<br>Brief - Priority<br>Issues<br>(Attachment C)                                                                                                                                                     | Transport issues                                                                                                                                                                                                                                   |                                                                                                               |

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#### APPENDICES

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- Appendix B Site Layout with Mike 11 Chainages
- Appendix C Upstream Hydrograph for Mike 11 Model
- Appendix D Tailwater Conditions for Mike 11 Model
- Appendix E Cross Sections Existing and Proposed for Chainages 1041010 & 1041230
- Appendix F MUSIC Catchments
- Appendix G Stormwater Management Code



## 6.1 Introduction

GHD have been commissioned by Mirvac Queensland to provide advise and analysis in respect to Brisbane River flooding and stormwater quality for the redevelopment of the former Tennyson Power Station, Tennyson. In respect to Brisbane River flooding this report addresses the potential impact of the proposed development on the function of the Brisbane River and consequently, upon upstream and downstream properties. The impact of River flooding upon the development (eg. provision of appropriate flood immunity and safe access/egress to various elements of the proposed development) is addressed in Volume 5.

This report outlines the issues, assessment, potential impacts and proposed mitigation methods to be adopted and incorporated into the proposed development.

The proposed development is located on the banks and within a confined floodplain backwater area of the Brisbane River. The development also encroaches into the Brisbane River Corridor.

Accordingly, the provisions of the Stormwater Management Code of the Brisbane City Plan are applicable, and the development proposal responds to the Performance Criteria by presenting Acceptable Solutions to relevant Criteria.

BCC have estimated that 1974 peak flood level to be 10.8m AHD, also that the Wivenhoe Dam has reduced the 100 year ARI river flood at the site. Brisbane City Council have provided a Defined Flood Level (DFL) of 7.9m AHD for a 100 year flood for planning purposes. The DFL differs from the Brisbane River flood modelling results which can be seen in Section 6.3.3, all reference to the 100 year flood level are in relation to the DFL with the exception of Section 6.3.3 which refers to the Brisbane River flood model.

#### 6.1.1 Site Description

At the time of lodgement it is anticipated that a reserve for sport and recreational purposes will have been granted to the Department of Local Government, Planning, Sport and Recreation over the subject site.

The real property description of the reserve is Lot 1 on SP 164685, County Stanley, Parish Yeerongpilly, Title Reference: 49104467.

It is expected that the following easements will be registered on the reserve at the time of application:

**Oueensland Electricity Transmission Corporation Limited (Powerlink)** 

Easement B on SP 184023 benefiting Lot 2 on SP164685 for electricity and access purposes.

Energex Limited

- Easement A on SP184022 for electricity purposes
- Easement B on SP184023 for electricity purposes
- Easement C on SP184024 for electricity purposes

Lot 566 on SP 104107, which accommodates the Department of Primary Industries and Fisheries Animal Research Institute (DPI&F site), is included in the subject application only for the purposes of the following components of the development:

- The main access road to the proposed development is from Fairfield Road;
- The pedestrian/cycleway which connects the proposed main access road to the foreshore area of the subject site;
- The pedestrian pathway connecting the main access road to the proposed overbridge to Yeerongpilly Railway Station at the Fairfield Road frontage of the site; and
- · Car parking associated with the State Tennis Centre.

Other than an amended access arrangement to the Institute, no changes to the Institute activities are proposed as part of this application.

The site is bounded by the Brisbane River to the north, Sofistone Street and the eastern end of King Arthur Terrace to the west, the Corinda Yeerongpilly Rail corridor and Tennyson Memorial Drive to the south and the DPI&F site to the east.

The site upon which the State Tennis Centre and proposed residential development is to be developed currently contains the now decommissioned Tennyson Power Station and other ancillary buildings and structures.

The southern part of the subject site also contains an electricity substation adjacent to the site's southern boundary. This is covered by existing Easement A on SP 165945.



The area on the DPI site that is proposed to be developed to accommodate the proposed access road is presently mostly paddock for animals used in DPI activities.

#### 6.1.2 Existing Site Description in Relation to Brisbane River Flooding

The proposed Tennyson Riverside Development Site will occupy the site of the now derelict Tennyson Power Station, on the south side of the River. See Master Plan.

The site grades from the River High Astronomical Tide (HAT) level of 1.8mAHD to levels generally in the order of 12.0 mAHD.

Portions of the site, together with portions of the abutting Lot 566 on SP 104107, which accommodates the Department of Primary Industries and Fisheries Animal Research Institute (DPI&F), form an 'off stream' ineffective-flow-area or backwater (the site floodplain) to the Brisbane River of approximately 7.5 Ha in area. Figure 6.1-1 shows the existing site conditions and the 100 year ARI flood extents on the site. Figure 6.1-1also shows the flow paths of major Brisbane River floods onto the site.

High ground and the existing power plant building (including eastward extensions of its fill platform) effectively block flood waters below 7.9 mAHD from entering the site from the River at the upstream boundary of the site. Other high ground approximately 120m downstream of the existing building fill platform forms the downstream extent of the site floodplain connection to the river. The site floodplain connection to the River is also further confined by three existing buildings which obstruct flow onto the floodplain (southern portions of site).

Existing floodplain storage on the site for 100 year ARI floods is approximately 111,400 m<sup>3</sup>.

The primary hydrologic and hydraulic functions of the Brisbane River that are potentially impacted due to development are:

- · Floodplain storage; and
- Flood conveyance.

The general requirement in respect of these functions is to cause 'no worsening' of flood condition on other properties due to increase in flood peak flow rate or flood levels.

In order that the development meets BCC's Urban Management Division Subdivision and Development Guidelines (Part B Design Requirements) in respect of flood immunity, various habitable and on-habitable uses are required to be above flood levels of varying magnitudes. These are:

- 100 year ARI level + 0.5m and 100 year ARI level + 0.3m respectively for habitable and non-habitable Residential uses;
- 100 year ARI level + 0.5m and 100 year ARI level respectively for Industrial / Commercial developments; and
- For car parking, the minimum design levels are equivalent to 20 year ARI flood level.







## 6.2 Brisbane River Flood Impacts

#### 6.2.1 Impact of Proposed Works on Site Floodplain Storage

In order to accommodate the proposed development and, at the same time meet the Part B Design Requirements in respect of flood immunity, a combination of site filling and cut will be required. Such earthworks alter the pattern of flooding on the site and floodplain storage available on the site. Refer Figure 6.1-2 showing inundation extent post development.

A digital comparison of digital elevation models representing both the existing site (derived from site survey) and preliminary site design surface, against a level surface of RL7.9mAHD (the flood level defined by BCC) has provided an assessment of pre and post development floodplain storage volume. The difference between the pre and post development floodplain storage volumes gives an estimate of the impact of the development in terms of gain (or loss) of floodplain storage.

Table 6.1 below, shows the results of this comparison for the existing site and preliminary proposed development design surface. 'Off site' in Table 6.1 refers to portions of the DPI&F site accommodating proposed works only. In this respect, it should be noted that the floodplain storage values given for the 'Off site' area are not the total existing storage available on the DPI&F site. The balance of the DPI&F site contains no proposed works, hence there is no change in floodplain storage on that portion of the DPI&F site, and it is not relevant to this application.

|                    | Volume from Surface to 7.9m AHD |                           |                          |  |  |
|--------------------|---------------------------------|---------------------------|--------------------------|--|--|
| Reference Surface  | Off Site (m <sup>3</sup> )      | Ou Site (m <sup>3</sup> ) | Total (m <sup>3</sup> )  |  |  |
| Existing Surface   | 132918                          | 111420                    | 244338 (sum)             |  |  |
| (Pre Development)  |                                 |                           | 244354 (from model)      |  |  |
| Developed Surface  | 138601                          | 69766                     | 208367 (sum)             |  |  |
| (Post Development) | ·                               |                           |                          |  |  |
| Total Loss/Gain    | 5683 (gain of storage)          | -41654 (loss of storage)  | -35971 (loss of storage) |  |  |

#### Table 6.2-1 Comparison of Pre and Post Development Floodplain Storage

The above analysis of the net effect of site cut and fill shows that a loss of floodplain storage of approximately 40000 m<sup>3</sup> will result on the site.

Analysis of total works on both the subject site and on DPI&F land shows that loss of floodplain storage will be approximately 36,000 m<sup>3</sup>.

Such storage volume represents a minimal percentage of total available floodplain storage in this reach of the Brisbane River. Additionally, the site floodplain, as shown in Figure 6.1-1 is restricted in its connection to the River, hence its effectiveness in contributing to floodplain storage available during the rising limb of a flood hydrograph is limited.

Further, the minimal loss of floodplain storage (approximately 36,000 m<sup>3</sup>) represents only 0.0015% of the total volume of flood water below 7.9m AHD (approximately  $2.4 \times 10^9$  m<sup>3</sup> as taken from BCC supplied data) at this point in the River.

Accordingly, due to:

- Minimal loss of floodplain storage; and
- The relative 'disconnectedness' of the site floodplain from the River,

it is expected that the proposed development will have no measurable adverse impact upon flood afflux or peak flood flow rate due to loss of floodplain storage.





## 6.3 Brisbane River Flow Conveyance

#### 6.3.1 Existing Brisbane River Flow Conveyance

The southern limit of the existing active flow area of the Brisbane River is defined by an alignment consisting of:

- High ground on the River frontage at western site boundary;
- Existing power plant building and its extended fill platform to the east (downstream);
- Three existing buildings east of main power plant building; and
- High ground approximately 120m east (downstream) of the existing building fill platform.

Figure 6.3-2 shows this alignment and the features that form the boundary between the active Brisbane River flow path and the inactive flow area of the site floodplain.

Existing conveyance flood conveyance at the fringe of the active flow area is further constrained by the presence of:

- Two existing pump station buildings and other small buildings;
- Existing jetty structure; and
- Existing riparian vegetation along the River frontage.

These structures can be seen in Figure 6.3-1.



L Existing Pump Station Buildings.



2. Existing Riparian Vegetation near pump station buildings (upstream).





3. View from top of Power Station shows area of floodplain connection to River and alignment of three existing buildings (white) that for part of active flow area boundary.



4. View of Power Station showing Pump Station (lower left), Jetty (mid image) and Riparian Vegetation.



Figure 6.3-1 Site Photos Showing obstructions at fringe of active flow area

#### 6.3.2 Proposed River Flow Conveyance

The Master Plan and Figure 6.3-3 show that the proposed locations for Buildings A, B, C, & D do not project 'forward' into existing active flow path of Brisbane River beyond that of the existing Power Station building. Further, it can be seen for the Master Plan that the positions of Buildings A & C are set back slightly from the alignment of the existing Power Station building, and thus will have the effect of increasing the available active flow width of the River in this location.

It should be noted that Buildings C & D are substantially set back from the existing Power Station building – retaining wall alignment which constrain River active flow area at this point. The proposed development includes removal of the existing constraint to flow width and lowering of the over bank levels to form a public park. These works will have the effect of increasing the available active flow area above that currently existing, thereby contributing to a possible increase in available flow conveyance and an easing of flood levels.

Comparison of the Master Plan and Figure 6.3-3 shows that Buildings E & F project 'forward' of the alignment of the existing active flow path boundary with the inactive flow of the site floodplain. This projection is at its maximum at Building E, and is approximately 40 m into the obstructed, 'high friction', and low velocity (refer Figure 6.3-3) fringe of the active flow path of the River.

The location of Building E corresponds with cross section. Ch 1041230 in BCC's hydraulic (Mike11) model of the River (see Appendix B). An analysis of the Brisbane River cross sectional area (taken from BCC Mike11 model), and proposed site development at the point of maximum encroachment (Building E) is shown in Figure 6.3-2. The analysis shows that reduction of existing flow cross sectional area within the active flow zone, due to proposed development, is approximately 5% in respect to the DFL.

Such reduction in active flow area where velocities are lowest (due to increased friction and various obstructions discussed above) is not expected to result in afflux that will cause worsening of flooding to upstream properties.

In order to demonstrate any potential afflux effect due to the proposed development, a portion of Brisbane City Council's Brisbane River Mike11 hydraulic model has been acquired; amended and run. Section 6.3.3 describes the approach and results of this modelling.

#### 6.3.3 Brisbane River Hydraulic Analysis

Brisbane City Council has provided a truncated portion of its Mike11 hydraulic model of the Brisbane River to allow analysis of effects of Buildings C, D, E, and F in the fringe of the River active flow area. This model covers Brisbane River Chainage 1038600 to 1043725 (see Appendix A) with the development affecting Chainages 1041010 and 1041230.

#### 6.3.3.1 Mike 11 Model

MIKE 11 is a fully dynamic one-dimensional hydraulic modelling package developed by the Danish Hydraulics Institute. The model is used for the simulation of river, channel and floodplain systems. The model performs unsteady flow calculations and is recommended for use only in the sub-critical flow regime.

Mike 11 Version 1999b was used to run the truncated Brisbane River model. Boundary conditions were supplied by BCC. A hydrograph was provided for Chainage 1038600 (see Appendix C) and tailwater levels were provided for Chainage 1043725 (see Appendix D). The hydrograph was also provided for Oxley Creek.

#### 6.3.3.2 Changes to Model

The BCC provided model was initially modified to include the derelict power station building (see Appendix E), as this will be the limit of the flow conveyance at Chainage 1041010 for the existing scenario.

Chainage 1041010 and 1041230 were then modified (see Appendix E) for the proposed scenario which involved:

- Removing the power station from the existing conditions;
- Adding Building B to Chainage 1041010; and
- Adding Building E to Chainage 1041230.

#### 6.3.3.3 Results

Table 6.3-1 shows the resulting maximum water levels for the 100 year ARI storm event at the chainages provided in the truncated BCC model. The BCC supplied results are the water levels resulting from the model as supplied directly from BCC with no modifications. The existing water levels are the results of the scenario with the powerstation building included, and the proposed results included the removal of the powerstation building and the insertion of the proposed buildings as stated in 6.3.3.2.

As can be seen in Table 6.3-1 there is no difference in water level between the BCC supplied data and the (modifed) existing scenario model (see also Appendix E). It can therefore be concluded that the insertion of the powerstation building has little or no affect on the conveyance of floodwaters for a 100-year flood. It should be noted however that location of the bank markers in the





BCC supplied model indicate that there is flow conveyance behind the existing powerstation building (x=300.6m) whereas the limit of flow conveyance is infact in front of the powerstation building (x=826.3).

It can be assumed that the Mike 11 Model water level results are not accurate to the imm therefore the results presented above can be rounded to the nearest 10mm. As the change in water level between the proposed results and the BCC provided results for a 100-year flood are less than 5mm it can be expected that the impact is no change in afflux. It can be seen in the results that the water level decreases over the modified cross sections Chainage 1041010 and 1041230, which is contrary to what was expected therefore it could be concluded that there was a small instability in the model.

The 50-year flood was also modelled and results again displayed a small instability with water levels increasing and decreasing contrary to expectation, in this case the change in water level was only 1mm and can therefore be ignored.

In conclusion the proposed development will have negligible or no affect on the existing floodwater conveyance of the Brisbane River for the 50 and 100 year flood. There will be negligible or no incease in flood water level due to the development of Lots 1 and 2 on RP 100860, Lot 1 on RP37962, Lot 663 on SL 2532, Lot 1 on RL6147, and Part of Lot 566 on SP104107.





|                      | Maximum 100 year | Proposed results |          |                          |
|----------------------|------------------|------------------|----------|--------------------------|
| Chainage             | BCC Supplied     | Existing         | Proposed | minus BCC<br>results (m) |
| BNE 1038600.00       | 7.086            | 7.086            | 7.086    | 0                        |
| BNE 1039100.00       | 7.052            | 7.052            | 7.052    | 0                        |
| BNE 1039200.00       | 7.052            | 7.052            | 7.052    | 0                        |
| BNE 1039200.00       | 7.052            | 7.052            | 7.052    | 0                        |
| BNE 1039565.00       | 7.049            | 7.049            | 7.049    | 0                        |
| BNE 1039670.00       | 7.051            | 7.051            | 7.052    | 0.001                    |
| BNE 1039670.00       | 7.051            | 7.051            | 7.052    | 0.001                    |
| BNE 1039828.00       | 7.052            | 7.052            | 7.052    | 0                        |
| BNE 1039828.00       | 7.052            | 7.052            | 7.052    | 0                        |
| BNE 1040090.00       | 7.044            | 7.044            | 7.045    | 0.001                    |
| BNE 1040250.00       | 7.014            | 7.014            | 7.015    | 0.001                    |
| BNE 1040250.00       | 7.014            | 7.014            | 7.015    | 0.001                    |
| BNE 1040490.00       | 6.948            | 6.948            | 6.948    | 0                        |
| BNE 1041010.00       | 6.973            | 6.973            | 6.972    | -0.001                   |
| BNE 1041230.00       | 6.945            | 6.945            | 6.941    | -0.004                   |
| BNE 1041460.00       | 6.897            | 6.897            | 6.897    | 0                        |
| BNE 1041700.00       | 6.893            | 6.893            | 6.893    | 0                        |
| BNE 1041960.00       | 6.783            | 6.783            | 6.783    | 0                        |
| BNE 1042235.00       | 6.649            | 6.649            | 6.649    | 0                        |
| BNE 1042500.00       | 6.605            | 6.605            | 6.605    | 0                        |
| BNE 1042500.00       | 6.605            | 6.605            | 6.605    | 0                        |
| BNE 1042515.00       | 6.603            | 6.603            | 6.603    | 0                        |
| BNE 1042910.00       | 6.458            | 6.458            | 6.458    | 0                        |
| BNE 1043010.00       | 6.408            | 6.408            | 6.408    | 0                        |
| BNE 1043010.00       | 6.408            | 6.408            | 6.408    | 0                        |
| BNE 1043080.00       | 6.373            | 6.373            | 6.373    | 0                        |
| BNE 1043110.00       | 6.361            | 6.361            | 6.361    | 0                        |
| BNE 1043110.00       | 6.361            | 6.361            | 6.361    | 0                        |
| BNE 1043725.00       | 6.157            | 6.157            | 6.157    | 0                        |
| OXLEY 599400.00      | 7.052            | 7.052            | 7.053    | 0.001                    |
| OXLEY 600000.00      | 7.052            | 7.052            | 7.052    | 0                        |
| STLUCIALINK1 0.00    | 7.052            | 7.052            | 7.052    | 0                        |
| STLUCIALINK1 1050.00 | 6.361            | 6.361            | 6.361    | 0                        |
| STLUCIALINK2 0.00    | 7.051            | 7.051            | 7.052    | 0.001                    |

#### Table 6.3-1 Maximum 100 year ARI Water Level Results

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| STLUCIALINK2 1050.00 | 6.408 | 6.408 | 6.408 | 0     |  |
|----------------------|-------|-------|-------|-------|--|
| STLUCIALINK3 0.00    | 7.014 | 7.014 | 7.015 | 0.001 |  |
| STLUCIALINK3 850.00  | 6.605 | 6.605 | 6.605 | 0     |  |
| BNE 1038600.00       | 7.086 | 7.086 | 7.086 | 0     |  |
| BNE 1039100.00       | 7.052 | 7.052 | 7.052 | 0     |  |





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Figure 6.3-4 Plood Conveyance Area





## 6.4 Water Quality

#### 6.4.1 Background

The overall aims of the water quality assessment are to:

- · Assess the level of stormwater quality infrastructure required to treat runoff from the development; and
- Propose stormwater treatment measures to meet the water quality objectives.

This section of the report outlines the development of water quality models for the Tennyson Riverside Development catchment using the Model for Urban Stormwater Improvement Conceptualisation MUSIC model.

#### 6.4.2 Water Quality Treatment Philosophy

The water quality treatment measures proposed for the Tennyson Riverside Development aim to treat the site stormwater threemonth ARI discharge to meet the overall Water Quality Objectives (WQOs) requirements. All water quality and quantity requirements will be addressed internally to the development, as no downstream treatment is available prior to the receiving environment. The stormwater runoff will be treated before entering the trunk stormwater network which will discharge directly into the Brisbane River.

Runoff from frequent recurrence events will be retained within retention depressions, and infiltrate to the environment or stormwater drainage system.

Runoff from less frequently occurring (larger rainfall) events will surpass the capacity of the infiltration and retention depressions. This runoff will firstly be conveyed by the overflow flow gully pits into the stormwater system, and once the gully pit capacity has been reached, will be conveyed by overland flow paths and off the development.

#### Upstream Runoff Diversion

Water quality treatment measures for this site will not be affected by the requirements to treat stormwater from upstream catchment is diverted into the underground stormwater system and will flow under the site directly to the River.

#### **Catchment Opportunities and Constraints**

Potential constraints with respect to the implementation of stormwater quality controls include:

- Insufficient change in grade for implementation of proprietary style Gross Pollutant Traps in most areas;
- Most of the pervious areas are public access areas with high usage, and not usable for treatment area; and
- Each property titleholder is to have a separate stormwater management system, which involves treating stormwater before entering the underground drainage network.

Key opportunities identified for the catchment in relation to the application of stormwater quality control measures include:

• Landscaped gardens and road reserve areas are available for location of treatment measures.

#### 6.4.3 Water Quality Objectives

The Tennyson Riverside Development site is located in the Planning Unit 'BN/340 Yeronga' in the Brisbane Waterways Strategy Plan (Brisbane City Council 2000). This unit discharges into the freshwater section of the Brisbane River. The performance of the proposed water quality treatment measures have been compared to the *Brisbane City Council Guidelines* -*Water Quality Objectives 2000*. The WQOs are obtained from Set A Environmental Values (EVs) (i.e. the environmental value is that of a modified ecosystem maintaining wildlife, cultural heritage, visual recreation, industry, stock and irrigation). The WQOs for Set A of EVs are summarised in Table 6.4-1.

#### Table 6.4-1 WQOs for Brisbane City Council (Tidal Estuary)

| Pollutant             | Water Quality Objective Median Values    |
|-----------------------|------------------------------------------|
| Suspended Solids (SS) | 15 mg/l for combined wet and dry periods |
|                       | 90%ile<100 mg/l for wet weather periods  |
| Total Phosphorus (TP) | 0.07 mg/l                                |
| Total Nitrogen (TN)   | 0.65 mg/l                                |



#### 6.4.4 Water Quality Treatment Options

The selection of treatment controls for the study area will depend on a wide range of criteria. Common stormwater treatment methods should be assessed against a number of categories with particular emphasis on the following:

- Availability of suitable sites and site topography;
- Available hydraulic head loss at the selected site;
- Site geology;
- Site groundwater levels;
- Effectiveness of the treatment measure to achieve desired pollutant retention;
- Compatibility with existing site constraints;
- · Aquatic and wild-life habitat;
- Public safety;
- · Capital cost and maintenance; and
- Aesthetic appeal.

For this investigation a distributed treatment philosophy is proposed, with gross pollutant traps (litter only), and bioretention filters in the form of basins, landscaped gardens and kerb gardens. These devices will be incorporated throughout the development site.

Presently the bioretention locations presented are indicative only. The final layout will depend upon issues to be resolved during detail design including those listed above.

#### 6.4.5 Water Quality Modelling

To evaluate stormwater quality within the catchment, a water quality model of the catchment was developed using MUSIC, the Model for Urban Stormwater Improvement Conceptualisation, developed by CRC for Catchment Hydrology. The model was run under MUSIC version 3.01.

MUSIC provides the ability to simulate both quantity and quality of runoff from catchments ranging from a single house block up to many square kilometres, and the effect of a wide range of treatment facilities on the quantity and quality of runoff downstream using a range of time steps from daily down to 6 minutes.

#### Model Data

Climate

Climate data for the catchment was sourced from the MUSIC Database using the rainfall and PET values for Brisbane. The period 1980 to 1990 represented the rainfall variability of the whole data set and was thus selected. The MUSIC warm-up option of groundwater storages recharge was used. Pan-evaporation data was also provided and used to derive average monthly values.

#### Rainfall/Runoff

Catchment runoff volumes were estimated using Brisbane City Council default rainfall/runoff parameters for the MUSIC land use classes (Brisbane City Council, 2003). The catchments for the treatment devices were broken into various types of land uses, the layout of these catchments can be seen in Appendix F.

| Catchment                          | Land Use          | Surface<br>Area | Fraction<br>Impervious |
|------------------------------------|-------------------|-----------------|------------------------|
| Tennis Centre - Stadium East       | Commercial        | 0.80            | ]                      |
| Tennis Centre - Stadium West       | Commercial        | 0.32            | 1                      |
| Tennis Centre - Hard Courts        | Modified *        | 1.16            | 1                      |
| Tennis Centre - Hard Courts Access | Commercial        | 0.18            | 1                      |
| Tennis Centre – Clay Courts        | Rural Residential | 0.34            | ł                      |







| Tennis Centre – Grass Courts            | Rural Residential | 0.25  | 0    |
|-----------------------------------------|-------------------|-------|------|
| Brisbane City Council –Road East        | Urban Residential | 1.28  | 1    |
| Brisbane City Council -Road Centre East | Urban Residential | 0.75  | 1    |
| Brisbane City Council –Road West        | Urban Residential | 0.5   | 1    |
| Brisbane City Council -Road Centre West | Urban Residential | 0.21  |      |
| Brisbane City Council -Parkland         | Rural Residential | 2.33  | 0.06 |
| Gymnasium                               | Commercial        | 0.18  | 0.64 |
| Residential Lot (excl roof area)        | Rural Residential | 2.035 | 0.3  |
| Additional Car parking                  | Urban Residential | 0.24  | l    |
| Tennis Centre East                      | Rural Residential | 0.35  | 0.1  |
| Tennis Centre West                      | Rural Residential | 0.11  | 0.1  |
| Picnic Area 1                           | Rural Residential | 0.12  | 0.1  |
| Picnic Area 2                           | Rural Residential | 0.18  | 0.1  |
| Picnic Area 3                           | Rural Residential | 0.07  | 0.1  |
| Tennis Centre Carpark 1                 | Commercial        | 0.23  | 1.0  |
| Tennis Centre Carpark 2                 | Commercial        | 0.54  | 1.0  |

\*The tennis centre hard courts have been assumed to generate little or no pollutants due to the regular cleaning of the courts.

#### 6.4.6 Pollutant Export

Similarly, the pollutant export equations given by Brisbane City Council (Brisbane City Council, 2003) were used as default values. These are summarized in Table 6.4-5.

| Table 6.4-3 | Average | Monthly | Pan | Evaporation |
|-------------|---------|---------|-----|-------------|
|             |         |         |     |             |

| Month     | Pan Evaporation (mm) |
|-----------|----------------------|
| January   | 195                  |
| February  | 165                  |
| March     | 180                  |
| April     | 195                  |
| May       | 1.55                 |
| June      | 165                  |
| July      | 120                  |
| August    | 85                   |
| September | 75                   |
| October   | 80                   |
| November  | 95                   |
| December  | 120                  |





| Parameter                           | Urban<br>Residential | Commercial | Industrial | Rural<br>Residential | Forest |
|-------------------------------------|----------------------|------------|------------|----------------------|--------|
| Field Capacity (mm)                 | 200                  | 80         | 80 .       | 80                   | 80     |
| Infiltration Capacity Coefficient a | 50                   | 200        | 200        | 200                  | 200    |
| Infiltration Capacity Coefficient b | ł                    | 1          | ]          | 1                    | ]      |
| Rainfall Threshold (mm)             | 1                    | l          | I          | 1                    | 1      |
| Soil Capacity (mm)                  | 400                  | 120        | 120        | 120                  | 120    |
| Initial Storage (%)                 | 10                   | 25         | 25         | 25                   | 25     |
| Daily Recharge Rate (%)             | 25                   | 25         | 25         | 25                   | 25     |
| Daily Drainage Rate (%)             | 5                    | 5          | 5          | 5                    | 5      |
| Initial Depth (mm)                  | 50                   | 50         | 50         | 50                   | 50     |

| Table 6.4-4 | MUSIC | Rainfall / | Runoff | Parameters       |
|-------------|-------|------------|--------|------------------|
| Table 6.4-4 | MUSIC | Ramtali /  | Runoff | <b>Parameter</b> |

Table 6.4-5

MUSIC Base and Storm flow Concentration Parameters

|                           |               | TSS (Log <sub>10</sub> | mg/l)         | Total Phosphorus<br>(Log <sub>10</sub> mg/l) |               | Total Nitrogen<br>(Log <sub>10</sub> mg/l)) |               |
|---------------------------|---------------|------------------------|---------------|----------------------------------------------|---------------|---------------------------------------------|---------------|
| Source Node               |               | Base Flow              | Storm<br>Flow | Base Flow                                    | Storm<br>Flow | Base Flow                                   | Storm<br>Flow |
| Urban                     | Mean          | 1.00                   | 2.18          | -0.97                                        | -0.47         | 0.20                                        | 0.26          |
| Residential Std Deviation | Std Deviation | 0.34                   | 0.39          | 0.31                                         | 0.31          | 0.20                                        | 0.23          |
| Commercial                | Mean          | 0.78                   | 2.16          | -0.60                                        | -0.39         | 0.32                                        | 0.37          |
| Std Deviation             | 0.39          | 0.38                   | 0.50          | 0.34                                         | 0.30          | 0.34                                        |               |
| In Austria I              | Mean          | 0.78                   | 1.92          | -1.11                                        | -0.59         | 0.14                                        | 0.25          |
| Industrial Std Deviation  | Std Deviation | 0.45                   | 0.44          | 0.48                                         | 0.36          | 0.20                                        | 0.32          |
| Rural                     | Mean          | 0.53                   | 2.26          | -1.54                                        | -0.56         | -0.52                                       | 0.32          |
| Residential               | Std Deviation | 0.24                   | 0.51          | 0.38                                         | 0.28          | 0.39                                        | 0.30          |
| Acricultural              | Mean          | 1.40                   | 2.30          | -0.88                                        | -0.27         | 0.07                                        | 0.59          |
| Agricultural Std Devia    | Std Deviation | 0.31                   | 0.31          | 0.13                                         | 0.30          | 0.13                                        | 0.26          |
| Pawastad                  | Mean          | 0.51                   | 1.90          | -1.79                                        | -1.10         | -0.59                                       | -0.075        |
| rucsia                    | Std Deviation | 0.28                   | 0.20          | 0.28                                         | 0.22          | 0.22                                        | 0.24          |

An example of the model layout is shown in Figure 6.4-1.









#### 6.4.7 Sizing of Bioretention Treatment Devices

In order to treat the site stormwater runoff to meet Council water quality objectives, a number of treatment devices have been proposed to reduce the pollutant loading and overall concentrations of pollutants in the stormwater runoff. Bioretention devices have been proposed predominantly due to their high total nitrogen removal efficiency. Proprietary style gross pollutant traps have been proposed where bioretention devices were impractical which have generally good suspended solids removal and gross pollutant removal. The table below contains details of the proposed bioretention devices including required surface are, depth and filter material properties.

| Catchment                              | Device No. | Extended<br>Detention<br>Depth (m) | Surface<br>Area<br>(m²) | Filter<br>Area<br>(m <sup>2</sup> ) | Filter<br>Depth<br>(m) | Hydraulic<br>Conductivity<br>(mm/h) | Particle<br>Diameter<br>(mm) |
|----------------------------------------|------------|------------------------------------|-------------------------|-------------------------------------|------------------------|-------------------------------------|------------------------------|
| State Tennis Centre                    | 1          | 0.25                               | 300                     | 300                                 | 1.0                    | 100                                 | 0.3                          |
|                                        | 2          | 0.25                               | 500                     | 500                                 | 1.0                    | 100                                 | 0.3                          |
|                                        | 3          | 0.25                               | 300                     | 300                                 | 1.0                    | 100                                 | 0.3                          |
| ······································ | 4          | 0.25                               | 300                     | 300                                 | 1.0                    | 100                                 | 0.3                          |
|                                        | 5          | 0,25                               | 300                     | 300                                 | 1.0                    | 100                                 | 0.3                          |
|                                        | 6          | 0.25                               | 500                     | 500                                 | 1.0                    | 100                                 | 0.3                          |
| Brisbane City Council                  | 1          | 0.25                               | 500                     | 500                                 | 1.0                    | 100                                 | 0.3                          |
|                                        | 2          | 0.25                               | 250                     | 250                                 | 0.8                    | 100                                 | 0.3                          |
|                                        | 3          | 0.25                               | 200                     | 200                                 | 0.8                    | 100                                 | 0.3                          |
| Gymnasium                              | 1          | 0.25                               | 200                     | 200                                 | 1.0                    | 100                                 | 0.3                          |
| Residential                            | 1          | 0.25                               | 300                     | 300                                 | 0.8                    | 100                                 | 0.3                          |
|                                        | 2          | 0.25                               | 300                     | 300                                 | 1.0                    | 100                                 | 0.3                          |

#### Table 6.4-6 Bioretention Device Sizes

Proprietary style gross pollutant traps (CDS or similar) are also proposed throughout the site. See proposed site drainage layout plan Drwg No B04254-SK55 (Appendix A of Volume 5) for details of proposed storm water quality treatment layout.

#### 6.4.8 Results

In all cases the Brisbane City Council defined water quality objectives are met. The median concentrations of Total Suspended Solids (TSS), Total Phosphorous (TP) and Total Nitrogen (TN) for each catchment are shown in Table 6.4-7.





| Ladie 0.4-7 Resul     | able 0.4-7 Resulting Wedgan Fondam Concern anois for each Cauchnent |         |         |  |  |  |  |
|-----------------------|---------------------------------------------------------------------|---------|---------|--|--|--|--|
| Catchment             | TSS mg/L                                                            | TP mg/L | TN mg/L |  |  |  |  |
| State Tennis Centre   | 0.304                                                               | 0.009   | 0.193   |  |  |  |  |
| Brisbane City Council | 7.24                                                                | 0.007   | 0.155   |  |  |  |  |
| Gymnasíum             | 0.00                                                                | 0.000   | 0.040   |  |  |  |  |
| Residential           | 0.178                                                               | 0.008   | 0.162   |  |  |  |  |
| WQO                   | 15                                                                  | 0.07    | 0.65    |  |  |  |  |
|                       |                                                                     |         |         |  |  |  |  |

Table 6.4-7 demonstrates that the currently proposed biofiltration and gross pollutant trap combinations provide substantial over performance in all development catchments when compared with Brisbane City Council water quality objectives.

Pollutant load reductions are also in the order of, or in excess of desirable industry standards. Expected pollutant load reductions are presented Table 6.4-8.

| Table 6.4-8 Tr        | eatment Train Effec | ment Train Effectiveness (Pollutant Load Reduction) for each Catchment |      |   |  |  |  |  |
|-----------------------|---------------------|------------------------------------------------------------------------|------|---|--|--|--|--|
|                       | Pollutant Loa       | Pollutant Load Reduction %                                             |      |   |  |  |  |  |
| Catchment             | TSS                 | TP                                                                     | TN   |   |  |  |  |  |
| State Tennis Centre   | 77.7                | 63.7                                                                   | 47.0 |   |  |  |  |  |
| Brisbane City Council | 79.3                | 68.8                                                                   | 51.8 |   |  |  |  |  |
| Gymnasium             | 98.5                | 89.6                                                                   | 72.2 | 1 |  |  |  |  |
| Residential           | 80.6                | 71.1                                                                   | 54.2 |   |  |  |  |  |

As can be seen from Table 6.4-7 the Brisbane City Council water quality objectives have been met and exceeded for each catchment area. The proposal is to provide stormwater quality treatment up to the extent contained within this preliminary analysis. Over performance achieved with this preliminary proposal does allow for some possible rationalisation of finally adopted stormwater quality treatment, so long as ultimate compliance with BCC WQOs can be demonstrated.





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## 6.5 Conclusion

The impact of the proposed development in respect of Brisbane River flooding, and discharge stormwater quality have been assessed and, where necessary, mitigation measures have been proposed.

The proposed development does result in minimal loss of floodplain storage, however the loss represents only approximately 0.0015% of a design 100 year ARI flood volume in this reach of the river. Such minimal loss is unlikely to result in any measurable increase in either peak flood flow rate or peak flood levels in the vicinity of the site or in downstream reaches.

Portions of the proposed development allow for an increase above the existing Brisbane River flood flow area at the site, while some portions of proposed development result in marginal decrease in available flood flow area. The net effect is expected to be that no measurable afflux will result from the development as currently proposed.

Hydraulic modelling (making use of Brisbane City Council's existing Brisbane River hydraulic model) of the effect of the proposed development upon Brisbane River flood conveyance has been undertaken. The results confirmed that the proposed development will have negligible or no affect on the existing floodwater conveyance of the Brisbane River for the 50 and 100 year flood. There will be negligible or no incease in flood water level due to the development of Lots 1 and 2 on RP 100860, Lot 1 on RP37962, Lot 663 on SL 2532, Lot 1 on RL6147, and Part of Lot 566 on SP104107.

The proposed development will not have an adverse affect on the Brisbane River water quality. Proposed bioretention devices and gross pollutant traps will be implemented to treat site stormwater runoff for low flows. The proposed treatment measures over perform with respect to stormwater quality treatment in comparison to the water quality objectives and are therefore conservative. Hence, there is opportunity to fine tune and rationalise the proposed layout in the detail design phase.





### 6.6 References

Draft Australian Runoff Quality Guidelines, 2003. Institute of Engineers Australia

Guidelines for Pollutant Export Modelling in Brisbane Version 7 (Revision 1) (2003). Supplement to Brisbane City Council Water Quality Management Guidelines.

Brisbane City Council, 2000a. Brisbane City Council's Water Quality Management Guidelines, Version 1.

Brisbane City Council, 2000b. Guideline on Identifying and Applying Water Quality Objectives in Brisbane City. Version 1. Brisbane City Council 2000c, Subdivision and Development Guideline.





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Appendix A

# BCC Mike 11 Model Cross Section Locations

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Appendix B Site Layout with Mike 11 Chainages







Appendix C Upstream Hydrograph for Mike 11 Model

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Appendix D

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# Tailwater Conditions for Mike 11 Model

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| Design.RES11        | Q10             | ) Water Level | at                   | BNE 1043725                         | .00                        |                    |                     |                       |                                    |       |                 |       |
|---------------------|-----------------|---------------|----------------------|-------------------------------------|----------------------------|--------------------|---------------------|-----------------------|------------------------------------|-------|-----------------|-------|
| 1/01/1999 9:00      |                 | 2/01/19       | 99 14:00             | 3.626                               | 3/01/1999 19:00            | 6.023              | 5/01/1999 0:00      | 5.793                 | 6/01/1999 5:00                     | 4.783 | 7/01/1999 10:00 | 4.081 |
| 1/01/1999 9:30      | 0.0             | 1 2/01/199    | 99 14:30             | 3.685                               | 3/01/1999 19:30            | 6.028              | 5/01/1999 0:30      | 5.785                 | 6/01/1999 5:30                     | 4.759 | 7/01/1999 10:30 | 4.077 |
| 1/01/1999 10:00     | 0.2             | 2/01/199      | 99 15:00             | 3.745                               | 3/01/1999 20:00            | 6.037              | 5/01/1999 1:00      | 6.777                 | 6/01/1999 6:00                     | 4.735 | 7/01/1999 11:00 | 4.073 |
| 1/01/1999 10:30     | 0.93            | 2 2/01/199    | 99 15:30             | 3.806                               | 3/01/1999 20:30            | 6.046              | 5/01/1999 1:30      | 5.771                 | 6/01/1999 6:30                     | 4.712 | 7/01/1999 11:30 | 4.068 |
| 1/01/1999 11:00     | 1.              | 1 2/01/199    | 99 16:00             | 3.867                               | 3/01/1999 21:00            | 6.05               | 5/01/1999 2:00      | 5.765                 | 6/01/1999 7:00                     | 4.688 | 7/01/1999 12:00 | 4.063 |
| 1/01/1999 11:30     | 1.12            | 7 2/01/199    | 99 16:30             | 3.927                               | 3/01/1999 21:30            | 6.054              | 5/01/1999 2:30      | 5.759                 | 6/01/1999 7:30                     | 4.666 | 7/01/1999 12:30 | 4.058 |
| 1/01/1999 12:00     | 1.1/            | 2/01/191      | 99 17:00             | 3.985                               | 3/01/1999 22:00            | 6,055              | 5/01/1999 3:00      | 5.754<br>6.75         | 6/01/1999 8:00                     | 4.044 | 7/01/1999 13:00 | 4.003 |
| 1/01/1999 12:30     | 1.20            | 2/01/190      | 99 17.30             | 4.042                               | 3/01/1999 22:30            | 6.00<br>6.064      | 5/01/1999 4:00      | 5 746                 | 6/01/1999 9:00                     | 4.022 | 7/01/1999 14:00 | 4.040 |
| 1/01/1999 13:30     | 1.38            | 5 2/01/199    | 99 18:30             | 4,156                               | 3/01/1999 23:30            | 6.069              | 5/01/1999 4:30      | 5.742                 | 6/01/1999 9:30                     | 4.58  | 7/01/1999 14:30 | 4.032 |
| 1/01/1999 14:00     | 1.41            | 3 2/01/199    | 99 19:00             | 4.212                               | 4/01/1999 0:00             | 6.073              | 5/01/1999 5:00      | 5.737                 | 6/01/1999 10:00                    | 4.56  | 7/01/1999 15:00 | 4.024 |
| 1/01/1999 14:30     | 1.428           | 3 2/01/199    | 99 19:30             | 4.27                                | 4/01/1999 0:30             | 6.079              | 5/01/1999 5:30      | 5.733                 | 6/01/1999 10:30                    | 4.54  | 7/01/1999 15:30 | 4.015 |
| 1/01/1999 15:00     | 1.43            | 7 2/01/199    | 99 20:00             | 4.329                               | 4/01/1999 1:00             | 6.088              | 5/01/1999 6:00      | 5.729                 | 6/01/1999 11:00                    | 4.521 | 7/01/1999 16:00 | 4.005 |
| 1/01/1999 15:30     | 1.45            | 3 2/01/199    | 99 20:30             | 4.39                                | 4/01/1999 1:30             | 6.094              | 5/01/1999 6:30      | 5.724                 | 6/01/1999 11:30                    | 4.502 | 7/01/1999 16:30 | 3.994 |
| 1/01/1999 16:00     | 1.47            | 3 2/01/199    | 99 21:00             | 4.47                                | 4/01/1999 2:00             | 6.101<br>6.100     | 5/01/1999 7:00      | 5.718                 | 6/01/1999 12:00                    | 4.484 | 7/01/1999 17:00 | 3.982 |
| 1/01/1999 10:30     | 1.49            | 2/01/19       | 99 21:30             | 4,555                               | 4/01/1999 2:30             | 6 116              | 5/01/1999 8:00      | 5.7.12                | 6/01/1999 13:00                    | 4 45  | 7/01/1999 18:00 | 3 954 |
| 1/01/1999 17:30     | 1.54            | 2/01/199      | 99 22:30             | 4.654                               | 4/01/1999 3:30             | 6,122              | 5/01/1999 8:30      | 5.697                 | 6/01/1999 13:30                    | 4,433 | 7/01/1999 18:30 | 3.938 |
| 1/01/1999 18:00     | 1.55            | 5 2/01/199    | 99 23:00             | 4.703                               | 4/01/1999 4:00             | 6,128              | 5/01/1999 9:00      | 5.689                 | 6/01/1999 14:00                    | 4.417 | 7/01/1999 19:00 | 3.921 |
| 1/01/1999 18:30     | 1.55            | 2/01/199      | 99 23:30             | 4.758                               | 4/01/1999 4:30             | 6,133              | 5/01/1999 9:30      | 5.679                 | 6/01/1999 14:30                    | 4.401 | 7/01/1999 19:30 | 3.903 |
| 1/01/1999 19:00     | 1.5             | 5 3/01/11     | 999 0:00             | 4.813                               | 4/01/1999 5:00             | 6.137              | 5/01/1999 10:00     | 5.669                 | 6/01/1999 15:00                    | 4.386 | 7/01/1999 20:00 | 3.884 |
| 1/01/1999 19:30     | 1.54            | 3 3/01/19     | 999 0:30             | 4.868                               | 4/01/1999 5:30             | 6.141              | 5/01/1999 10:30     | 5.657                 | 6/01/1999 15:30                    | 4.372 | 7/01/1999 20:30 | 3.863 |
| 1/01/1999 20:00     | 1,55            | 4 3/01/19     | 999 1:00             | 4.922                               | 4/01/1999 6:00             | 6.145              | 5/01/1999 11:00     | 5.645                 | 6/01/1999 16:00                    | 4.368 | 7/01/1999 21:00 | 3.841 |
| 1/01/1999 20:30     | 1.58            | 3/01/19       | 998 1:30<br>000 2-00 | 4.975<br>5 029                      | 4/01/1999 6:30             | 6.15               | 5/01/1999 11:30     | 5.631                 | 6/01/1999 16:30<br>6/01/1999 17:00 | 4.344 | 7/01/1999 21:30 | 3.010 |
| 1/01/1999 21:30     | 1.66            | 3/01/19       | 999 2:00             | 5.028                               | 4/01/1999 7:30             | 6,156              | 5/01/1999 12:30     | 5.601                 | 6/01/1999 17:30                    | 4.318 | 7/01/1999 22:30 | 3.767 |
| 1/01/1999 22:00     | 1.71            | 3/01/19       | 999 3:00             | 5.135                               | 4/01/1999 8:00             | 6,157              | 5/01/1999 13:00     | 5.584                 | 6/01/1999 18:00                    | 4.306 | 7/01/1999 23:00 | 3.741 |
| 1/01/1999 22:30     | 1.74            | 2 3/01/11     | 999 3:30             | 5,176                               | 4/01/1999 8:30             | 6.155              | 5/01/1999 13:30     | 5.567                 | 6/01/1999 18:30                    | 4.294 | 7/01/1999 23:30 | 3.713 |
| 1/01/1999 23:00     | 1.81            | 1 3/01/19     | 999 4:00             | 5.211                               | 4/01/1999 9:00             | 6.156              | 5/01/1999 14:00     | 5.548                 | 6/01/1999 19:00                    | 4.282 | 8/01/1999 0:00  | 3.684 |
| 1/01/1999 23:30     | 1.83            | 5 3/01/19     | 999 4:30             | 5.246                               | 4/01/1999 9:30             | 6.153              | 5/01/1999 14:30     | 5.528                 | 6/01/1999 19:30                    | 4,271 | 8/01/1999 0:30  | 3.655 |
| 2/01/1999 0:00      | 1.84            | 3 3/01/19     | 999 5:00             | 5.281                               | 4/01/1999 10:00            | 6.149              | 5/01/1999 15:00     | 5.508                 | 6/01/1999 20:00                    | 4.261 | 8/01/1999 1:00  | 3.625 |
| 2/01/1999 0:30      | 1.90            | 1 3/01/19     | 999 5:30             | 5.313                               | 4/01/1999 10:30            | 6.143              | 5/01/1999 15:30     | 5.487                 | 6/01/1999 20:30                    | 4.25  | 8/01/1999 1:30  | 3.594 |
| 2/01/1999 1:00      | 2,07            | 3/01/19       | 999 6:00             | 5.346                               | 4/01/1999 11:00            | 6,130              | 5/01/1999 16:00     | 5,460                 | 6/01/1999 21:00                    | 4.24  | 8/01/1999 2:00  | 3.502 |
| 2/01/1999 2:00      | 2.01            | 2 3/01/19     | 999 7.00             | 5.42                                | 4/01/1999 12:00            | 6.12               | 5/01/1999 17:00     | 5.418                 | 6/01/1999 22:00                    | 4.222 | 8/01/1999 3:00  | 3,497 |
| 2/01/1999 2:30      | 2.22            | 3 3/01/19     | 999 7:30             | 5.455                               | 4/01/1999 12:30            | 6,11               | 5/01/1999 17:30     | 5.394                 | 6/01/1999 22:30                    | 4.213 | 8/01/1999 3:30  | 3,464 |
| 2/01/1999 3:00      | 2.28            | 3 3/01/19     | 999 8:00             | 5.489                               | 4/01/1999 13:00            | 6.098              | 5/01/1999 18:00     | 5.369                 | 6/01/1999 23:00                    | 4.204 | 8/01/1999 4:00  | 3.43  |
| 2/01/1999 3:30      | 2.32            | 5 3/01/19     | 999 8:30             | 5.523                               | 4/01/1999 13:30            | 6.084              | 5/01/1999 18:30     | 5.343                 | 6/01/1999 23:30                    | 4.196 | 8/01/1999 4:30  | 3.397 |
| 2/01/1999 4:00      | 2.35            | 3/01/19       | 999 9:00             | 5.557                               | 4/01/1999 14:00            | 6.071              | 5/01/1999 19:00     | 5.318                 | 7/01/1999 0:00                     | 4,188 | 8/01/1999 5:00  | 3.363 |
| 2/01/1999 4:30      | 2.38            | 3 3/01/19     | 999 9:30             | 5.59                                | 4/01/1999 14:30            | 6.056              | 5/01/1999 19:30     | 5.291                 | 7/01/1999 0:30                     | 4.181 | 8/01/1999 5:30  | 3.329 |
| 2/01/1999 5:00      | 2.41            | 3/01/199      | 99 10:00             | 5.623                               | 4/01/1999 15:00            | 6,041              | 5/01/1999 20:00     | 5.200                 | 7/01/1999 1:00                     | 4.1/4 | 8/01/1999 0:00  | 3.295 |
| 2/01/1999 3:30      | 2.43            | 3/01/19       | 99 11:00             | 5 689                               | 4/01/1999 16:00            | 6.020              | 5/01/1999 21:00     | 5.211                 | 7/01/1999 2:00                     | 4.16  | 8/01/1999 7:00  | 3.227 |
| 2/01/1999 6:30      | 2.55            | 5 3/01/19     | 99 11:30             | 5,721                               | 4/01/1999 16:30            | 5.993              | 5/01/1999 21:30     | 5.184                 | 7/01/1999 2:30                     | 4.153 | 8/01/1999 7:30  | 3,194 |
| 2/01/1999 7:00      | 2.61            | 3 3/01/19     | 99 12:00             | 5.754                               | 4/01/1999 17:00            | 5,978              | 5/01/1999 22:00     | 5.156                 | 7/01/1999 3:00                     | 4,147 | 8/01/1999 B:00  | 3,161 |
| 2/01/1999 7:30      | 2.67            | 4 3/01/19     | 99 12:30             | 5.786                               | 4/01/1999 17:30            | 5.962              | 5/01/1999 22:30     | 5.129                 | 7/01/1999 3:30                     | 4.141 | 8/01/1999 8:30  | 3.128 |
| 2/01/1999 8:00      | 2.73            | 7 3/01/19     | 99 13:00             | 5.818                               | 4/01/1999 18:00            | 5.946              | 5/01/1999 23:00     | 5,101                 | 7/01/1999 4:00                     | 4.136 | 8/01/1999 9:00  | 3.095 |
| 2/01/1999 8:30      | 2.80            | 1 3/01/199    | 99 13:30             | 5,847                               | 4/01/1999 18:30            | 5.93               | 5/01/1999 23:30     | 5.073                 | 7/01/1999 4:30                     | 4.13  | 8/01/1999 9:30  | 3.063 |
| 2/01/1999 9:00      | 2.66            | 3/01/199      | 99 14:00             | 5.872                               | 4/01/1999-19:00            | 5,915              | 6/01/1999 0:00      | 5.040                 | 7/01/1999 5:00                     | 4.120 | 8/01/1999 10:00 | 3.032 |
| 2/01/1999 10:00     | 3.00            | 7 3/01/19     | 99 15:00             | 5.915                               | 4/01/1999 20:00            | 5,886              | 6/01/1999 1:00      | 4,991                 | 7/01/1999 6:00                     | 4,115 | 8/01/1999 11:00 | 2.97  |
| 2/01/1999 10:30     | 3,08            | 2 3/01/19     | 99 15:30             | 5.934                               | 4/01/1999 20:30            | 5.872              | 6/01/1999 1:30      | 4.964                 | 7/01/1999 6:30                     | 4.11  | 8/01/1999 11:30 | 2.94  |
| 2/01/1999 11:00     | 3.15            | 3/01/19       | 99 16:00             | 5,953                               | 4/01/1999 21:00            | 5.859              | 6/01/1999 2:00      | 4.938                 | 7/01/1999 7:00                     | 4.106 | 8/01/1999 12:00 | 2.91  |
| 2/01/1999 11:30     | 3.23            | 8 3/01/19     | 99 16:30             | 5.97                                | 4/01/1999 21:30            | 5.846              | 6/01/1999 2:30      | 4.911                 | 7/01/1999 7:30                     | 4.101 | 8/01/1999 12:30 | 2.882 |
| 2/01/1999 12:00     | 3.32            | 1 3/01/19     | 99 17:00             | 5,985                               | 4/01/1999 22:00            | 5.834              | 6/01/1999 3:00      | 4.885                 | 7/01/1999 8:00                     | 4.097 | 8/01/1999 13:00 | 2.854 |
| 2/01/1999 12:30     | 3.40            | 7 3/01/19     | 99 17:30             | 5.998                               | 4/01/1999 22:30            | - 5.822            | 6/01/1999 3:30      | 4.859                 | 7/01/1999 8:30                     | 4.093 | 8/01/1999 13:30 | 2.826 |
| 2/01/1999 13:00     | 3.49            | 1 3/01/19     | 99 18:00             | 6,008                               | 4/01/1999 23:00            | 5.612              | 6/01/1999 4:00      | 4.834                 | 7/01/1999 9:00                     | 4.005 | 8/01/1999 14:00 | 2.0   |
| T 210 11 1999 10:00 | 1 <u>, 3,3D</u> | 1 201/103     |                      | 1.010                               | -101/1000 20:30            | 0.002              | 0.01110007.00       | 1                     |                                    | +     | B/01/1999 15:00 | 2.749 |
|                     |                 |               |                      |                                     | · · ·                      |                    |                     |                       |                                    |       | 8/01/1999 15:30 | 2.724 |
|                     | 7 10000000      |               | 0.00000000           |                                     |                            |                    |                     |                       |                                    |       | 8/01/1999 16:00 | 2.701 |
| 6                   | 6               |               |                      |                                     |                            |                    | ASIA SECTION ASIA S |                       |                                    |       | 8/01/1999 16:30 | 2.678 |
| H                   | <b>0</b>        |               |                      | /                                   |                            |                    | dus de fra          |                       |                                    |       | 8/01/1999 17:00 | 2.656 |
| u / u               | 5               |               | 14-25-22             | - / -                               |                            |                    | $\sim$              |                       |                                    |       | 8/01/1999 17:30 | 2.634 |
| )                   | 4               |               |                      | -/                                  |                            |                    | States Section      |                       |                                    |       | 8/01/1999 18:30 | 2.014 |
| - A                 | 3               |               |                      | [                                   |                            |                    | 0.03.03.63.63       | $\sim$                |                                    |       | 8/01/1999 19:00 | 2.575 |
| Ľ                   | -               |               | - /                  |                                     |                            |                    |                     |                       |                                    |       | 8/01/1999 19:30 | 2.557 |
| ter                 | 4               |               | 1                    |                                     |                            |                    |                     |                       |                                    |       | 8/01/1999 20:00 | 2.539 |
| Wa                  | 1               |               |                      | anninga Albingda<br>Managa Albingda | 100 04 07 02 00 00         |                    |                     |                       |                                    |       | 8/01/1999 20:30 | 2.522 |
|                     | 0               |               |                      |                                     |                            | 6512562221/22<br>1 |                     |                       |                                    | 1     | 8/01/1999 21:00 | 2.506 |
|                     | 66              | бç            | 66                   | 66                                  | ନ୍ତୁ କୁ                    | 66                 | 66                  | 66                    | 66 66                              |       | 8/01/1999 21:30 | 2.49  |
| 1                   | 315<br>00:      | <u>8</u>      | <u>19</u>            | ĕ, õ                                | 19 <u>(</u><br>19 <u>(</u> | 00<br>19č          | 20 <u>1</u> 90      | 19 <del>(</del><br>20 | 190 00<br>11 1                     |       | 8/01/1999 22:00 | 2.475 |
| 11.00 00 0000       | 30.             | 70            | 01<br>21             | 01/                                 | 10,000                     |                    | 5 ¥3                | 110                   | 10<br>10<br>10<br>10<br>10         |       | 8/01/1999 23:00 | 2,447 |
|                     | £               | 1/            | 2/                   | 3/                                  | 4/1                        | 6/1                | 1/2                 | 8/                    | 10 10                              |       | 8/01/1999 23:30 | 2.433 |
|                     |                 |               |                      |                                     | Ti                         | me                 |                     |                       |                                    |       | 9/01/1999 0:00  | 2.42  |
| 1                   |                 |               |                      |                                     |                            |                    |                     |                       |                                    | l     |                 |       |

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# VOL.6 FLOODING & STORMWATER QUALITY MANAGEMENT

Appendix E

# Cross Sections Existing and Proposed for Chainages 1041010 & 1041230







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100 year ARI flood level - Existing Conditions - Chainage 1041230



100 year ARI flood level - Existing Conditions - Chainage 1041010



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100 year ARI flood level - Proposed Conditions - Chainage 1041010

100 year ARI flood level - Proposed Conditions - Chainage 1041230



# **VOL.6 FLOODING & STORMWATER QUALITY MANAGEMENT**

# Appendix F MUSIC Catchments

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NOVEMBER 2005 TENNYSON RIVERSIDE DEVELOPMENT APPLICATION



# **VOL.6 FLOODING & STORMWATER QUALITY MANAGEMENT**

Appendix G

# Stormwater Management Code

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| CODE          |            |
|---------------|------------|
| MENT (        |            |
| <b>NAGE</b>   |            |
| TER MA        | int Code   |
| <b>T</b> MMAT | r Manageme |
| STOR          | Stormwate  |

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|                      |         |                                                                                                                                                                        |                                                                                                                                                                              |                                                                                                                                |                                                                                                                                                                                     |                                                                                                                                                                                                                                             | -                                                                                                                                                                              |                                                                                                                                                 |
|----------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Assessment           |         | The proposal will comply with the Subdivision and<br>Development Guidelines - Acceptable Solution A1.1<br>Refer relevant Performance Criteria below for more detail in | respect of flooding, protection of receiving waters, and use of WSUD.                                                                                                        |                                                                                                                                |                                                                                                                                                                                     |                                                                                                                                                                                                                                             |                                                                                                                                                                                |                                                                                                                                                 |
| Acceptable Solutions |         | A1.1<br>The proposal complies with the Subdivision and<br>Development Guidelines.                                                                                      | A1.2<br>A Site Based Stormwater Management Plan (SBSMP) is<br>prepared for all major and minor stormwater management<br>measures. The SBSMP must provide the following where | applicable:<br>an underground and/or open drain/overtand flow path<br>potwork maximision the use of pathral channel design and | <ul> <li>make remaining up do your of the provision of the provision for detention/retention storage basins</li> <li>an Erosion and Sediment Control (ESC) Program where</li> </ul> | <ul> <li>required by Council's Erosion and Sediment Control Standard</li> <li>retention of natural waterway corridors</li> <li>public safety factors and risk management measures</li> <li>an acceptable level of flood immunity</li> </ul> | A1.3<br>The proposal complies with any Stormwater Management<br>Plan (SMP), Local Stormwater Management Plan (LSMP) or<br>Waterways Management Plan (WMP) prepared by Council. | Note:<br>The Subdivision and Development Guidelines provide<br>guidance on the level of information required for different<br>development types |
| Performance Criteria | General | P1<br>The planning of the stormwater management system must<br>provide for the integrated management of stormwater in<br>order to:                                     | <ul> <li>Minimise flooding</li> <li>protect and enhance environmental values of receiving<br/>waters</li> </ul>                                                              | principles are of natural waterway corridors and                                                                               | <ul> <li>matural channel design principles</li> <li>maximise community benefit</li> <li>minimise public safety risk</li> </ul>                                                      |                                                                                                                                                                                                                                             |                                                                                                                                                                                |                                                                                                                                                 |

Tennsyon Riverside Development Stormwater Management Code (Brisbane River Flooding and Stormwater Quality Management)

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| Performance Criteria                                                                                                                                                                                 | Acceptable Solutions                                                                                                                                                                                                                             | Assessment                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hooding                                                                                                                                                                                              |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| P1<br>The proposed stormwater management system or site works<br>must not adversely impact on flooding or drainage of<br>properties that are upstream, downstream or adjacent to the<br>subject site | A1<br>The proposal meets the requirements of Council's<br>Subdivision and Development Guidelines and does not<br>result in an increase in flood level or flood duration on<br>unstream downstream or adjacent properties.                        | In respect of Brisbane River flooding, the development will comply with the Subdivision and Development Guidelines – Acceptable Solution A1.                                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                      | Note:<br>Compliance with this acceptable solution can be demonstrated<br>by the submission of a hydraulic and hydrology report (as part<br>of a SBSMP) identifying potential flooding impacts on<br>upstream, downstream or adjacent properties. | Volume 6 of this submission discusses issues relating to the<br>impact of the proposed development on Brisbane River flood<br>levels. Volume 6 provides analysis supporting the proposition<br>that the proposed development will have no measurable<br>impact upon flood afflux or peak flow rate due to loss of flood<br>storage, and therefore cause no adverse impact on upstream,<br>downstream, or adjacent properties. |
|                                                                                                                                                                                                      |                                                                                                                                                                                                                                                  | Volume 5 of this submission discusses issues relating to the impact of the proposed development on upstream properties. In particular Volume 5 demonstrates that there are no impacts on properties and drainage systems upstream of the railway line.                                                                                                                                                                        |
| P2<br>The drainage network must provide capacity to safely<br>convey stomwater run-off resulting from relevant design<br>storm events taking into account increased run-off from roof                | A2.1<br>The design demonstrates that a drainage network will be<br>provided that will comply with Council's Subdivision and<br>Development Guidelines                                                                                            | A drainage network compliant with Council's Subdivision & Development Guidelines is to be provided for the development. Volume 5 of this submission provides descriptions and oreliminary design details for the proposed                                                                                                                                                                                                     |
|                                                                                                                                                                                                      | Note:<br>Compliance with this acceptable solution can be demonstrated<br>by identifying the conceptual drainage requirements for the<br>proposal in a SBSMP.                                                                                     | drainage network.                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                      | A2.2<br>The design allows sufficient area to provide for a drainage<br>network that will comply with Council's Subdivision and<br>Development Guidelines.                                                                                        | •                                                                                                                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                      | Note:<br>Compliance with this acceptable solution can be demonstrated                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                      |                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |

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Tennsyon Riverside Development Stormwater Management Code (Brisbane River Flooding and Stormwater Quality Management)

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                      |
| session of the second sec |                                                      |
| d to accommodate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                      |
| Solutions<br>technic and hydro<br>identifying the area require-<br>network.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ty Management)                                       |
| Acceptable the submis<br>by the submis<br>of a SBSMP<br>the drainage r                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ng and Stormwater Quali                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | pment<br>ode (Brisbane River Floodii                 |
| Performance Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Tennsyón Riverside Develo<br>Stormwater Management C |

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| Performance Criteria                                                                                                                                                                   | Acceptable Solutions                                                                                                                              | Assessment                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P3<br>Development design must reduce property damage and,<br>where applicable, ensure public safety by ensuring that the<br>development levels are set above the relevant design flood | A3.1<br>All development is located above minimum flood immunity<br>levels in accordance with Council's Subdivision and<br>Development Guidelines. | Flooding performance criteria will comply with the Subdivision and Development Guidelines – Acceptable Solution A3.1                                                                                                                                                         |
|                                                                                                                                                                                        | Note:<br>Compliance with this acceptable solution can be demonstrated<br>by the submission of a hydraulic and hydrology report                    | Brisbane River flood levels at the site for the 100 and 20 year ARI event are 7.9m and 4.4m AHD respectively. The following floor levels have been proposed throughout the development:                                                                                      |
|                                                                                                                                                                                        | identifying tiood levels and developinerit design fevers (as part<br>of a SBSMP).                                                                 | <ul> <li>Residential first floor levels for Buildings D, E &amp; F<br/>are at 9.5, 8.4 &amp; 8.4 mAHD respectively;</li> </ul>                                                                                                                                               |
|                                                                                                                                                                                        | A3.2<br>Road access is provided in accordance with the flood immunity<br>levels identified in Council's Subdivision and Development               | <ul> <li>Kesidential first floor levels for buildings A, b &amp; C<br/>are at 9.5 mAHD;</li> <li>Residential Basement Carpark entrances 8.8mAHD</li> </ul>                                                                                                                   |
|                                                                                                                                                                                        | Guideines.                                                                                                                                        | <ul> <li>Residential surface level carparking for Buildings A,<br/>B &amp; C 9 Om AHD (min)</li> </ul>                                                                                                                                                                       |
|                                                                                                                                                                                        | Compliance with this acceptable solution can be demonstrated<br>by the submission of a hydraulic and hydrolony report                             | <ul> <li>Residential surface level carparking for Buildings</li> <li>D. E &amp; F 7.0mAHD (min)</li> </ul>                                                                                                                                                                   |
|                                                                                                                                                                                        | identifying flood levels and development design levels.                                                                                           | <ul> <li>Tennis Centre Stadium concourse and associated<br/>holitichle areas are at 0.6 mAHD.</li> </ul>                                                                                                                                                                     |
|                                                                                                                                                                                        |                                                                                                                                                   | <ul> <li>Tennis Centre Hard Courts are at 9.0 mAHD;</li> <li>Tennis Centre Clay and Grass Courts are at 5.5</li> </ul>                                                                                                                                                       |
|                                                                                                                                                                                        |                                                                                                                                                   | <ul> <li>mAHD;</li> <li>Tennis Centre carpark at 4.4mAHD (min);</li> <li>Gymnasium floor level and associated</li> </ul>                                                                                                                                                     |
|                                                                                                                                                                                        |                                                                                                                                                   | <ul> <li>carpark/service area at 9.0 mAHD; and</li> <li>Road levels vary between 14.2 and 6.5mAHD.</li> <li>Flood free access will be provided. This is detailed in Volume 5 of this submission.</li> </ul>                                                                  |
|                                                                                                                                                                                        |                                                                                                                                                   | There are no major overland flow paths from external catchments affecting the site. The existing railway line located along the southern boundary of the site serves as a barrier to overland flow. Overland flow paths are further detailed in Volume 5 of this submission. |
|                                                                                                                                                                                        |                                                                                                                                                   |                                                                                                                                                                                                                                                                              |
| Tennsvon Riverside Development                                                                                                                                                         |                                                                                                                                                   | Page4                                                                                                                                                                                                                                                                        |

Tennsyon Riverside Development Stormwater Management Code (Brisbane River Flooding and Stormwater Quality Management)

| Performance Criteria                                                                                                                                                                                    | Acceptable Solutions                                                                                                                                                                                                                                                           | Assessment                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| P4                                                                                                                                                                                                      | A4                                                                                                                                                                                                                                                                             | N/A - No major channel works are proposed as part of the |
| Any channel works that are part of the development, major drainage works or flood mitigation works must maintain and/or enhance the environmental values of the waterway corridor or drainage corridor. | Design and construction of channel works incorporate water<br>sensitive urban design and natural channel design features<br>which will comply with:<br>Council's Subdivision and Development Guidelines, and;<br>where applicable any SMP, LSMP or WMP prepared by<br>Council. | development.                                             |
|                                                                                                                                                                                                         | Note:<br>Compliance with this acceptable solution can be demonstrated<br>by the provision of conceptual details of any channel works (as<br>part of a SBSMP).                                                                                                                  |                                                          |
|                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                |                                                          |

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Tennsyon Riverside Development Stormwater Management Code (Brisbane River Flooding and Stormwater Quality Management)

Page5

| Performance Criteria                                                                                                                                                                     | Acceptable Solutions                                                                                                                                                                                                                                                                                      | Assessment                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P5<br>Erosion treatment works along waterway banks and<br>associated drainage structures must maintain or enhance<br>the environmental values of waterways.                              | <ul> <li>A5</li> <li>Design and construction of erosion treatment features incorporate natural channel design features which will comply with:</li> <li>Council's Subdivision and Development Guidelines, and</li> <li>Council's Urban Creek Erosion – Guidelines for Selecting Remedial Works</li> </ul> | Erosion treatment measures will be provided to the bank of<br>the Brisbane River where disturbances are proposed.<br>Generally the majority of the riparian vegetation is to be<br>retained. Please refer to Volume 7 of this submission for<br>further details. |
|                                                                                                                                                                                          | Note:<br>Compliance with this acceptable solution can be demonstrated<br>by the provision of conceptual details of any erosion treatment<br>works (as part of a SBSMP).                                                                                                                                   | •                                                                                                                                                                                                                                                                |
| P6<br>Bridges and culverts provided for flood immunity to minimise<br>traffic disruption must improve public safety and allow for<br>fauna movement and recreation corridors where these | A6<br>The design complies with Council's Subdivision and<br>Development Guidelines.                                                                                                                                                                                                                       | No bridge or major culvert structures are proposed as part of<br>the development. A cross road culvert of very minor nature<br>will be provided under the new road link to Ortive Street. This                                                                   |
| needs are identified.                                                                                                                                                                    | Note:<br>Compliance with this acceptable solution can be demonstrated<br>by the provision of conceptual details of any bridge or culvert<br>works (as part of a SBSMP).                                                                                                                                   | is very minor in nature and will be designed in accordance<br>with Council's Subdivision & Development Guidelines. The<br>requirement for fauna movement and recreation corridors is<br>not considered necessary in this instance.                               |
| <ul> <li>P7</li> <li>The design and construction of detention and retention storage features must:</li> <li>achieve acceptable impacts on environmental values;</li> </ul>               | A7<br>The design complies with Council's Subdivision and<br>Development Guidelines and where applicable any SMP,<br>LSMP, or WMP prepared by Council.                                                                                                                                                     | N/A – As there is minimal increase in impervious area and discharge will be directly to the Brisbane River no detention or retention storage is proposed for the development.                                                                                    |
| <ul> <li>provide for recreational use where possible,<br/>achieve acceptable risk to public safety and property.</li> </ul>                                                              | Note:<br>Compliance with this acceptable solution can be demonstrated<br>by the provision of conceptual details of any detention and<br>retention storage features (as part of a SBSMP).                                                                                                                  |                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |
|                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                  |

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Tennsyon Riverside Development Stormwater Management Code (Brisbane River Flooding and Stormwater Quality Management)

| Performance Criteria                                                             | Acceptable Solutions                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Assessment |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Water Quality and Drainage                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |
| P1<br>Water quality impacts must be minimised using best practice<br>techniques. | A1.1<br>The design provides for stormwater quality best management<br>practices that are sufficient to treat the target pollutants and<br>will comply with the Council's Subdivision and Development<br>Guidelines.<br><i>Note:</i>                                                                                                                                                                                                                                             | N/A        |
|                                                                                  | by indicating the areas that are to be set aster for water<br>quality best management practices. For most development<br>this can be achieved by determining pollutant loads using<br>hand calculations as set out in Council's Guidelines for<br>Pollutant Export Modelling in Brisbane and identifying the type<br>and size of stormwater quality best management practices<br>based on their efficiencies identified in Council's Subdivision<br>and Development Guidelines. |            |
|                                                                                  | A1.2<br>Stormwater quality best management practices are design,<br>constructed and maintained in accordance with Council's<br>Subdivision and Development Guidelines.                                                                                                                                                                                                                                                                                                          |            |
|                                                                                  | Note<br>Compliance with this acceptable solution can be demonstrated<br>by providing conceptual detail of how stormwater quality will<br>be managed (as part of a SBSMP).                                                                                                                                                                                                                                                                                                       |            |
| P2<br>Release of sediment laden stormwater is minimised.                         | A2<br>All development complies with Council's Erosion and Sediment<br>Control Standard.<br><i>Note:</i>                                                                                                                                                                                                                                                                                                                                                                         | N/A        |
|                                                                                  | Compliance with this acceptable solution can be demonstrated<br>by providing conceptual details of how the requirements of<br>Council's Erosion and Sediment Control Standard will be met<br>(conceptual SBSMP). This will generally be conditioned and<br>may require the submission of a subsequent detailed SBSMP<br>for operational works.                                                                                                                                  |            |
|                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |            |

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Tennsyon Riverside Development Stormwater Management Code (Brisbane River Flooding and Stormwater Quality Management)

| Performance Criteria                                                                                                    | Acceptable Solutions                                                                                                                                                                                                                                                 | Assessment                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High risk development                                                                                                   |                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                              |
| P3<br>Environmental values and water quality objectives of<br>receiving waters within or downstream of the proposal are | A3.1<br>Relevant water quality objectives for receiving waters are<br>identified and site specific discharge standards met.                                                                                                                                          | All P3 high risk development - water quality and drainage<br>performance criteria will comply with the Management of<br>Urban Stormwater Quality Planning Scheme Policy as                                                                                                                                   |
|                                                                                                                         | Note:<br>Compliance with this acceptable solution may be demonstrated<br>by following the process outlined in the Management of Urban                                                                                                                                | outlined in the Brisbane City Plan 2000 and the Water<br>Quality Management Guidelines 2000 as outlined in Section<br>C of the Subdivision and Development Guidelines.                                                                                                                                       |
|                                                                                                                         | Stormwater Quality Planning Scheme Policy. This can be documented in a SBSMP.                                                                                                                                                                                        | Acceptable Solution A3.1 will be satisfied.                                                                                                                                                                                                                                                                  |
|                                                                                                                         | A3.2<br>The design provides for stormwater quality best management<br>practices that are sufficient to treat the target pollutants and will<br>comply with Council's Subdivision and Development<br>Guidelines.                                                      | Environmental values and water quality objectives of the receiving waters are identified in the Guideline on Identifying and Applying Water Quality Objectives in Brisbane City.                                                                                                                             |
|                                                                                                                         | A3.3<br>Stormwater quality best management practices are designed,<br>constructed and maintained in accordance with Council's<br>Subdivision and Development Guidelines.                                                                                             | MUSIC modelling has been undertaken to determine suitable<br>stormwater management devices and to demonstrate that site<br>specific discharge standards are expected to be met. The<br>modelling was undertaken in accordance with Guidelines for<br>Pollutant Export Modelling in Brisbane Version 7 Draft. |
|                                                                                                                         | Note:<br>Compliance with this acceptable solution can be demonstrated<br>by providing conceptual detail of how stormwater quality will be<br>managed (as part of a SBSMP).                                                                                           | Results of the MUSIC modelling and conceptual details of the stormwater quality management system/devices can be found in Volume 6, Volume 3 (Urban Design), and Volume 5 (Engineering Services) of this submission.                                                                                         |
| P4<br>Release of sediment laden stomwater is minimised.                                                                 | A4<br>All development complies with Council's Erosion and<br>Sediment Control Standard.                                                                                                                                                                              | Preliminary details of proposed Erosion & Sediment Control measures are included in Volume 5 of this submission. Further details of erosion & sediment control measures will be                                                                                                                              |
|                                                                                                                         | Note:<br>Compliance with this performance criteria / acceptable solution<br>can be demonstrated by providing conceptual details of how<br>the requirements of Council's Erosion and Sediment Control<br>Standard will be met (conceptual SBSMP). This will generally | provided at the detailed design phase.<br>An Erosion Hazard Assessment has been completed for this development and is included in Volume 5 of this submission.                                                                                                                                               |
|                                                                                                                         |                                                                                                                                                                                                                                                                      | Darrol                                                                                                                                                                                                                                                                                                       |

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Tennsyon Riverside Development Stormwater Management Code (Brisbane River Plooding and Stormwater Quality Management)

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Assessment Acceptable Solutions be conditioned and may require the submission of a subsequent detailed SBSMP for operational works. Performance Criteria

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|-------------------------------------------|--------------------------------------------------------|--------------------------------------------|-------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------|-------------------------------|-----------------------------------|-----------------------------------|----------------------------------|-----------------------------------------|---------------------------------------------------|-------------------------------|--------------------------------|-------------------------------------|-----------------------------------------|-------------------------------------|-------------------------------------|-------------------------|-------------------------------------------------|
|                                           | Potential Media<br>Opportunity Timeframes              | eg. September / October<br>2011            | eg. early September 2011            |                                                          |                                                                                             |                         |                               |                                   |                                   |                                  |                                         |                                                   |                               | -                              |                                     |                                         |                                     |                                     |                         |                                                 |
| un na | Potential Media Opportunity                            | eg. Official opening media event / release | eg. Cheque presentation media event |                                                          |                                                                                             |                         |                               |                                   |                                   |                                  |                                         |                                                   |                               |                                |                                     | leg. Sod-turn media event / release     |                                     |                                     |                         |                                                 |
| od Fightback Pl<br>:ture Program          | Payments Made                                          | \$64,280.00                                | 0                                   | \$141,402.25                                             | \$77,650,000                                                                                | \$118,820,00            | \$23,994.00                   | \$7,389.10                        | Ō                                 | 0                                | \$9,170.00                              | \$44,450.00                                       | \$33,690.00                   | 0                              | 00.07 <u>6</u> ,69 <b>\$</b>        | \$239,500.00                            | \$127,770.00                        | \$72,130.00                         | 0                       |                                                 |
| ort Recreation Floo<br>Tennis Infrastruc  | Project Status                                         | Completed                                  | Not Commenced                       | Linder Construction                                      | Not Commanced                                                                               | Not Commenced           | Under Construction            | Completed                         | Not Commenced                     | Not Commenced                    | Completed                               | Under Construction                                | Under Construction            | Not Commenced                  | Completed                           | Not Commenced                           | Not Commenced                       | Completed                           | Not Commenced           |                                                 |
| Spe                                       | Signed<br>Funding<br>Agreement                         | 00 Received                                | 00 Not signed                       | 25 Received                                              | D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D<br>D | 0 Received              | 00 Received                   | 10 Received                       | B2 Not signed                     | 00 Not signed                    | 00<br>Received                          | 00 Received                                       | 00 Received                   | 00 Not signed                  | 00 Received                         | 00 Received                             | 00 Received                         | An Received                         | 00 Not signed           |                                                 |
|                                           | Total Maximum<br>Fundable<br>Amount (GST<br>Exclusive) | \$64,280.0                                 | \$54,648,0                          | 141 400                                                  | \$77.650.0                                                                                  | \$118 820 0             | \$23.994.                     | \$7 389                           | \$16.881                          | \$234.550                        | \$9.170                                 | \$44,450                                          | 333.600<br>333.690            | \$8,428.                       | ,070,                               | \$239,500                               | \$127.770                           | \$72.130                            | \$141,700               |                                                 |
|                                           | SRS Region                                             | South-West                                 | Central                             | Central                                                  | South-West                                                                                  | North Coast             | Central                       | South-West                        | South-West                        | North<br>Oueensland              | South-West                              | South-West                                        | North Coast                   | South-West                     | Central                             | South-West                              | Central                             | South-West                          | Far North<br>Oueensland | South-West                                      |
| rnment                                    | State<br>Electorate                                    | Toowoomba<br>North                         | Callide                             | Bundaberg                                                | Мапедо                                                                                      | Pine Rivers             | Gregory                       | Beaudesert                        | Ipswich West                      | Hinchinbrook                     | Warrego                                 | Condamine                                         | Nicklin                       | Nanango                        | Maryborough                         | Warrego                                 | Callide                             | Toowoomba<br>South                  | Hinchinbrook            | Southern<br>Downs                               |
| i <b>nd</b> Gover                         | LGA                                                    | Toowoomba<br>Regional<br>Council           | Banana Shire<br>Council             | Bundaberg<br>Regional<br>Council                         | Western<br>Downs<br>Region Council                                                          | Moreton Bay<br>Regional | Barcaldine<br>Regional        | Scenic Rim<br>Regional<br>Council | Somerset<br>Regional              | Hinchinbrook<br>Shire Council    | Western<br>Downs<br>Regional<br>Council | Toowoomba<br>Regionat<br>Council                  | Sunshine<br>Coast<br>Regional | Toowoomba<br>Regional          | Fraser Coast<br>Regional<br>Council | Western<br>Downs<br>Regional<br>Council | Banana Shire<br>Council             | Toowoomba<br>Regional               | Cardwell Shire          | Southern<br>Downs<br>Regional                   |
| Queensla                                  | Client                                                 | Alford Park Tennis<br>Club Inc             | Bells Creek Tennis<br>Club Inc      | Bundaberg & District<br>Junior Tennis<br>Association Inc | Chinchilla Tennis<br>Association Inc                                                        | Dayboro Tennis club     | Desert Recreation<br>Club Inc | Fassifern Tennis<br>Club          | Glamorgan Vale<br>Tennis Club Inc | Ingham Tennis<br>Association for | Jandowae Tennis<br>Club inc             | Kingsthorpe &<br>District<br>Progress Association | Nambas Tennis<br>Club Inc     | Quinatow Recreation<br>Reserve | Rossendale Tennis<br>Club inc       | Tara Tennis Çlub Inc                    | Theodore Tennis<br>Association Inc. | Toowoomba Ternis<br>Association Inc | Tully Tennis & Social   | Warwick & District<br>Ternis Association<br>Inc |
| Y                                         |                                                        | Approved<br>Proiects                       |                                     |                                                          |                                                                                             |                         |                               |                                   |                                   |                                  |                                         |                                                   |                               |                                |                                     |                                         |                                     |                                     |                         |                                                 |

# **VOL.5 ENGINEERING SERVICES**

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APPENDIX A - Stormwater Drainage Catchment Plans & Calculations

**APPENDIX B - Sewer Reticulation Plans & Calculations** 

APPENDIX C - Proposed Roadworks Layout

APPENDIX D - Services, Works & Infrastructure Code

APPENDIX E - Filling & Excavation Code

APPENDIX F - Erosion Hazard Assessment



[] : LAMBERT & RÉHBEIN

# 5.1 INTRODUCTION

The Tennyson Riverside Development involves the redevelopment of the former Tennyson Powerhouse into a multi-use development. The site is approximately 12 hectares in area with approximately 50% of that land being dedicated to a new State Tennis Centre (STC) and the remaining portion for a residential development along the riverbank of the Brisbane River.

Lambert & Rehbein have been commissioned by Mirvac Pty Ltd to undertake investigations into the proposed engineering servicing of the development and prepare an Engineering Services Report for inclusion in the Development Application submission to Brisbane City Council.

# 5.2 SITE DESCRIPTION

At the time of lodgement it is anticipated that a reserve for sport and recreational purposes will have been granted to the Department of Local Government, Planning, Sport and Recreation over the subject site.

The real property description of the reserve is:

Lot 1 on SP 164685

County Stanley

Parish Yeerongpilly

Title Reference: 49104467.

It is expected that the following easements will be registered on the reserve at the time of application:

Queensland Electricity Transmission Corporation Limited (Powerlink)

Easement B on SP 184023 benefiting Lot 2 on SP164685 for electricity and access purposes.

#### Energex Limited

- Easement A on SP184022 for electricity purposes
- Easement B on SP184023 for electricity purposes
- Easement C on SP184024 for electricity purposes

Lot 566 on SP 104107, which accommodates the Department of Primary Industries and Fisheries Animal Research Institute (DPI&F site), is included in the subject application only for the purposes of the following components of the development:

- The main access road to the proposed development is from Fairfield Road;
- The pedestrian/cycleway which connects the proposed main access road to the foreshore area of the subject site;
- The pedestrian pathway connecting the main access road to the proposed overbridge to Yeerongpilly Railway Station at the Fairfield Road frontage of the site; and
- Car parking associated with the State Tennis Centre.

Other than an amended access arrangement to the Institute, no changes to the Institute activities are proposed as part of this application.

The site is bounded by the Brisbane River to the north, Softstone Street and the eastern end of King Arthur Terrace to the west, the Corinda Yeerongpilly Rail corridor and Tennyson Memorial Drive to the south and the DPI&F site to the east.

The site upon which the State Tennis Centre and proposed residential development is to be developed currently contains the now decommissioned Tennyson Power Station and other ancillary buildings and structures.



# 5.3 STORMWATER DRAINAGE

#### 5.3.1 Existing Conditions

#### Power Station Drainage

Based on design drawings of the existing power station prepared by The Queensland Electricity Generating Board, there is extensive existing stormwater drainage servicing the subject site. For existing conditions, the subject site can be subdivided into two main stormwater catchments as shown on catchment plan B04254-SK51 (Refer to Appendix A). The southern section of the site (catchment B) including some roofwater from the main power station building discharges to an existing 1050mm diameter stormwater pipe traversing the site. The existing 1050mm diameter stormwater pipe is discussed in more detail in subsequent sections of this report. The northern section of the site (catchment A) discharges directly to the Brisbane River via a number of outlets.

From inspection of the site, survey information and design drawings of the existing power station, there are a number of existing stormwater outlets from the site discharging to the Brisbane River ranging in size from 375mm diameter to 900mm diameter.

There is also an existing rectangular open channel approximately 4 metres wide by 4 metres deep discharging to the Brisbane River. We understand that the open channel was originally used for discharge of coolant water during operation of the power station.

#### Existing Stormwater Pipe Traversing Site

Based on Bi-map and as constructed information obtained from Council, there is an existing Council stormwater pipe located between Tennyson Memorial Avenue and the Brisbane River. This pipe traverses the south eastern section of the site and the western section of the Animal Research Institute (ARI) located to the east of the subject site. The segment of the pipe traversing the subject site is 1050mm in diameter with the pipe size increasing to 1200mm, 1350mm and 1500mm within the ARI site before discharging to the Brisbane River.

Stormwater from a total catchment area of approximately 26 hectares is collected by this stormwater system. This includes stormwater from the southern section of the site, the western section of the ARI site, and an external upstream catchment to the south of the site. Catchment plan B04254-SK52 (Refer to Appendix A) shows the particular catchments discharging to this existing drainage network.

The external catchment is approximately 8.6 hectares and grades to a trapped sag located in Tennyson Memorial Avenue where it is collected and conveyed under an existing rail corridor and through the subject site. Based on limited survey information and as constructed data, the existing railway line is located at approximately RL12.0m AHD while the trapped sag in Tennyson Memorial Avenue is located at approximately RL9.0m AHD. Therefore the existing railway line detains stormwater runoff in Tennyson Memorial Avenue once the capacity of the existing stormwater pipe is reached. The Q10 runoff generated by the external catchment has been estimated as 2.69m<sup>3</sup>/s. Please refer to the calculations in Appendix A.

Internal catchment B shown on plan B04254-SK51 also contributes runoff to this system. It consists of approximately 2.4ha of impervious area and 5.0ha of pervious area. The Q10 flows generated by the two catchment are  $1.28m^3$ /s and  $1.49m^3$ /s respectively, totalling  $2.77m^3$ /s. Please refer to the calculations in Appendix A.

An existing depression located on the ARI property extends into the subject site, directing stormwater runoff towards an inlet structure located within the ARI site. This runoff is then collected and discharged to the Brisbane River through the above mentioned drainage. The contributing catchment is approximately 10.9ha and consists of open space and existing building infrastructure. The Q10 runoff generated has been calculated as  $2.6m^3/s$ . Overall the cumulative Q10 peak flow calculated for the existing drainage system is  $5.4m^3/s$ . Please refer to the calculations in Appendix A.

#### Existing Stormwater Pipe Traversing Animal Research Institute Site

An existing stormwater pipe traversing the northern portion of the ARI property collects stormwater from catchments to the north of the ARI site and to the east of Fairfield Road. Three catchments contribute to this drainage system and are shown on catchment plan B04254-53 (Refer Appendix A). Catchment A1 (4.3ha) and A2 (10.0ha) incorporate existing residential areas located to the north and east, while catchment A3 (7.1ha) is the contributing catchment from within the ARI site. Calculations for the runoff generated by each catchment are included in Appendix A. The calculated combined peak flow generated for a Q10 event is 5.6m<sup>3</sup>/s.



#### LAMBERT & REHBEIN

TENNYSON RIVERSIDE DEVELOPMENT APPLICATION

NOVEMBER 2005

#### 5.3.2 Proposed Conditions

#### General

It is proposed to discharge all stormwater for the subject site directly to the Brisbane River utilising the existing outlets located within the site. Sketch plans B04254-SK55 & SK56 (Refer Appendix A) show the proposed drainage system. Runoff from the STC, the Residential Precinct and the road network will be collected and treated prior to discharge. GHD have been commissioned to investigate adequate water quality treatment devices and procedures for each precinct of the site. Their report is included as Volume 6 of this submission.

#### External Catchment

It is proposed to divert the existing 1050mm diameter Council stormwater pipe traversing the subject site. A new 1200mm diameter stormwater pipe will be provided through the subject site to cater for the upstream catchment to the south of the site and the existing drainage from the existing Electrical Substation for the local 10 year ARI storm event. The proposed 1200mm diameter stormwater pipe will connect to the existing stormwater pipe on the northern side of the existing rail corridor. This will achieve a 'non-worsening effect' on the existing upstream catchment as required by Council. Drainage from the western portion of the STC site will also be discharged to this system following treatment as shown on plan B04254-SK55 (Refer Appendix A).

#### State Tennis Centre

Two piped connections will be provided to service the STC with treatment of runoff occurring prior to discharging into the council owned infrastructure. The western portion of the STC site will be collected and discharged to the north directly to the Brisbane River via the 1200mm diameter pipe from the external catchment. The eastern portion will be collected and discharged to the existing drainage infrastructure that traverses the ARI site. Piped drainage within the STC will be designed to cater for a 20 year ARI in accordance with the State Government design brief. Cardno Young have been commissioned to provide detailed drainage design internal to the STC precinct.

The eastern catchment is shown on the proposed development catchment plan B04254-SK54. It consists of the main stadium area, the clay/grass courts and the parking area located to the east of the site. The existing catchment from the ARI site discharging to the existing depression mentioned earlier is also included but is reduced in size due to the proposed access roadworks. The total post development Q10 flow, including the ARI site has been calculated as  $2.20m^3/s$ . This is a reduction of  $3.22m^3/s$ , or approximately 60%, in comparison with the current flows to this system of  $5.42m^3/s$ . As such, the current drainage network is sufficient to convey this portion of the site and the adjacent property adequately.

Overland flow drainage generated on the western catchment of the STC site during major storm events will be collected by the road network and discharged overland to the Brisbane River via a designated overland flow path located between buildings C & D. The eastern catchment will flow into the natural depression located on the ARI site. Overland flow drainage within the STC will be designed to cater for a 50 year ARI in accordance with the State Government design brief. Sketch plan B04254-SK55 shows the location of the overland flow paths.

#### Residential Precinct

Runoff from the carpark areas of the Residential component of the development will be collected and treated prior to connection to the Council owned infrastructure and subsequently be discharged to the Brisbane River. The runoff captured from building roof areas is considered as clean and will not be included in the treatment train. Runoff from buildings A, B, and C will be directed to an existing 450mm diameter outlet located to the north west of the site. Buildings E and F will be collected similarly and discharged to the Brisbane River via an existing 375mm diameter outlet. Building D will be serviced by a new 375mm diameter pipe and connected to the proposed 1200mm diameter piped drainage system. As mentioned earlier, runoff from each building is considered clean and will not require treatment prior to discharge.

Building E will be constructed over the existing drainage channel located to the north of the site. This drainage channel will be removed and replaced with pipework located clear of building works and of sufficient capacity to convey drainage from the developed site. It is intended to construct the new pipe outlet near the existing jetty which is to be removed so as to minimise any disturbance of the river bank.

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#### Road Network

Stormwater runoff from the road network will be collected and treated prior to discharge to the Brisbane River. The piped system will collect and convey runoff up to and including a Q10 storm event. Overland flow drainage will be conveyed along the road network to the overland flow paths identified earlier.

The access road linking the site to Fairfield Road will drain towards the central median area. The median will be used for treatment of runoff prior to collection and discharge to the Brisbane River.

The Softstone Street access will be conventional two way cross fall with drainage pits along both sides of the carriageway. This runoff will be piped through a GPT and then outlet to a landscaped treatment area located to the north of Building C. For storm events above a Q3 month event, runoff will bypass the low flow outlet and discharge directly to the Brisbane River. Sketch plan B04254-SK55 & SK56 show the proposed drainage network.

#### Existing Stormwater Pipe Traversing Animal Research Institute Site

Although the existing drainage system located to the north of the ARI site is not being utilised for the proposed development, the proposed access road will reduce the drainage catchment area A3 from 7.1ha to 3.6ha with the balance area being collected and diverted by the access road to a separate discharge point to the Brisbane River. There is a small increase in impervious area (approximately 0.3ha) contributing to this existing drainage system by way of a small catchment associated with the access road between Fairfield Road and the first roundabout. The net effect of these changes is a reduction of  $0.7m^3/s$  (5.6m<sup>3</sup>/s pre development c.f 4.9m<sup>3</sup>/s post development) in Q10 flow delivered to the existing drainage system. Please refer to Appendix A for calculations.

#### On Site Detention

Based on limited survey information and assumptions made on the proposed site layout, there is a slight increase in impervious area over the subject site and therefore an increase in stormwater discharge. However it is considered that detention is not required on site as the stormwater from the site is discharging directly to the Brisbane River and does not affect any existing downstream stormwater infrastructure. It should also be noted that during a storm event the peak discharge from the site will occur hours before the peak discharge would occur in the Brisbane River. Therefore the increase in peak discharge from the site will have no effect on flooding levels or peak discharge in the Brisbane River.

As mentioned earlier, overland flow runoff from the eastern portion of the STC site will be directed to the depression located on the ARI site. Once the capacity of the receiving pipe has been reached, water will begin to pond within the depression. It should be noted that due to the low elevation of the depression in comparison to the surrounding topography, ponding would also occur in the depression when water levels in the Brisbane River are elevated. From survey information, the base of the depression is located at approximately RL 4.0m AHD. Brisbane City Council has advised that the 20 year ARI flood level for the Brisbane River is 4.4m AHD at the site. Therefore storms greater than a 20 year ARI flood event will cause ponding in the depression from backwater effects. It has been demonstrated earlier that the proposed development will reduce the quantity of stormwater runoff directed towards the ARI site. Hence this will achieve a 'non-worsening effect' on the ARI site.

GHD have been commissioned to carry out flood modelling and flood storage analysis for the proposed development. Their report is included as Volume 6 of this submission.

# 5.4 ROADWORKS

The proposed primary access to the development is from a new signalised intersection to be constructed along Fairfield Road approximately 70m to the south of Ortive Street. A new road will be constructed from the intersection, through the Animal Research Institute (ARI) and into the subject site. A secondary access is proposed from the intersection of Softstone Street and King Arthur Terrace. The existing intersection will be upgraded to a three leg roundabout.

#### 5.4.1 Primary Access

The proposed primary access to the development is from a new signalised intersection to be constructed along Fairfield Road approximately 70m to the south of Ortive Street. Sketch plan B04254-SK58 (Refer Appendix C) shows the proposed configuration of this intersection. A new road will be constructed from the intersection, through the Animal Research Institute (ARI) and into the subject site.

This road will be provided with immunity from the Brisbane River Q50 flood level of RL 6.6. Please refer to plan B04254-SK50 in Appendix C for preliminary road grading details.



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#### 5.4.2 Secondary Access

The proposed secondary access to the site located at the intersection of Softstone Street & King Arthur Terrace will be in the form of a 3-leg roundabout. The roundabout will require suitable geometry to cater for the existing traffic which includes buses and possibly semi trailer vehicles.

This secondary access is located above the nominated Brisbane River Q100 flood level of RL 7.9 for the site and will provide flood free access for the site as required by Brisbane City Council Development Guidelines.

#### 5.4.3 Access to Ortive Street

The existing intersection of Ortive Street and Fairfield Road is to be closed to facilitate the new intersection for the primary access road. It is proposed to provide access to Ortive Street from the new roundabout on the primary access road. The sag point of this access will be located at RL 7.7 which is 200mm below the nominated Brisbane River Q100 flood level of RL 7.9 for the site. However this depth of water is considered acceptable and will still provide for flood free access to the existing residences in Ortive Street as required by Brisbane City Council Development Guidelines.

#### 5.4.4 Access to ARI Site

The existing access to the ARI Site Facilities is from Ortive Street. This access is to be relocated to access from the new roundabout on the primary access road.

#### 5.4.5 Access to Existing Substation

Vehicular access to the existing electrical substation is currently provided via a sealed road located between a point adjacent to the main site entry off Softstone Street and the western boundary of the substation along the southern boundary of the site. This access is proposed to be maintained in the proposed development.

Further details of proposed road widths and traffic control arrangements are detailed in the Traffic Investigation prepared by TTM included as Volume 4 of this submission.

### 5.5 SEWER RETICULATION

#### 5.5.1 Existing Conditions

Bi map information obtained from Council indicates that existing sewer infrastructure is located within the vicinity of the site and includes:

- An existing 225mm diameter gravity main running along the southern side of Tennyson Memorial Avenue within the road reserve and private property. This main then heads south across the Brisbane Golf Club grounds approximately 130m to the east of the subject sites eastern property boundary and eventually connects to the existing 525mm diameter Moolabin Creek Branch Sewer.
- An existing 150mm diameter gravity main running along the western side of Softstone Street.
- An existing private pump station and associated 100mm diameter rising main located in the Animal Research Institute (ARI) property to the east of the site. The existing 100mm diameter private rising main currently runs across Tennyson Memorial Avenue, through the Brisbane Golf Club grounds, along Palomar Road eventually discharging to an existing gravity sewer manhole at the intersection of Palomar Road and Moolabin Crescent. The gravity main then connects to the existing 525mm diameter Moolabin Creek Branch Sewer.

Bi map information obtained from Council indicates that there is currently no provision for the connection of sewer discharge from the site to Council's sewer reticulation system. From as constructed information of the site and site visits it is evident that the effluent was previously treated on site by means such as septic systems, chlorination and discharge to the Brisbane River.

#### 5.5.2 Proposed Development

It is proposed to provide a Council standard gravity reticulation main, pump station and rising main to service both the STC and the residential components of the site. Construction of this infrastructure will be necessary to service both components of the development.





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The B.C.C gravity system will consist of a 150mm diameter gravity sewer main which will generally be located along the new access road and partly through the STC site. Individual property connection branches will be provided from the main for each site. This general intent is detailed on sketch plan B04254 – SK57(Refer to Appendix B) with final detailed design to be completed at the operational works stage.

The gravity main will discharge into a Council pumping station located in the south east corner of the site. Permanent access to this pump station will be maintained by way of easement over the carpark area of the STC. A rising main will then transfer the discharge from the pump station under the electricity easement, railway line and Tennyson Memorial Avenue to a discharge maintenance hole located on the southern side on Tennyson Memorial Avenue. A 6m wide easement will be provided over the rising main where it traverses private property as required by Brisbane City Council Water and Sewerage Reticulation Standards.

This discharge maintenance hole will then transfer the sewer under gravity to the existing 225mm diameter system to the 525mm diameter Moolabin Creek Branch Sewer.

Preliminary investigations into the 225mm diameter main located along Tennyson Memorial Avenue and through the Golf Club show that a section (approximately 110m) of the main between MH69592 (Point B) and MH124003 (Point C) consists of a 150mm diameter pipe. This section is located approximately 300m upstream of the 525mm diameter Moolabin Creek Branch Sewer. MH69592 is a junction maintenance hole that receives discharge from the Light Industrial and Brisbane Golf Club catchment areas and a large residential catchment located to east of Fairfield Road. Sketch Plan B04254 – SK57 shows the contributing catchments used in the calculations and the section of 150mm main in question.

Preliminary calculations have been undertaken to determine approximate catchments and subsequent flows discharging into this system. Please refer to Appendix B for the calculations. The results indicate that the 225mm system upstream of the junction maintenance hole MH69592 has sufficient capacity to convey flows generated by the developed subject site in addition to the current flows utilising this system (note that any future development of the Animal Research Institute site has not been included). The remaining downstream portion of the 225mm diameter main and the section of 150mm diameter main do not have sufficient capacity.

As private dwellings are connected to the existing main, it is not possible to replace the existing 150mm/225mm pipes with 300mm diameter pipe work without constructing maintenance holes for each existing property connection as required by Brisbane City Council Water and Sewerage Reticulation Standards. Therefore the proposed solution is to construct an additional 300mm diameter sewer to the 525 Moolabin Creek Branch Sewer as shown on Sketch Plan B04254 – SK57. This system could be located within the roadway of Allawah St and Moolabin Crescent and discharge into MH120795. We note that Moolabin Crescent is an unformed road reserve and is currently part of a larger surrounding parkland area. There appear to be no major obstructions within the proposed new sewer alignment corridor.

It is proposed to credit these augmentation works to the existing external sewer mains against the sewer headworks contributions for the development.

# 5.6 WATER RETICULATION

#### 5.6.1 Existing Conditions

Bi – map information obtained from Council indicates that there is extensive water supply infrastructure surrounding the site. This includes:

- An existing 300mm diameter cast iron main running along the northern side of the Tennyson Memorial Avenue road reserve that terminates at the intersection of Softstone and Curzon Streets.
- A 225mm diameter cast iron main branches off at this location and runs along Softstone Street further servicing 150mm and 100mm mains in surrounding streets.
- An existing 300mm diameter cast iron main located under the roadway in Fairfield Road.
- Two existing water service connections provided to the site, one 150mm and one 100mm in size, from the existing mains in Softstone Street.



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#### 5.6.2 Proposed Development

It is proposed to provide a new Council water main along the length of the new access road. This will link the existing water mains located in Fairfield Road and Softstone Street. Connections for the STC and residential components will be provided from this new main as required. It is anticipated that the size of this main will be a 150 or 200mm diameter pipe subject to further detailed deisgn. It is anticipated that no augmentation of existing external mains will be necessary.

### 5.7 CONCLUSION

Lambert & Rehbein have been commissioned by Mirvac Pty Ltd to undertake investigations into the proposed engineering servicing of the Tennyson Riverside Development and to prepare an Engineering Services Report for inclusion in the Development Application submission to Brisbane City Council.

From the investigations undertaken it is concluded that services are available or can be provided to adequately cater for the requirements of the proposed development.



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#### APPENDIX A

#### Stormwater Drainage Catchment Plans & Calculations



#### PRE-DEVELOPMENT EX Ø1050 / Ø1200

#### EXT. U/S CATCHMENT

A = 8.2ha tc = 17 minutes

 C
 I
 Q

 Q<sub>10</sub>
 0.88
 134
 2.69m³/s

 Q<sub>20</sub>
 0.93
 156
 3.28m³/s

#### SITE – EXISTING INTERNAL CATCHMENTS

A = 2.43ha tc = 5minutes

Area B (Imp)

|                 | C    | le l | Q                     |
|-----------------|------|------------------------------------------|-----------------------|
| Q <sub>10</sub> | 0.88 | 215                                      | 1.28m <sup>3</sup> /s |
| Q <sub>20</sub> | 0.93 | 248                                      | 1.55m <sup>3</sup> /s |

A = 5.04ha tc = 15minutes

Area B (Perv)

|                 | С    | I   | Q        |
|-----------------|------|-----|----------|
| Q <sub>10</sub> | 0.75 | 142 | 1.49m³/s |
| Q <sub>20</sub> | 0.79 | 164 | 1.81m³/s |

#### **ARI EXISTING**

(to 1050 ∅)

A = 10.9ha tc = 25minutes Assume  $\frac{1}{3}$  developed - C<sub>10</sub> = 0.88  $\frac{2}{3}$  open Space - C<sub>10</sub> = 0.7

 $C_{10} \text{ comb.} = \frac{0.88}{3} + \frac{0.7}{3} \text{x}^2 = 0.76$ 

|                 | C    |     | Q        |
|-----------------|------|-----|----------|
| Q <sub>10</sub> | 0.76 | 113 | 2.60m³/s |
| Q <sub>20</sub> | 0.80 | 131 | 3.17m³/s |

#### TOTAL PRE DEVELOPMENT FLOWS

<u>1050  $\varnothing$ </u> Q<sub>10</sub> = (Ext. Catch) + (Site Internal [imp]) + (Site Internal [perv]) + ARI

| Area | tc | Q <sub>10</sub> | Q <sub>20</sub> |
|------|----|-----------------|-----------------|
| Ex   | 17 | 2,69            | 3.28            |
| SI   | 5  | 1.28            | 1.55            |
| SP   | 15 | 1.49            | 1.81            |
| ARI  | 25 | 2.60            | 3.17            |

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| tc = 5  | $Q_{10} = (5 \times 2.69) + 1.28 + (5 \times 1.49) + (5 \times 2.60)$<br>17 15 25                                       | = 3.09m³/s |
|---------|-------------------------------------------------------------------------------------------------------------------------|------------|
| tc = 10 | $Q_{10} = (\underbrace{10}_{17} \times 2.69) + (\underbrace{10}_{15} \times 1.49) + (\underbrace{10}_{25} \times 2.60)$ | = 3.62m³/s |
| tc = 15 | $Q_{10} = (\underline{15} \times 2.69) + 1.49 + (\underline{15} \times 2.60)$<br>17 25                                  | = 5.42m³/s |
| tc = 17 | $Q_{10} = 2.69 + (\frac{17}{25} \times 2.60)$                                                                           | = 4.46m³/s |

#### $Max Q_{10} = 5.42m^3/s$

#### <u>Q<sub>20</sub></u>

| tc = 5                           | $Q_{20} = (5 \times 3.28) + 1.55 + (5 \times 1.81) + (5 \times 3.17)$<br>17 15 25                                       | = 3.75m³/s              |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------|
| tc = 10                          | $Q_{20} = (\underbrace{10}_{17} \times 3.28) + (\underbrace{10}_{15} \times 1.81) + (\underbrace{10}_{25} \times 3.17)$ | = 4.41m³/s              |
| tc = 15                          | $Q_{20} = (\underline{15} \times 3.28) + 1.81 + (\underline{15} \times 3.17)$<br>17 25                                  | = 6.61m³/s              |
| tc = 17                          | $Q_{20} = 3.28 + (\frac{17}{25} \times 3.17)$                                                                           | = 5.44m <sup>3</sup> /s |
| Max Q <sub>20</sub> = <u>6.6</u> | <u>1m<sup>3</sup>/s</u>                                                                                                 |                         |

#### POST DEVELOPMENT Ex Ø1050 / Ø1200

#### EXT. U/S CATCHMENT

Will bypass through new network -Q = 0

#### SITE – PROPOSED INTERNAL CATCHMENT

| A = | 2.15ha |
|-----|--------|
|-----|--------|

( ;

#### tc = 5 minutes

| Impervious      |      |     |          |
|-----------------|------|-----|----------|
|                 | С    | ł   | Q        |
| Q <sub>10</sub> | 0.9  | 215 | 1.16m³/s |
| Q <sub>20</sub> | 0.95 | 248 | 1.41m³/s |

# A = 1.31ha tc = 10 minutes

|                 | C    | 1   | Q        |  |  |
|-----------------|------|-----|----------|--|--|
| Q <sub>10</sub> | 0.75 | 167 | 0.46m³/s |  |  |
| Q <sub>20</sub> | 0.79 | 192 | 0.55m³/s |  |  |

#### ARI

A = 9.23ha tc = 25 minutes

|                 | С    |     | 0                     |
|-----------------|------|-----|-----------------------|
| Q <sub>10</sub> | 0.76 | 113 | 2.20m <sup>3</sup> /s |
| Q <sub>20</sub> | 0.80 | 131 | 2.69m³/s              |

#### TOTAL POST DEVELOPMENT FLOWS

Q = (Site Internal [SI] {imp}) + (Site Internal [SP] {Perv}) + ARI

| Area | tc | Q <sub>10</sub> | Q <sub>20</sub> |
|------|----|-----------------|-----------------|
| SI   | 5  | 1.16            | 1.41            |
| SP   | 10 | 0.46            | 0.55            |
| ARI  | 25 | 2.20            | 2.69            |

 $Q_{10}$ 

| tc = 5  | $Q_{10} = 1.16 + (5 \times 0.46) + (5 \times 2.20)$<br>10 25 | = 1.83m³/s |
|---------|--------------------------------------------------------------|------------|
| tc = 10 | $Q_{10} = 0.46 + (10 \times 2.20)$                           | = 1.34m³/s |
| tc = 25 | Q <sub>10</sub>                                              | = 2.20m³/s |
|         | •                                                            |            |

 $Max Q_{10} = 2.20m^3/s$ 

 $\mathbf{Q}_{20}$ 

tc = 5  $Q_{20} = 1.41 + (5 \times 0.55) + (5 \times 2.69) = 2.23 m^3/s$ tc = 10  $Q_{20} = 0.55 + (10 \times 2.69) = 1.62 m^3/s$ 

| tc = 25 | $Q_{20}$ |  | = 2.69m³/s |
|---------|----------|--|------------|
|---------|----------|--|------------|

 $Max Q_{10} = 2.69 m^3/s$ 

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#### PRE-DEVELOPMENT DRAINAGE THROUGH ARI SITE FROM FAIRFIELD ROAD

#### ARI Existing

<u>د</u>

| $A_1 = 4.5 \text{ na}$ $C_{10} = 0.79$ IC = 10 min    | utes I = 16/mm/hr |  |  |  |
|-------------------------------------------------------|-------------------|--|--|--|
| $\rightarrow$ Q <sub>10</sub> = 1.58m <sup>3</sup> /s |                   |  |  |  |
| $A_2 = 10.0$ ha $C_{10} = 0.79$ tc = 13 min           | utes I = 150mm/hr |  |  |  |
| $\rightarrow$ Q <sub>10</sub> = 3.29m <sup>3</sup> /s |                   |  |  |  |
| $A_3 = 7.11$ ha $C_{10} = 0.80$ tc = 15 min           | utes I = 142mm/hr |  |  |  |
| $\rightarrow$ Q <sub>10</sub> = 2.24m <sup>3</sup> /s |                   |  |  |  |

#### @ Point A

| tc = 5  | $Q_{10} = (\underbrace{5}_{10} \times 1.58) + (\underbrace{5}_{10} \times 3.29) + (\underbrace{5}_{10} \times 2.24)$<br>10<br>13<br>15 | = 2.80m³/s              |
|---------|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| tc = 10 | $Q_{10} = 1.58 + (10 \times 3.29) + (10 \times 2.24)$<br>13 15                                                                         | = 5.60m³/s              |
| tc = 13 | $Q_{10} = 3.29 + (\frac{13}{15} \times 2.24)$                                                                                          | = 5.23m³/s              |
| tc = 15 | Q <sub>10</sub> =                                                                                                                      | = 2.24m <sup>3</sup> /s |

Max  $Q_{10} = 5.60 \text{ m}^3/\text{s}$ 



#### POST DEVELOPMENT DRAINAGE THROUGH ARI SITE FROM FAIRFIELD ROAD

#### ARI

(Fairfield Road)

Catchment A3 reduced by 3.48ha (Cut off by new access)

- Post Dev A3 = 3.63ha l = 142mm/hr ∴ Q<sub>10</sub> = 1.15m³/s

 $A_1 \& A_2$  Flows same as Pre-Dev ie.  $Q_{10}A_1 = 1.58 \text{ m}^3/\text{s}$ ;  $Q_{10}A_2 = 3.29 \text{ m}^3/\text{s}$ 

| New Road | A = 0.3ha                               | $C_{10} = 0.9$ | tc = 5 minutes | l = 215mm/hr |
|----------|-----------------------------------------|----------------|----------------|--------------|
| (A4)     |                                         |                |                |              |
|          | Q <sub>10</sub> = 0.16m <sup>3</sup> /s |                |                |              |

@ Point A

| tc = 5  | $Q_{10} = (\underbrace{5}_{10} \times 1.58) + (\underbrace{5}_{10} \times 3.29) + (\underbrace{5}_{10} \times 1.15) + 0.16$<br>10<br>13<br>15 | = 2.60m³/s |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------|
| tc = 10 | $Q_{10} = 1.58 + (10 \times 3.29) + (10 \times 1.15)$<br>13 15                                                                                | = 4.88m³/s |
| tc = 13 | $Q_{10} = 3.29 + (\underline{13} \times 1.15)$<br>15                                                                                          | = 4.29m³/s |

Max  $Q_{10} = \frac{4.88 m^3/s}{10}$ 












# **VOL.5 ENGINEERING SERVICES**

**APPENDIX B** Sewer Reticulation Plans & Calculations



C

TENNYSON RIVERSIDE DEVELOPMENT APPLICATION

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# SEWER REVIEW CALCULATIONS

# EXISTING SEWER LOADS

Approx. 170 Res. A Lots Contribute to Point A Of these ≈ 130 Res A Lots are Upstream of Ø225 at Point B ie. Serviced by Ø150 prior to discharge into Ø225 at Point C (MH 69592)

from Water Resources Guidelines Point A- 3.1EP / 3 bedroom house - 3.1 x 170 = <u>527EP</u>

Point B - 3.1 x 130 = 403EP

Estimated Approx. 14ha of Light Industry / Commercial

BCC Water & Sewerage Guidelines - 20EP/ha Light Industrial - 14 x 20 = 280EP

TOTAL EXISTING EP AT POINT A = 527 + 280 = 807EP TOTAL EXISTING EP AT POINT B = 403 + 280 = 683EP

# PROPOSED DEVELOPMENT

| Units:- | 140 x 2 B/Room – 2.4EP/unit (Water Resources Guidelines) | = 336EP |
|---------|----------------------------------------------------------|---------|
|         | 205 x 3 B/Room – 3.1EP/unit (Water Resources Guidelines) | = 636EP |
|         | 40 x 4 B/Room – Assume 3.8EP/unit                        | = 152EP |

TOTAL NO. OF UNITS = 385

TOTAL RESIDENTIAL EP = 336 + 636 + 152 = 1124EP

## SPECIAL USE AREA (STC)

From BCC Water & Sewerage Guidelines (Sport & Rec.) - 10EP/ha TOTAL EP for Site Approx. 4.2ha = 42EP

TOTAL ADDITIONAL EP FOR DEVELOPED SITE = 1166EP

## TOTAL FLOWS = EXISTING + DEVELOPED

TOTAL EP to 150Ø down stream of Point B = 683 + 1166 = **1849EP** The max allowable flow for 150Ø in accordance with BCC Water & Sewerage Guidelines = <u>300EP</u>

TOTAL EP to 150Ø up stream of Point B = 280 + 1166 = **1446EP** TOTAL EP to 150Ø down stream of Point C = 807 + 1166 = **1973EP** The max allowable flow for 225Ø in accordance with BCC Water & Sewerage Guidelines = 1867EP



# Therefore

-

- existing 150Ø pipe down stream of point B is under sized for developed site
- existing 225Ø pipe up stream of point B is satisfactory for developed site existing 225Ø pipe down stream of point C is under sized for developed site -
- -



# **VOL.5 ENGINEERING SERVICES**

APPENDIX C Proposed Roadworks Layout



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# **VOL.5 ENGINEERING SERVICES**

APPENDIX D Services, Works & Infrastructure Code



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SERVICES, WORKS AND INFRASTRUCTURE CODE Performance Criteria and Acceptable Solution

| COUNCIL USE          |                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                         |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COMMENTS             | Connections to existing sewerage<br>reticulation, water reticulation,<br>stormwater drainage, electricity and<br>telecommunication services are<br>available. Please refer to Engineering<br>Services Report (Volume 5 of this<br>submission) prepared by Lambert &<br>Rehbein. | New kerb and channel and concrete<br>pathways are to be provided to the<br>new roadway servicing the site. These<br>will be linked with existing<br>infrastructure in Softstone Street and<br>Fairfield Road.<br>A new bus bay and associated path<br>will be provided in Softstone Street.                             |
| SOLUTIONS            | >                                                                                                                                                                                                                                                                               | × .                                                                                                                                                                                                                                                                                                                     |
| ACCEPTABLE SOLUTIONS | <ul> <li>A1 The land is provided with:</li> <li>reticulated water, sewerage, drainage, electricity and telecommunication services.</li> <li>gas service where reasonable.</li> </ul>                                                                                            | <ul> <li>A2 The following are provided or already exist at the frontage of the site, to the standard that would have applied if the development formed part of a new subdivision:</li> <li>concrete kerb and channel.</li> <li>forming and grading to walkways.</li> <li>crossing over channel and walkways.</li> </ul> |
| PERFORMANCE CRITERIA | Land used for urban purposes<br>must be serviced adequately with<br>regard to water, waste disposal,<br>drainage, telecommunication and<br>energy.                                                                                                                              | Frontage to the site must provide<br>the following to an appropriate<br>standard:                                                                                                                                                                                                                                       |
|                      | à                                                                                                                                                                                                                                                                               | P2                                                                                                                                                                                                                                                                                                                      |

Solution: = Acceptable Solution
 A/S = Alternative Solution

N/A = Not applicable to this proposal

Ref: B04254CR004

 $\left( \right)$ LAMBERT & REHBEIN Seigineers • managers • scientists

| ·                    | SERVICES, WORKS AND INFRASTRUC<br>Performance Criteria and Acceptable | CTURE COD | Ш                                      |      |
|----------------------|-----------------------------------------------------------------------|-----------|----------------------------------------|------|
| E CRITERIA           | ACCEPTABLE SOLUTIONS S                                                | SOLUTIONS | COMMENTS                               | COUN |
| sssible high quality | <ul> <li>a constructed bikeway.</li> </ul>                            |           | Existing services will be relocated as |      |
|                      | <ul> <li>a constructed walkway, minimum</li> </ul>                    |           | required to accommodate these          |      |
| accessible, high     | 1.2m wide and full width from the                                     |           | works.                                 |      |
| public walkway       | property line to the kerb in                                          |           |                                        |      |
| e and integrated     | multipurpose centres.                                                 |           | Please refer to Engineering Services   |      |
| he surrounding       | <ul> <li>reconstruction of any damaged</li> </ul>                     |           | Report (Volume 5 of this submission)   |      |

| COUNCIL USE          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COMMENTS             | Existing services will be relocated as required to accommodate these works.<br>Please refer to Engineering Services Report (Volume 5 of this submission) prepared by Lambert & Rehbein.                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                        |
| SOLUTIONS            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                        |
| ACCEPTABLE SOLUTIONS | <ul> <li>a constructed bikeway.</li> <li>a constructed bikeway, minimum</li> <li>1.2m wide and full width from the property line to the kerb in multipurpose centres.</li> <li>reconstruction of any damaged public walkway in concrete.</li> <li>construction of the carriageway.</li> <li>payment of costs for required alterations to public utility mains, services or installations.</li> <li>construction of and required alterations to public utility mains, services or installation.</li> <li>drainage works.</li> </ul> |                                                                                                                                                                        |
| PERFORMANCE CRITERIA | <ul> <li>safe, accessible high quality bikeways.</li> <li>a safe, accessible, high quality public walkway compatible and integrated with the surrounding environment.</li> <li>provision of and alteration to required public utilities.</li> </ul>                                                                                                                                                                                                                                                                                | <ul> <li>effective drainage.</li> <li>appropriate conduits to<br/>facilitate the provision of<br/>required street lighting<br/>systems and traffic signals.</li> </ul> |

Ref: B04254CR004

# **VOL.5 ENGINEERING SERVICES**

APPENDIX E Filling & Excavation Code



 $\bigcirc$ LAMBERT & REHBEIN Sensineers • managers • scientists FILLING AND EXCAVATION CODE Performance Criteria and Acceptable Solution

|    | PERFORMANCE CRITERIA                                                                               |      | ACCEPTABLE SOLUTIONS                                                                                              | SOLUTIONS               | COMMENTS                                                                                                                                                | COUNCIL USE |
|----|----------------------------------------------------------------------------------------------------|------|-------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 54 | Filling or excavation must not<br>impact adversely on visual<br>amenity or the stability of land.  | A1.1 | A retaining wall is set back at least half<br>the height of the wall from any boundary<br>of the site.            | A/S                     | Retaining walls higher than 1.5m will<br>be incorporated into the State Tennis<br>Centre. The majority of these walls are                               |             |
|    | Note:<br>Retaining wall construction will<br>also need to comply with Section                      | A1.2 | Retaining walls over 1.5m are stepped<br>0.75m for every 1.5m in height, terraced<br>and landscaped.              | > >                     | boundaries. Where they are located<br>on external boundaries it is in cut and<br>adjacent to the rail corridor. Therefore                               |             |
|    | 4 of Schedule 5 of the Standard<br>Building Regulations 1993 and<br>embankment gradients will need | A1.3 | Retaining wall finishes that present to<br>adjoining land are of a high quality<br>appearance and compatible with |                         | there is little impact on adjoining properties.                                                                                                         |             |
|    | to comply with Section 5 of<br>Schedule 5 of the Standard<br>Building Regulations 1993.            |      | surrounding development.                                                                                          | Ar a - ar a fait summer | Retaining walls will be incorporated<br>into the residential component of the<br>development. These will generally be                                   |             |
|    | )                                                                                                  |      |                                                                                                                   |                         | less than 1.5m in height and are part<br>of a detailed landscape design that<br>will soften the visual impact of these                                  |             |
|    |                                                                                                    |      |                                                                                                                   |                         | wails. Further details will be provided<br>as part of the landscape design.                                                                             |             |
| P2 | Filling or excavation must not<br>result in any contamination of<br>land or waters.                | A2.1 | For filling, only clean fill is used.                                                                             |                         | This will be noted in our design documentation.                                                                                                         |             |
|    |                                                                                                    | A2.2 | For excavation, no contaminated material is excavated, or acid sulphate soil or contaminant disturbed.            | AS                      | Contaminated soils will be managed in<br>accordance with the Site Remediation<br>Plan. Acid sulphate soil will be<br>managed in accordance with the ASS |             |
|    | ·                                                                                                  | A2.3 | For excavation or filling acid sulphate<br>soils are not affected by changes to the<br>site's hydrology.          | >                       | Management Flam<br>Acid sulphate soil will be managed in<br>accordance with the ASS<br>Management Plan                                                  |             |
|    |                                                                                                    | A2.4 | The site is not on the contaminated land register.                                                                | AS                      | The site is to be removed from the contaminated land register by way of a Site Remediation Plan.                                                        |             |
|    |                                                                                                    |      |                                                                                                                   |                         |                                                                                                                                                         |             |

Solution: = Acceptable Solution
 PC = Satisfies Performance Criteria Directly
A/S = Alternative Solution

N/A = Not applicable to this proposal

Ref: B04254CR003

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Performance Criteria and Acceptable Solution FILLING AND EXCAVATION CODE

|                         |                                             |      |                                                                                                                                   |                                          |                                                                                                        | COUNCIL USE |
|-------------------------|---------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------|
| PERFORM                 | ANCE CRITERIA                               |      | ACCEPTABLE SOLUTIONS                                                                                                              | SOLUTIONS                                | COMMENTS                                                                                               | ONLY        |
| Filling or<br>cause any | excavation must not increase in flooding or | A3.1 | No filling or excavation is located.                                                                                              | A/S                                      | Filling is proposed within a wetland<br>area located on the ARI site. However                          |             |
| drainage p              | problems.                                   |      | <ul> <li>In any waterway corridor as shown<br/>on the Planning Scheme Maps and</li> </ul>                                         | en e | the significance of this wetland is<br>further discussed in the Ecological                             |             |
|                         |                                             |      | <ul> <li>defined in the definitions.</li> <li>Within the waterway corridor or, if</li> </ul>                                      | diA                                      | Assessment Keport (Volume / of this submission)                                                        |             |
|                         |                                             |      | there is no waterway corridor, within<br>the 100 year ARI extent                                                                  |                                          |                                                                                                        |             |
|                         |                                             |      | <ul> <li>In any wetland as shown on the<br/>Planning Scheme Maps and defined<br/>in the definitions.</li> </ul>                   |                                          |                                                                                                        |             |
|                         |                                             | A3.2 | Filling or excavation does not cause                                                                                              | >                                        | Please refer to the Engineering                                                                        |             |
|                         | <b></b>                                     |      | ponding on the site or on nearby land.                                                                                            | <b>2</b>                                 | Services Report (Volume 5 of this submission) prepared by Lambert & Rehbein.                           |             |
|                         |                                             | A3.3 | Any increase in flooding will not adversely affect the safety or use of any                                                       | >                                        | There is no increase in flooding.                                                                      |             |
|                         |                                             |      | adjoining site and land upstream and downstream.                                                                                  |                                          |                                                                                                        |             |
|                         |                                             | A3.4 | Any changes to run-off characteristics<br>resulting from filling for storm events, up<br>to at least the 2 vear ARI design storm. | >                                        |                                                                                                        |             |
|                         |                                             |      | are minimised in an ecologically sensitive manner.                                                                                |                                          |                                                                                                        |             |
|                         |                                             | A3.5 | Filling or excavation does not adversely affect the flow of water in any overland                                                 | >                                        | Please refer to the Flooding &<br>Stormwater Quality Management<br>Domort Molume & of this submission) |             |
|                         |                                             |      | HOW PART.                                                                                                                         |                                          |                                                                                                        |             |

Solution: = Acceptable Solution
 PC = Satisfies Performance Criteria Directly
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N/A = Not applicable to this proposal

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FILLING AND EXCAVATION CODE Performance Criteria and Acceptable Solution

|                      | <b></b>                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                             |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COUNCIL USE          |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                             |
| COMMENTS             |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Appropriate Erosion and Sediment<br>Control measures will be implemented<br>around earthworks during<br>construction.                                                                                                                                       |
| SOLUTIONS            |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                             |
| ACCEPTABLE SOLUTIONS | Note:<br>Compliance with Acceptable Solutions<br>A3.1 to A3.5 can be demonstrated<br>through the submission of a report<br>detailing: | <ul> <li>Calculations for flood modelling of<br/>the riparian zone, including ground<br/>cover, understorey and canopy<br/>vegetation.</li> <li>Management strategies to prevent<br/>adverse flooding and minimise<br/>changes to run-off characteristics<br/>consistent with Council's current<br/>Subdivision and Development<br/>Guidelines 1997 and Environmental<br/>Best Management Practice for<br/>Waterwars and Wetlands 1996.</li> </ul> | A4 Filling or excavation complies with the<br>Stormwater Management Code and<br>Council's Erosion and Sediment<br>Control Standard.                                                                                                                         |
| PERFORMANCE CRITERIA |                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Filling or excavation must not<br>adversely affect environmental<br>values in receiving waterways or<br>wetlands.<br>Note:<br>For guidance on stormwater<br>management refer to the<br>Management of Urban<br>Stormwater Quality Planning<br>Scheme Policy. |

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A PC = Satisfies Performance Criteria Directly

A/S = Alternative Solution

N/A = Not applicable to this proposal

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FILLING AND EXCAVATION CODE Performance Criteria and Acceptable Solution

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|         | COUNCIL USE          |                                                                                                             |                                                                                       |                                                                                                                   |                                                                                                                          |                                                                                                                                                                             |                                             |                                                                      |                                                                                                                             |                                                                                                                                                                                                          |                                                                          |
|---------|----------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
|         | COMMENTS             | Standard industry measures are to be implemented.                                                           |                                                                                       |                                                                                                                   | Filling and excavation operations will<br>exceed 4 weeks in total however the<br>works will he started which will assist | to minimise this duration. Access will<br>also be via major roadways and will be<br>designed to minimise the affect on the<br>amenity of any adjoining residential<br>uses. | Access will be provided from major          | roadways with the proposed routes<br>designed to minimise impacts on | existing residential uses in the vicinity<br>of the site. Further details are to be<br>provided at operational works stage. | Filling and excavation operations will<br>exceed 4 weeks in total however the<br>works will be staged which will assist<br>to minimise this duration. Access will<br>also be via maior roadways and will | minimise the affect on the amenity of<br>any adjoining residential uses. |
|         | SOLUTIONS            |                                                                                                             | >                                                                                     | >                                                                                                                 | A/S                                                                                                                      | *                                                                                                                                                                           | >                                           |                                                                      | AS                                                                                                                          | 8<br>A                                                                                                                                                                                                   |                                                                          |
| <b></b> | ACCEPTABLE SOLUTIONS | No dust emissions extend beyond the boundary of the site.                                                   | No other air emissions, including odours, are detectable at the boundary of the site. | A management plan for control of dust<br>and air emissions is prepared and<br>implemented.                        | The total duration of filling or excavation operations does not exceed four weeks.                                       | Filling or excavation operations occur<br>only between 7am to 6pm Monday to<br>Saturday.                                                                                    | Haul routes used for transportation of fill | to or from the site only use Major Roads.                            | Truck movement generated by filling or<br>excavation do not exceed 20 truck<br>movements per day.                           | Truck movements generated by filling or<br>excavation do not occur for longer than 4<br>weeks.                                                                                                           |                                                                          |
|         |                      | A5.1                                                                                                        | A5.2                                                                                  | A5.3                                                                                                              | A6.1                                                                                                                     | A6.2                                                                                                                                                                        | A7.1                                        |                                                                      | A7.2                                                                                                                        | A7.3                                                                                                                                                                                                     |                                                                          |
| -       | PERFORMANCE CRITERIA | Emissions of air pollutants from<br>filling or excavation, particularly<br>dust must not have a significant | environmental harm or nuisance<br>impacts.                                            | Note:<br>For guidance on the assessment<br>of air quality, refer to the Air<br>Quality Planning Scheme<br>Policy. | Emissions of noise must not<br>cause significant environmental                                                           | Note:<br>For guidance on the assessment<br>of air quality, refer to the Air<br>Quality Planning Scheme Policy.                                                              | Traffic generated by filling or             | excavation must not impact on<br>the amenity of the surrounding      | area.                                                                                                                       |                                                                                                                                                                                                          |                                                                          |
|         |                      | P5                                                                                                          |                                                                                       |                                                                                                                   | P6                                                                                                                       |                                                                                                                                                                             | P7                                          |                                                                      |                                                                                                                             |                                                                                                                                                                                                          |                                                                          |

Solution: < = Acceptable Solution < PC = Satisfies Performance Criteria Directly A/S = Alternative Solution

N/A = Not applicable to this proposal

Tennyson Riverside Development

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Ref: B04254CR003

# **VOL.5 ENGINEERING SERVICES**

# APPENDIX F Erosion Hazard Assessment

LAMBERT & REHBEIN

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NOVEMBER 2005 TENNYSON RIVERSIDE DEVELOPMENT APPLICATION

# Erosion Hazard Assessment

-To periodiging with any development or operational works which design distribution requiring attractment of th -context requiring water greater measurement with respect to marking log, coll proport and the control of and met

#### What is an Erosion Hazard Assessment?

Generally, the most significant soil erosion and sediment pollution 'risk' applies during the construction stage of a development. In some cases however, the development may present a long term risk after completion.

The Erosion Hazard Assessment determines whether that risk is 'low' or 'high'. The assessment uses a point scoring system based on Council's requirements for stormwater management and Erosion and Sediment Control (ESC).

#### Explaining the Erosion Hazard Assessment form

Complete the table on the back of this form before you complete the certification below.

- · Site condition lists varying erosion-related factors to be assessed.
- <u>Points</u> a range of values representing the significance of the erosion-related factors for each site condition. Note that the higher the points value, the more significant its potential erosion and/or pollution hazard.
- <u>Score</u> your assessment. Allocate the appropriate point score for each site condition which best matches your development
  proposal. (Example: for the first site condition, you would write score 2 points if the average slope of disturbance area was
  6%.)
- <u>Trigger score</u> some site conditions have been allocated a trigger score. If your score for any of these site conditions is equal to or greater than the trigger score, the development proposal will usually be considered 'high risk'.
- <u>Certification</u> only a person with suitable qualifications and experience in erosion and sediment control can certify that
  this form has been completed accurately and to Council's requirements. Refer to Council's Applicants Guide to Managing
  Erosion and Sediment Control in the Development Application/Assessment Process for the definition of a 'suitably qualified
  and experienced professional in erosion and sediment control'.
- <u>Additional information</u> refer to the Erosion Hazard Assessment Technical Notes for more information about completing this assessment. Where you see a number in brackets like this [-] in the assessment table the number is referenced in the technical notes.

#### A 'low' risk score

Generally, if the Erosion Hazard Assessment produces a Total Score of less than 17 and no individual score is equal to or greater than its Trigger Score, the development proposal is considered to be 'low risk'.

## A 'high' risk score

If the *Erosion Hazard Assessment* produces a Total Score of **17 or greater** or any individual score is equal to or greater than its Trigger Score, the development proposal is considered to be 'high risk'. Applicants must lodge sufficient supporting information to demonstrate that the performance criteria of the relevant Code/s in the *City Plan 2000* can be achieved.

| Certification – complete Assessment Table on                                                                                                                                               | back of this form first                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Is Total Score equal to or greater than 17?<br>No Yes Refer to Council's Applicants Guide to<br>Managing Erosion and Sediment Control in the<br>Development Application/Assessment Process | Prepared by <i>Print name</i> Certified by <i>Print name</i>              |
| Did you answer 'yes' to any Trigger Score question?<br>No Yes Refer to Council's Applicants Guide to                                                                                       | BU<br>LANTBERT & REHBEIN                                                  |
| Application number                                                                                                                                                                         | Certifier's signature and date 3 /10 / 05                                 |
| TENNTSON RIVERSIDE DEVELOPMENT                                                                                                                                                             | Brisbane Assessor's name<br>City<br>Council<br>Use Only Officer code Date |

| Ace              | ocement Table                                                                                                                                                                                                                      |                       |       |                                        |                                                                                                                |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------|----------------------------------------|----------------------------------------------------------------------------------------------------------------|
| M33              | essinent idule                                                                                                                                                                                                                     |                       |       | · · · · · · · · · · · · · · · · · · ·  |                                                                                                                |
| Site (           | Condition                                                                                                                                                                                                                          | Points                | Score | Trigger Score                          | BCC Use Only                                                                                                   |
| [1] AV           | Iess than 3%         (3% = 33H:1V)           more than 3% but less than 5%         (5% = 20H:1V)           more than 5% but less than 10%         (10% = 10H:1V)           more than 10% but less than 15%         (15% = 6.7H:1V) | 0<br>1<br>2<br>4<br>6 | D     | Score equal to or greater than 4?      |                                                                                                                |
| [2] SC           | DIL CLASSIFICATION GROUP (AS1726)<br>GW, GP, GM, GC<br>SW, SP, SM, SC, Pt<br>MH, CH, OH<br>ML, CL, OL, if imported fill will be used, or if soils untested                                                                         | 0<br>1<br>2<br>3      | 2     |                                        |                                                                                                                |
| [3] EN           | IERSON (DISPERSION) CLASS NUMBER           Class 4, 6, 7, or 8           Class 5           Class 3           Class 1 or 2                                                                                                          | 0<br>2<br>4<br>6      | 2     | Score equal to or greater than 4?      |                                                                                                                |
| [4] DU           | IRATION OF SOIL DISTURBANCE<br>less than 1 month<br>more than 1 month but less than 4 months<br>more than 4 months but less than 6 months<br>more than 6 months                                                                    | 0<br>2<br>4<br>6      | 4     | Score equal to or greater than 4?      |                                                                                                                |
| 5] AR            | EA OF DISTURBANCE<br>less than 1000 m <sup>2</sup><br>more than 1000 m <sup>2</sup> but less than 5000 m <sup>2</sup><br>more than 5000 m <sup>2</sup> but less than 1 ha<br>more than 1 ha but less than 4 ha<br>more than 4 ha   | 0<br>1<br>2<br>4<br>6 | 4     | Score equal to or greater than 4?      |                                                                                                                |
| [6] WA           | ATERWAY DISTURBANCE<br>No disturbance to watercourse, open drain or channel<br>Involves disturbance of watercourse, open drain or channel.                                                                                         | 0<br>2                | 0     | Score equal to or greater than 2?      |                                                                                                                |
| 7 RE             | HABILITATION METHOD                                                                                                                                                                                                                | 1                     | -     | ······································ |                                                                                                                |
| Percei<br>by see | ntage of area (relative to total disturbance) revegetated<br>eding without mulching (ie. worst case revegetation method)<br>less than 1%<br>more than 1% but less than 5%<br>more than 5% but less than 10%<br>more than 10%       | 0<br>1<br>2<br>4      |       |                                        |                                                                                                                |
| 81 RE            | CEIVING WATERS                                                                                                                                                                                                                     |                       |       |                                        | la de la companya de |
| *                | Open water body (eg. creek, river, bay)<br>Enclosed water body (eg. lake, boat harbour)                                                                                                                                            | 0<br>2                | 0     |                                        |                                                                                                                |
| (9] SU           | BSOIL EXPOSURE                                                                                                                                                                                                                     |                       |       |                                        |                                                                                                                |
| •                | No subsoil exposure except for service trenches<br>Subsoils are likely to be exposed                                                                                                                                               | 0<br>2                | 2     |                                        |                                                                                                                |
| 10] E)           | XTERNAL CATCHMENTS<br>No external catchment<br>External catchment diverted around the soil disturbance<br>External catchment not diverted around the soil disturbance                                                              | 0<br>1<br>2           | 1     |                                        |                                                                                                                |
| 111 R(           | OAD CONSTRUCTION                                                                                                                                                                                                                   |                       |       |                                        | · · ·                                                                                                          |
| *                | No road construction<br>Involves road construction works                                                                                                                                                                           | 0<br>2                | 2     |                                        |                                                                                                                |
| 12] pł           | H OF SOILS TO BE REVEGETATED<br>less than pH 5                                                                                                                                                                                     | 1<br>0                | 1     |                                        |                                                                                                                |

C

[13] Total Score = /9



Sport and Recreation Queenslanc

| and the second se                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Sport and Recreation Queensland<br>S05/211 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| and the second se                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Decument #                                 |
| and a second sec | Container # 5RQ03 365                      |

20 61 241.p.

President Tennis Queensland PO Box 1145 MILTON QLD 4064

# Dear

Thank you for the opportunity for and myself to meet with yourself and Mr Stephen Ayles on 17 January 2005 to discuss the Tennyson Riverside Development (TRD).

As you are aware, a two-stage competitive bid process for the TRD is well advanced, with a decision on a preferred proponent expected in the first quarter of 2005.

As discussed at the meeting, Tennis Queensland (TQ) continues to be bound by the Sport and Recreation Queensland (SRQ) confidentiality agreement which includes a requirement that TQ not discuss specific details of the project with the media or any other parties, without prior consent from SRQ. Please ensure this requirement is met at all times.

If TQ is asked to comment on the project, I recommend you do not give any specific details on the project, but only advise that TQ is working closely with the State Government to deliver an international-standard State Tennis Centre at Tennyson, and that you understand that a decision on a preferred proponent is expected in the first quarter of 2005.

SRQ has dedicated significant specialist resources to the project, and is committed to finalising the competitive bid process in a timely and efficient manner.

SRQ will continue to keep you updated on the project and will seek specific technical information and advice from TQ to assist in progressing the project. In this regard, SRQ is likely to ask TQ to provide technical advice on a number of issues in February 2005 associated with the State Tennis Centre element of the TRD.

Thank you for your ongoing input and commitment to this project.

Yours sincerely

Tim Peisker Project Director Tennyson Riverside Development Sport and Recreation Queensland

# COPP

# AGREEMENT

between

# SPORT AND RECREATION QUEENSLAND

and

**TENNIS QUEENSLAND** 

Crown Solicitor State Law Building 50 Ann Street BRISBANE

Telephone: 3239 6338 Facsimile: 3239 6386 Reference: CDC/IIE115/98/LAM/953190

# THIS AGREEMENT is made

**BETWEEN:** the **STATE OF QUEENSLAND** through Sport and Recreation Queensland, a division of the Department of Innovation and Information Economy, Sport and Recreation Queensland

("the Department")

# AND: the ROYAL QUEENSLAND LAWN TENNIS ASSOCIATION LTD [CRN 009 713 544]

("Tennis Queensland")

## BACKGROUND

- A. Tennis Queensland has identified the Tennyson Power Station site as its preferred location for a State Tennis Centre.
- B. The Department proposes to initiate a Competitive Bid Process for the construction of the "Tennyson Riverside Development" project comprising a State Tennis Centre and associated development on the former Tennyson Power Station site.
- C. The Department acknowledges the key role of Tennis Queensland as providing specialist advice on tennis issues to the Department, as required, during the Competitive Bid Process.
- D. The Department and Tennis Queensland have agreed to work together to facilitate the development of a State Tennis Centre suitable for the promotion of tennis in Queensland and the hosting of state, national and international tennis events on a scale similar to Davis Cup and Fed Cup ties, hardcourt championships and age championships.
- E. Tennis Queensland has agreed to establish and authorise a Sub-Committee to provide specialist advice to the Department, and to liaise directly with the Department in relation to the Competitive Bid Process.
- F. This Agreement records the agreement between the parties in relation to the Competitive Bid Process.

# THE PARTIES AGREE:

# 1. INTERPRETATION

1.1 In this Agreement, unless the contrary intention appears:

"Agreement" means this document, including the Schedule;

"Director General"

means the Chief Executive of the Department of Innovation and Information Economy, Sport and Recreation Queensland;

"Competitive Bid Process"

means the invitation from the Department to private sector entities for proposals concerning the construction of a tennis centre and associated development on and around the former Tennyson Power Station site and all subsequent dealings between the Department and private sector entities who respond to the invitation prior to the appointment of a preferred proponent;

"Competitive Bid Process means information about the Competitive Bid Information" Process and this Agreement;

"Minister" means the Deputy Premier, Treasurer and Minister for Sport;

"Probity Auditor" means the individual named in the Schedule or other person subsequently nominated by the Minister to ensure the integrity of the Competitive Bid Process;

"Probity Plan" means the plan developed pursuant to clause 3;

means the design, financing and construction of the Tennyson Riverside Development project on or around the former Tennyson Power Station site:

means expression of interest proposals and detailed development proposals submitted during the Competitive Bid Process;

"Sub-Committee" means the sub-committee of the Board of Tennis Queensland comprising the persons listed in the Schedule.

## 1.2 In this Agreement:

"Project"

"Proposals"

-

- (a) the singular includes the plural and vice versa;
- (b) a reference to a clause or schedule is a reference to a clause or schedule of this Agreement;
- (c) if the day for something is to be done is a Saturday, Sunday or public holiday in Queensland, it may be done on the next business day in Queensland;
- (d) in the case of any inconsistency between a schedule and a clause, the clause will prevail to the extent of any inconsistency.

# 2. TERM

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This Agreement will commence when it has been signed by both parties and will expire at the end of the corresponding date in 2008 or earlier if terminated by the agreement of both parties.

# 3. GUIDING PRINCIPLES

- 3.1 The Probity Auditor will develop a Probity Plan to provide guiding principles to serve and maintain the integrity of the Competitive Bid Process, covering accountability, transparency, confidentiality and the management of conflicts of interest.
- 3.2 Tennis Queensland acknowledges the Department's obligation to develop and comply with a Probity Plan for the Competitive Bid Process and will comply with any reasonable request by the Department in relation to compliance with the Probity Plan.

# 4. **PROVISION OF ADVICE**

Tennis Queensland will, through the Sub-Committee:

- (a) provide advice to the Department as required in relation to development requirements, facility standards, operational requirements and any other matter reasonably required by the Department to facilitate the Competitive Bid Process;
- (b) meet with the Department's Contact Officer, Probity Auditor and project team members as reasonably required by the Department to facilitate the Competitive Bid Process.

# 5. UNDERTAKINGS BY TENNIS QUEENSLAND

- 5.1 Tennis Queensland will advise and consult with the Department in relation to the Competitive Bid Process through the Sub-Committee, and has authorised the Sub-Committee to represent the interests of Tennis Queensland under this Agreement.
- 5.2 Tennis Queensland acknowledges that its independence and impartiality are critical to the Competitive Bid Process and agrees it will:
  - (a) ensure the Sub-Committee respects the probity requirements of the Competitive Bid Process and does not (without the written consent of the Department) disclose to Tennis Queensland or any other person information which the Department notifies the Sub-Committee as being "for Sub-Committee Information Only";
  - (b) not be a party to or endorse any proposal concerning the Competitive Bid Process;

- (c) where required by the Department, provide specialist advice to the Queensland Government exclusively in relation to the Competitive Bid Process and will not provide advice in any form to any other entity in relation to the Competitive Bid Process;
- (d) not meet or have discussions in relation to the C ompetitive B id P rocess with any entity who does not represent the Queensland Government, except where requested by the Queensland Government and accompanied by a representative of the Department;
- (e) not comment on or respond to any enquiries that it may receive in relation to the Competitive Bid Process and will pass all and any such enquiries to the Department's Contact Officer for consideration and response by the Department;
- (f) assist the promotion of the Project by issuing media releases and statements in support of the Project, but only with the Department's prior written approval, and in accordance with clause 7.1.

# 6. UNDERTAKINGS BY DEPARTMENT

The Department agrees that it will:

- (a) undertake the Competitive Bid Process and assess proposals on their merits;
- (b) accept Tennis Queensland's authorisation of the Sub-Committee to discharge the obligations of Tennis Queensland under this Agreement;
- (c) consult with Tennis Queensland through the Sub-Committee on specific issues as required by the Department during the Competitive Bid Process, in accordance with the Probity Plan;
- (d) advise Tennis Queensland of the outcome of each stage of the Competitive Bid Process.

# 7. CONFIDENTIALITY

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- 7.1 Tennis Queensland will not discuss Competitive Bid Process Information with the media or anyone else and will keep all Competitive Bid Process Information secret and confidential. Except as allowed by this Agreement or with the prior written consent of the Minister, Tennis Queensland will not disclose, copy, publish or use any Competitive Bid Process Information, or allow any other person to disclose, publish or use any of the Competitive Bid Process Information.
- 7.2 The obligations in clause 7.1 do not apply to Competitive Bid Process Information that:
 - (a) is legally required to be disclosed; or
 - (b) was freely available to the public prior to its disclosure to Tennis Queensland.

- 7.3 Tennis Queensland will ensure its employees and agents and the Sub-Committee comply with Tennis Queensland's obligations under this Agreement.
- 7.4 The obligations of Tennis Queensland under this clause 7 will continue despite the termination or expiration of this Agreement.

8. COMMUNICATION PROTOCOLS

- 8.1 To facilitate communication, the contact officers nominated in the Schedule (or other contact officers subsequently notified to the other party in writing) will be the first point of contact between the parties in relation to this Agreement.
- 8.2 Tennis Queensland warrants that each of its contact officers under clause 8.1 is a member of the Sub-Committee and is authorised to represent the interests of Tennis Queensland in discussions with the Department in relation to this Agreement.

9. **DISPUTE RESOLUTION**

- 9.1 The parties will seek to resolve any dispute in relation to this Agreement by negotiation.
- 9.2 If a dispute has not been resolved within 10 business days, the parties will refer the dispute for resolution at a senior level within their respective organisations. In this event, the dispute will be resolved by negotiation between the persons specified in the Schedule.

10. SEVERANCE

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If any part of this Agreement is unenforceable, the relevant part will be severed and the remaining provisions will continue to operate.

11. RELEVANT LAW

This Agreement will be governed by the laws of Queensland.

12. ENTIRE AGREEMENT

This Agreement is the entire agreement between the parties and replaces all prior agreements between the parties in relation to the subject matter.

13. NOTICES

13.1 Notices under this Agreement must be in writing and may be delivered by hand, by registered mail, or by facsimile to the addresses specified in the Schedule (or any substitute address notified by the relevant addressee to the other party).

13.2 Notice will be deemed to be given:

- (a) 2 business days after deposit in the mail with postage prepaid;
- (b) when delivered by hand; or

(c) if sent by facsimile transmission, upon an apparently successful transmission being noted by the sender's facsimile machine prior to close of business at 5.00pm. Facsimile transmissions received after 5.00pm will be taken to have been received on the next business day.

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Executed as a deed as follows:

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SCHEDULE

Probity Auditor (Clause 1)

Sub-Committee (Clause 1)

Stephen Ayles

Contact Officers (Clause 8)

The Department

Executive Director Sport and Recreation Queensland Department of Innovation and Information Economy, Sport and Recreation Queensland PO Box 187 BRISBANE ALBERT STREET QLD 4002

Facsimile:

Telephone: 07 323 71356

07 323 54723

9

Tennis Queensland

ţ.

Stephen Ayles Chief Executive Officer Tennis Queensland

Telephone: 3871 8555

Facsimile: 3371 2635

Dispute Resolution (Clause 9)

The Department

Director-General of the Department of Innovation and Information Economy, Sport and Recreation Queensland

Tennis Queensland

Chairperson of the Board of Directors

Addresses for Notices (Clause 13)

The Department

Executive Director Sport and Recreation Queensland Department of Innovation and Information Economy, Sport and Recreation Queensland PO Box 187 BRISBANE ALBERT STREET QLD 4002

Tennis Queensland

Level 1, 349 Coronation Drive MILTON QLD 4064

Document No.: 953190v.6

	Queensland Government
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Sport and Recreation Queensland Document # <u>S04/3949</u> Container File # <u>3203/365</u>

Sport and Recreation Queensland

Mr S Ayles Chief Executive Officer Tennis Queensland Level 1, 349 Coronation Drive MILTON QLD 4064

Dear Stephen

As part of the Tennyson Riverside Development (TRD) Stage 2 evaluation process, the TRD Project Office is seeking further technical advice from Tennis Queensland in relation to the following matters:

- the design and functionality of particular elements of the State Tennis Centre; and
- co-location of grass and clay courts and the impact on maintenance.

Your advice on these matters will provide essential input to the evaluation process.

As you know, the TRD competitive bid process and related consultation is subject to strict probity requirements and rules of conduct including:

- conflict of interest;
- confidentiality;
- document procedures and security; and
- meeting protocols.

We would appreciate the opportunity to meet with representatives of Tennis Queensland (yourself and Ashley Cooper, and the second of the secon

We would like to meet with you early next week if at all possible. Could you please advise me of your availability, preferred meeting dates and who from Tennis Queensland you would like to attend the meeting. If you have any questions on these arrangements, please contact me on (07) 3235 9582.

Yours sincerely

Tim Peisker

Project Director Tennyson Riverside Development Sport and Recreation Queensland

	TRANSMISSION VER	IFICATION REPORT		
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	Queensland Government		FACSIN	
To:	Queensland Government	Phone:	FACSIN Fax:	(07) 3371-2635
To:	Queensland Government Mr S Ayles Chief Executive Officer	Phone:	FACSIM Fax:	IILE (07) 3371-2635
To:	Queensland Queensland Mr S Ayles Chief Executive Officer Tennis Queensland	Phone:	FACSIM Fax:	(07) 3371-2635
To: From:	Oueensland Overnment Mr S Ayles Chief Executive Officer Tennis Queensland Tim Peisker	Phone:	FACSIN Fax: Date:	11LE (07) 3371-2635 21 October 2004
To:	Queensland Queensland Mr S Ayles Chief Executive Officer Tennis Queensland Tim Peisker Sport and Recreation Queensland	Phone:	FACSIM Fax: Date: No. of P (including	(07) 3371-2635 (07) 3371-2635 21 October 2004 ages: 3 <i>liss page</i>)

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Good afternoon

Please find following a letter regarding the Tennyson Riverside Development Project. The original has been posted.

Regards

Tim Peisker Director, Business Development Sport and Recreation Queensland



Queensland Government

FACSIMILE

To:	Mr S Ayles	Phone:	Fax:	(07) 3371-2635
	Chief Executive Officer			
	Tennis Queensland			No
From:	Tim Peisker		Date:	21 October 2004
	Sport and Recreation Queensland		No. of I (including	ages: 3 this page)
Subject:	Tennyson Riverside Development Project	·		······

Message

Good afternoon

Please find following a letter regarding the Tennyson Riverside Development Project. The original has been posted.

Regards

Tim Peisker Director, Business Development Sport and Recreation Queensland

Department of Local Government, Planning, Sport and Recreation

Sport and Recreation Business Development Division

Forestry House Level 5, 160 Mary Street BRISBANE QLD 4000 PO Box 15187 ALBERT STREET BRISBANE QLD 4002 Telephone (07) 300 62602 Facsimile (07) 323 59487 Website www.sportrec.qld.gov.au

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www.tennisqueensland.com.au

Level 1, 349 Coronation Drive Milton, 4064 Postai Address: PO Box 1145 Milton, 4064 Oueensland, Australia

t: (07) 3871 8555 f: (07) 3371 2635 e: info@tennişqueensland.com.qu

7 November 2004

Sport and Recreation Queensland
Document # 804 4380
Container File # _ S0903 365

Mr. T Peisker Project Director TENNYSON RIVERSIDE DEVELOPMENT PROJECT PO Box 187 Brišbane Albert Street QLD 4002

Dear Sir,

RE: STATE TENNIS CENTRE ADVICE REGARDING LIFECYCLE COST FOR TENNIS COURTS

1. INTRODUCTION

On 13 October 2004 Tennis Queensland received a letter from Sport and Recreation Queensland asking for input to assist Project Services in analyses of lifecycle costs for tennis courts. In particular Project Services requires information upon which to develop a greater understanding in relation to the following matters:

- The forecast life for each of the three types of tennis court surfaces to be provided at the State Tennis Centre (that is, cushioned acrylic hardcourt, grass and clay);
- Whether the forecast life of cushioned acrylic hardcourt surface would differ for match, show or centre courts;
- The on-going maintenance requirements and capital replacement that would be required to ensure courts achieve their forecast lives;
- How weather and environmental conditions (for example, proximity to the river, flooding, hail and possible lack of sunlight on grass courts) may impact on the forecast lives of the courts and the regularity of any maintenance; and
- Whether there are any other external factors that could affect the life of the various courts (for example, vandalism).

In preparing this response to Sport and Recreation Queensland, Tennis Queensland has not only relied on its internal knowledge and experience but also sourced information from A V Syntec, Plexipave Australia, ground staff that were involved with the maintenance of the grass courts at ANZ Stadium and currently involved with Suncorp Stadium, other State Tennis Associations (particularly Tennis New South Wales) as well as members of the Court Owners Association in Brisbane.

2. ASSET MANAGEMENT

Project Services would be well aware that thorough and proper maintenance is essential in order to realize desirable service for the full lifecycle of an asset and maintenance requirements are dependent on the intensity of utilization of the asset.

The design and construct contract should call for a Maintenance and Operations Manual to be delivered by the contractor. However, it is important to appreciate that the contents of such a manual will most likely be a collation of information available from product manufacturers and suppliers and there is a tendency for such information to under-state maintenance requirements.

A further and important aspect in relation to the State Tennis Centre is that its management should provide leadership in maintenance of tennis facilities such that the State Tennis Centre is always well presented, fully functional and both State Government and Tennis Queensland are proud to showcase the sport at the State Tennis Centre.

It is realized that the request from Project Services is specifically related to court surfaces. However, in this response a wider range of maintenance issues is discussed so that a broad comprehension of maintenance is obtained as many aspects will interrelate during operations of the State Tennis Centre. The various maintenance activities have different recurrence periods, as indicated below, with some activities being a normal operating expense while other activities would be funded from a Sinking Fund.

There are two Strategic Objectives that will have a significant influence on maintenance of the State Tennis Centre. These are briefly discussed below.

(i) International Standard Events

Notwithstanding that the control of international standard events in Australia rests with Tennis Australia, it is considered that the Australian Women's Hardcourts Championship currently played annually at the Gold Coast should be relocated to the State Tennis Centre, and furthermore it should be an objective to supplement this event with a men's event conducted at the same time. As such events are a lead-in to the Australian Open, court condition, and particularly court speed, should be kept reasonably consistent with that of Melbourne Park. A 32 main draw with qualifying for both men and women would use 12 courts including practice courts. Allowance should be made for a one coat resurface with line marking every year for the centre and show courts plus nine match courts.

Satellite, Challenger and Futures events would be conducted at the State Tennis Centre. These are high standard tournaments but do not require the same attention to surface condition and speed as lead-in events to the Australian Open.

(ii) Elite Training

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Practice matches and "drills" that are part of the player development program result in intense use of a tennis court compared with normal operations. Elite training has an impact on the acrylic surface but to a far lesser extent than the impact on clay courts and grass courts. With respect to the grass courts, wear of the surface will have to be closely monitored and training scheduled to avoid excessive wear and damage. The clay courts will require more intense maintenance to accommodate elite training and this degree of maintenance should be allowed for at the outset as the clay courts are included at the State Tennis Centre for the specific purpose of training players on a surface with characteristics similar to those of surfaces in Europe.

3. MAINTENANCE PROGRAMS

Maintenance programs are briefly discussed below with indicative cost factors (in 2004 dollars) being presented in Section 4 of this report.

Grounds and Landscaping

- Daily and weekly cleaning of the grounds.
- Regulated watering of all plants and turf area.
- Weekly/monthly cutting of lawns and trimming of shrubs and trees.
- Seasonal care of trees, shrubs and lawn including fertilizing.

• Landscape replacement should be expected every 5 to 7 years with the cost being dependent on the extent of landscaping.

Acrylic Cushioned Hardcourts

- Daily removal of contaminants such as dust and leaves and twigs using a combination of blower and vacuum cleaner. Seasonally, bird "droppings" may be a matter that requires immediate particular attention to removal before blistering of the acrylic.
- Squeegee removal of rainwater, as necessary.
- Six monthly or annual light water blast to remove any buildup of remnant contaminants. Dilute solution of chlorine may be required to remove small areas of mould or light stain.
- Every 3 years a light scrub with necessary water blasting and bleach treatment of the complete surface for all 17 courts.
- On average, a touch-up plus two-coat resurface with line marking every 6 years for all 17 courts.
- Every year a touch-up plus single coat resurface with line marking for up to 12 courts used for international standard tournaments.

Clay Courts

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- Daily removal of leaves and twigs, as necessary.
- Daily, and preferably after every session of play, the surface should be bagged in both directions and lines swept. A flat-bladed wooden rake may be required to assist bagging to remove surface irregularities. This must be done before watering.
- Watering daily, up to 4 times a day depending on temperature and wind conditions.
- Rolling after watering may be daily up to weekly depending on how well the surface holds together under playing conditions.
- Three monthly light replacement of surface material lost due to wind or water erosion.
- Yearly, major renovation of the surface by scarifying, placing additional surface material, watering, rolling and line marking to rejuvenate the playing surface.

Grass Courts

- Daily to weekly watering, rolling, cutting and line marking, as necessary, depending on use.
- Careful application of fungicides, pesticides, herbicides and fertilizers as part of regular maintenance and annual renovation of the grass surface.
- Several applications of topsoil during the year, as necessary.
- Regular, 4 to 6 times a year, vertidrain maintenance (hole punching through the turf layer),
- Annual aeration renovation using coring.

Lighting

- Half-yearly or annual monitoring of light intensity and uniformity, producing a continual log of the lighting condition.
- Annual or bi-annual cleaning of all reflectors, covers and visors (to manufacturer's recommendations) depending on results of monitoring of lighting condition.
- Annual or bi-annual checking of aiming angles to maintain uniformity.
- Annual or bi-annual checking of voltage at luminaire terminals during periods of full load.
- Individual lamp replacement, as necessary, to maintain light uniformity.
- Complete lamp replacement for groups of courts to maintain average light intensity. The recurrence period for complete lamp replacement will depend on court usage which would vary across the tennis centre. As an estimate all lamps may need to be replaced on average every 4 years. Lamp replacement should be scheduled during one of the cleaning cycles.

- Annual or bi-annual checking of nuts and bolts to headframes, trunnions and stirrups with tightening and adjustment, as necessary
 - Structural fasteners to be checked and adjusted as necessary.
- Moving parts to be greased to prevent seizure.

Fencing

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- Annual inspection and re-clipping, as necessary, with re-tensioning as far as possible.
- Remove and replace mesh every 15 to 20 years depending on the extent of permanent straining of the mesh.

4. COST FACTORS

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The following contains estimates for capital purchases, contractor services, consumables and human resources necessary to satisfactorily maintain the State Tennis Centre. An estimate of the expected life for each capital purchase item is given. Prices are quoted in 2004 dollars.

With respect to lighting it has been assumed that the fittings will be attached to the roof of the Centre Court and that towers in the corners would be used for the Show Courts. Height of the fittings for the Centre and Show Courts would necessitate the use of a "cherry picker" which would be on a hire basis including operator. Most importantly, access must be provided for such maintenance equipment. For all Match and Training Courts it is expected that the fittings would be able to be reached with a mobile tower which would be the property of the State Tennis Centre. General supply tariff has been used to estimate electricity costs.

Grounds and Landscaping		
Small mower, edger and brush cutter, 3years life	\$2000.00	
Other hand tools	\$250.00	
Wheelbarrow, 3 year life (heavy duty)	\$150.00	
Consumables	\$500.00pa	
Human resources	2 man-days pw	
Landscape refurbishment, 7year life	up to \$50,000	
Acrylic Cushioned Hardcourts (17)		
Air blower and vacuum cleaner, 3year life	\$1500.00	
Squeegees, 2year life (20 items)	\$4000.00	
Water blasting and scrubbing of courts	\$250.00 per court	
One coat resurface	\$2500.00 per court	
Two coat resurface	\$5000.00 per court	
Human resources, daily cleaning	8 man-hours pw	
Clay Courts (4)		
Sprinkler system including timer, 15year life	\$55000.00	
Windscreens, heavy duty, 10year life	\$26000.00	
Roller, 15year life	\$10000.00	
Bags, 3year life (2 per court)	\$2400.00	
Wooden rakes, 3year life (6 units)	\$600.00	
Line brushes, 5year life (4 units)	\$800.00	
Line re-coating, 3year life	\$1500.00	
Water usage	\$10000.00pa	
Replacement surface material	\$2500.00pa	
Major surface renovation	\$6000.00pa	
Calcium chloride for moisture retention	\$1500.00pa	
Equipment repair, lubricants and fuel	\$2000.00pa	
Human resources		2 man-days pw
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Grass Courts (2 extra wide)		
Roller and cylindrical mower, 10y	\$12000.00	
Fuels, oils services and parts	\$2000.00	
Aeration renovation and vertidrain	\$2000.00pa \$1600.00pa	
Chemicals	\$1000.00pa	
Tonsoil	ų	\$6500.00pa \$1200.00ma
Linematking material		\$1200.00pa
Binomarking material		\$350.00pa
Human resources		10 man-hours pw
Lighting		
Mobile lift, 25year life (with prope Maintenance costs per court (inclu Centre & Show Courts:	Mobile lift, 25year life (with proper maintenance and careful use) Maintenance costs per court (including electrician) per event Centre & Show Courts:	
	Lamps	\$3000.00
	Clean	\$700.00
	Equipment hire	\$3200.00
Match & Training Courts		
	Lamps	\$1440.00
	Clean	\$400.00
Electricity consumption per hour	ι.	
Centre & Show Courts:	•	\$5.80
Match & Training Courts		\$2.30

The above typical cost factors are in relation to maintenance of the design conditions of 2000 lux for the Centre and Show Courts and 1000 lux for the Match and Training Courts. Maintenance costs and electricity consumption could be reduced by providing reduced lighting levels through multiple switching on each court. Switching could reduce the Centre and Show Courts to 1000 lux or 500 lux and for the Match and Training Courts to 500 lux. The lower lighting levels would be appropriate for normal mode of operation of the State Tennis Centre. Appropriate computer controlled addressable switching technology should be investigated so that the use of lights at lower lux levels is spread evenly to extend the operating life of all lamps. Such technology should be sustainable through reduced energy costs, reduced greenhouse gas emissions and lower maintenance costs overall.

Fencing

Human resources, annual inspection and re-clipping Re-meshing

4 man-days pa \$5000.00 per court

5. RESPONSE TO SPECIFIC MATTERS

Considering the first three specific matters raised by Project Services it is considered that these matters are interrelated and by application of proper scheduled maintenance the forecast life of each of the surface types could be continually extended provided the base of the courts perform satisfactorily and there are no exceptional conditions experienced.

Flooding would be an exceptional circumstance that could have a very drainatic impact on the court bases and surfaces. With respect to the cushioned acrylic hardcourts, flooding could cause bubbling and delamination of the playing surface in addition to any negative effects that it may have on the court base. Should bubbling and delamination of the playing surface occur it would have to be entirely removed and the court resurfaced after remediation of the base as required. After flooding, the clay courts playing surface would have to have a major renovation possibly more extensive than that indicated in the maintenance regime. Flooding would be expected to have the least effect on the grass courts provided the silt deposition was quickly removed.

There is no known incidence of hail damage to an acrylic surface. Hail would have no negative impact on the clay or grass surfaces.

Lack of sunlight on the grass courts would be quite serious with significant negative impact of the grass growth.

External factors such as vandalism are a serious risk and the damage that could be caused is unquantifiable.

Yours faithfully,

Stephen Ayles Chief Executive Officer



www.tennisqueensland.com.au

4 April 2006

Level 1, 349 Coronation Drive Milton, 4064 Postal Address: PO Box 1145 Milton, 4064 Queensland, Australia

t: (07) 3871 8555 f: (07) 3371 2635

Tim Peisker Project Director Tennyson Riverside Development Sport and Recreation Queensland PO Box 15187, City East Qid 4002

Dear Mr Peisker

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Re: Queensland State Tennis Centre

Further to recent discussions, Tennis Queensland believes that the proposed design for the stadium at the Tennyson State Tennis Centre should be reviewed.

Discussions commenced in early 2003 between Tennis Queensland, Tennis Australia and the State Government regarding the utilization and consequently design of the stadium court. The predominant factor behind its design was that it was able to host a Davis Cup tie in winter on a portable grass court. This provided Queensland with a competitive advantage over southern states.

Grass had been the preferred surface of Davis Cup teams for several decades. At the time of these original discussions Australia was enjoying significant success in the Davis Cup with on average three to four ties per year. The team had included the likes of Lleyton Hewitt (at that time number one in the world), Pat Rafter, Todd Woodbridge, Mark Woodforde and Mark Phillipoussis. The Davis Cup team is significantly weaker than three to four years ago. Tennis Australia is going through a restructure process with respect to player development. It is unlikely in the foreseeable future that Australia will have the strength that it enjoyed in the late nineties and early part of this century. Consequently it is unlikely to participate in the same number of ties (as it is a knock-out format) that it has enjoyed in recent times. Australia will have fewer home ties in the coming years as it has played an unusually high number of home ties in recent years (countries alternate the hosting of ties).

Combined with the reduced likelihood of hosting Davis Cup ties is that an opportunity has now arisen to attract a combined men's (ATP) and women's (WTA) event to the new State Tennis Centre. Tennis Queensland is actively pursuing the rights to host these events (from January 2009) with Tennis Australia. This would have significant implications for the design of the stadium court.

The provision for additional temporary seats was provided in the event of a Davis Cup tie. Given the lesser prospect of attracting future Davis Cup ties and the new safety regulations relating to temporary seating, the need and commercial viability of providing temporary seats should be reviewed.

The design of the roof was so that a portable grass court could receive sunlight during a winter's day to ensure its growth and meshing. For a tie in winter the requirements of shade (and therefore a roof) for spectators is less important than for a summer event. If Queensland is targeting an annual summer event this will have significant consequences for the design of the roof. Spectators will not sit outside in the sun during summer.

The Royal Queensland Lawn Tennis Association Ltd, Trading as Tennis Queensland ACN 009 713 544 ABN 60 009 713 544

A maximum seating capacity of 5,500 is sufficient for a lead-in event to the Australian Open.

Regardless of these changes and the focus on a stadium that can host annual summer leadin events to the Australian Open, Queensland can still bid for and will attract its share of Davis Cup ties.

It is appreciated that the design process is underway, but believe that it is better that these issues are raised now before detailed design takes place.

Yours sincerely

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Stephen Ayles Chief Executive Officer



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Property news

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Property news

Mirvac Group says land earmarked for Tennyson Reach units will be turned into park

From: The Courier-Mail

June 25, 2011 12:00AM

23 comments

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4	retweet	U			



NEW plans: The Mirvac apartments at Tennyson succumbed to the river earlier this year. Picture: Russell Shakespeare *Source:* The Courier-Mail

ONE of Australia's biggest developers has written off the value of a prestige Brisbane unit complex hit hard by January's flood and will sell the remaining land to the city for a new park.

Mirvac Group announced it would set aside \$80 million to cover losses from 43 unsold units and undeveloped land at its Tennyson Reach project.

Eight ground-floor apartments were flooded at the two-tower complex adjacent to the city's tennis centre, and there have been no unit sales since.

It has also emerged that vacant riverfront land earmarked for three more apartment buildings will now be turned in to a public park.

The Brisbane City Council plans to pay Mirvac \$12 million to buy 2.9 ha of the remaining undeveloped land.

Mirvac will develop the park facilities in stages, with the first area set to open by late next year and the last stage wrapped up in the second half of 2013.

The complex is set to include an outdoor amphitheatre, an all-abilities children's playground, picnic shelters, a kick and throw area, cycle paths and a public pontoon.

The council is also planning public parks in Coorparoo and Milton, where it agreed in March to pay \$22 million to acquire the old flood-affected tennis centre site from developer Kevin Seymour.

Mirvac said the writedown and sale at Tennyson Reach would have no bearing on its efforts to continue restoration work at the 200-unit complex, where apartments sold for up to \$3.9 million.

Some unit buyers have sought to cancel contracts as a result of falling property values.

Mirvac reported a net loss of \$12.4 million in the first half of the financial year.

Department of **Communities**

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