

**CABINET - SUBJECTS FOR CONSIDERATION, 30 AUGUST 2001 9:30 AM**

**1 New Initiatives/Policy Matters**

Not Relevant

**102 DTRN04968/2001CS Port River Expressway Project Delivery  
RECOMMENDATION 7.1 APPROVED AS  
AMENDED; RECOMMENDATIONS 7.2 TO 7.8 TO BE  
CONSIDERED ON MONDAY, 3/9/2001  
*Premier & Cabinet Minister***

Not Relevant



Department of the  
Premier and Cabinet

**MINUTES forming ENCLOSURE DTRN04968/2001CS  
to**

30 August 2001

**TO: PREMIER  
PORT RIVER EXPRESSWAY**

Cabinet this morning took the following decision:

**“Endorses in principle the attached report to the Public Works Committee and authorises the Premier to make such modifications to the report that may be necessary.”**

It is proposed to make the following modifications to the report:

Under **“1. PROPOSAL”** on page 3, add:

**“1.3 Possibility of Addendum**

It is proposed to seek major private sector support for Stages 2 and 3 by issuing, in the first place, an Expression of Interest on the basis of a Build Own Operate Transfer (BOOT) mechanism. There is a financial uncertainty inherent in such an approach in that it is not possible to determine the value of the BOOT to the private sector without going to the market. A similar uncertainty arises in the value of the land package to be managed by the LMC. The Commonwealth's contribution also needs to be confirmed. Finally there is an uncertainty relating to the height of the rail bridge (6.3 and 7.1).

None of these uncertainties affect Stage 1 except the Commonwealth's decision which is imminent. Stage 1 is a stand-alone project as well as part of the overall project and is the only stage proposed to go to tender at this stage. Stages 2 and 3 are intended to be subject to Expressions of Interest which will not commit the Government to go to tender. A decision on tender will be referred to Cabinet at the completion of the Expressions of Interest and with further advice on the aforementioned uncertainties. The Public Works Committee will be advised of the outcome of these uncertainties and Cabinet's deliberations.”

Under "7.0 **FINANCIAL INFORMATION**

Stage 1 – Expressway", add the following after the table:


"This capital cost estimate is subject to the usual uncertainties associated with major and complex engineering projects. There is an additional uncertainty associated with the height requirement for the rail bridge as foreshadowed in 6.3. The preliminary estimate is that a requirement to raise the height to 6 metres would add \$5.0m to the \$131.6m capital cost."

On page 24, add the following after "The table below summarises the funding contribution....."

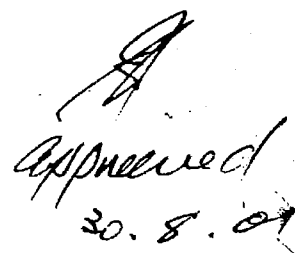
"It needs to be recognised that there are financial uncertainties inherent in taking the BOOT approach. While extensive financial modelling has been carried out (and can be made available to the Public Works Committee), the value the private sector places on the toll revenue will not be known until the market is actually tested. A similar consideration applies to the value of the land package being managed by the LMC. Finally, the contribution from the Commonwealth needs to be confirmed, though it is understood this is imminent.

In the event of material variations emerging in the course of, or during, the Expressions of Interest process, it is planned to draw such variations to the attention of Cabinet for its consideration in the context of its decision as to whether to advance Stages 2 and 3 of the project to the tender stage."

I believe the modifications reflect Cabinet's views and I recommend that you approve them.



Warren McCann  
CHIEF EXECUTIVE



Approved  
30.8.07

102

## CABINET COVER SHEET

1. **TITLE:** Port River Expressway – Project Delivery
2. **MINISTER:** Diana Laidlaw, MLC  
Minister for Transport and Urban Planning
3. **PURPOSE:** 3.1 To advance the Port River Expressway Project.

4. **RESOURCES REQUIRED FOR IMPLEMENTATION:****CAPITAL COSTS**

Treasury Forward Estimates

Sale of Grand Junction Road Stockpile

LMC Land Package proceeds

Total State Contribution

	99/00	00/01	01/02	02/03	03/04	04/05	Total
Treasury Forward Estimates	\$1.1M	\$3.8M	\$1.9M	\$15.3M	\$9.3M	\$0.2M	\$31.6M
Sale of Grand Junction Road Stockpile				\$1.5M			\$1.5M
LMC Land Package proceeds				\$11.95M			\$11.95M
Total State Contribution	\$1.1M	\$3.8M	\$1.9M	\$28.8M	\$9.3M	\$0.2M	\$45.1M

**RECURRENT COSTS:**

Stage 1

\$50,000 per year commencing 2004/05.

Stages 2 &amp; 3:

Nil recurrent costs as these are included in the operational costs as part of the BOOT scheme.

5. **RELATIONSHIP TO GOVERNMENT POLICY:**
- 5.1 On 20 December 1999 Cabinet reaffirmed the route of the Gillman Highway (now known as the Port River Expressway) and the location of the Road and Rail Bridges over the Port River. Cabinet noted that Private Sector investment would be sought for the construction of the Road Bridge and that a tolling regime would be required.
- 5.2 The legislation necessary to give effect to road tolling (provision for direct tolls only), the Highways (Miscellaneous) Amendment Bill 2000 was passed on 13 July 2000.
- 5.3 On 25 September 2000 Cabinet approved the inclusion of seven Government held land parcels as potential Government equity in this project. Three of these land parcels have been included in the Land Management Corporations Waterfront Redevelopment Project as approved by Cabinet on 4 June 2001. It is now proposed that the remainder of the land be transferred to the LMC together with the responsibility for the realisation of the funds.

**6. CONSULTATION:**

6.1 Inter-Agency consultation has been managed through the membership of a Project Steering Committee, and included the following organisations:

- Transport SA,
- DAIS (Land Management Corporation),
- Planning SA,
- Treasury & Finance,
- Premier & Cabinet,
- Industry & Trade,
- Attorney General's, and
- Commonwealth Department of Transport & Regional Services.

Separate discussions have been held between the CEO's of DT&F and DTUPA.

6.2 An Environmental Report has been produced for the project which involved consultation with a broad cross section of the community. A total of 175 comments were received which have been investigated in detail and documented in the Supplement to the Environmental Report. This was approved for release on 13 July 2001.

6.3 A presentation on the processes and procedures to be followed was made to the Prudential Management Group (PMG) on the 8th November 2000. A further presentation was made on 17th July 2001.

6.4 The Acquittals Committee has been consulted and Acquittals received from Central Agencies.

**7. FAMILY IMPACT STATEMENT:**

7.1 In achieving the transport objectives of this project, the following benefits will be delivered to the community:

- Improved amenity in Port Adelaide due to the removal of heavy transport traffic from the centre.
- Stimulate the urban regeneration of the Port Adelaide Centre and environs.
- Improved amenity through Rosewater due to the removal of the freight rail line that runs through the district.
- The construction stage will have a positive impact on the economy through the creation of jobs and regional incomes.

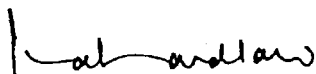
**8. URGENCY:**

For consideration by Cabinet on 30 August 2001.

## 9. RECOMMENDATIONS:

It is recommended that Cabinet:

- 7.1 Endorses the attached Report to the Parliamentary Public Works Committee.
- 7.2 Approves the calling of Tenders for Stage 1 of the project subject to Federal Government approval of additional matching funding under the Roads of National Importance program.
- 7.3 Notes that Private Sector involvement will now be sought for Stages 2 and 3 (Road and Rail Bridges) in the one package.
- 7.4 Approves the calling of Expressions of Interest for Stages 2 and 3 of the project, and approves Stage 1 progressing irrespective of the outcome of this process but subject to the normal requirement to return to Cabinet for acceptance of the Stage 1 tender.
- 7.5 Notes that the revised total cost estimate for the project is \$131.6 million. This estimate is exclusive of the capital costs of raising the height of the rail bridge. In the event this is required, it is anticipated costs in the order of \$5 million will be added to the project. The impact of this upon the Government's required financial contribution will not be known until the results of the BOOT have been received and the contributions from the Commonwealth and LMC land development are known.
- 7.6 Approves the future transfer of land previously approved as equity for this project to the Land Management Corporation (LMC) for development with a decision on the terms to be deferred until the results of the Request for Proposal for Stages 2 and 3 are known. (Note: quantum of funds was earlier estimated by Colliers Jardine for DTUPA Committee at \$11.95 million).
- 7.7 Notes that it is proposed to give the private sector a major participating role by advancing Stages 2 and 3 as a BOOT. This involvement introduces some uncertainties in addition to the normal project delivery uncertainties that form part of all major engineering works. The specific uncertainties associated with the BOOT are pricing of tolls; extent of traffic diversion; bridges operating regimes; and, ultimately, provision of a value for money outcome for government.  
Other identified uncertainties not associated with the BOOT are:
  - Proceeds from the sale of subject land being less than original forecast of \$11.95 million.
  - Confirmation of anticipated contribution from the Commonwealth Government;
  - Cost of raising rail bridge, if required
  - Impact on Ports Corp sale of proposed realignment of rail bridge (DAIS anticipates this is unlikely to be material).
- 7.8 Notes that the net benefit to Government of relocating Heini Becker Park has been incorporated into the financial analysis and agrees, in principle, to the relocation being to another site on Government Land.



Diana Laidlaw, MLC  
MINISTER FOR TRANSPORT AND URBAN PLANNING

**TO: THE PREMIER FOR CABINET**

**RE: PORT RIVER EXPRESSWAY**

**1. PROPOSAL**

- 1.1. To advance Stages 1, 2, & 3 of the Port River Expressway Project.

**2. BACKGROUND**

- 2.1. On 16 August 1999, Cabinet approved an allocation of \$1.12 million for expenditure during 1999/00 for concept development. This allocation has been included in the total cost estimate for the project.
- 2.2. On 20 December 1999, Cabinet reaffirmed the route of the Gillman Highway (now known as the Port River Expressway), and the location of the Road and Rail Bridges over the Port River. Refer to the attached Locality Plan. Cabinet also noted that Private Sector investment would be sought for the construction of the road bridge and that a tolling regime would be required.
- 2.3. The legislation necessary to give effect for road tolls (provision for direct tolls only), the Highways (Miscellaneous) Amendment Bill 2000, was passed on 13 July 2000.
- 2.4. On the 25th September 2000, Cabinet approved the inclusion of seven Government held land parcels as potential Government equity in this project. These parcels have been independently valued and have an estimated net value of \$11.95 million.
- 2.5. A Report to the Parliamentary Public Works Committee on all three stages has been prepared in accordance with appropriate Government guidelines. In addition, the Acquittals Committee has been consulted and Acquittals have been received from Central Agencies.

**3. DISCUSSION**

General

- 3.1. The major objectives of this project are to:
- divert through traffic from the Port Adelaide Centre allowing revitalisation of that area;
  - remove rundown and inefficient rail infrastructure from other parts of Port Adelaide and thereby stimulating urban regeneration; and
  - improve the operation and reduce inefficiencies in the broader transport system by providing more direct links from the National Highway and freight rail systems to the major freight and shipping facilities at Port Adelaide and Outer Harbor.

The attached plan shows the new transport (road and rail) linkages, and the areas which are subject to urban regeneration which will benefit from the removal of freight rail infrastructure.

- 3.2. The Expressway and Road Bridge over the Port River will provide a new high-speed linkage to the LeFevre Peninsula from the northern metropolitan area via Port Wakefield Road, and has been defined as a Road of National Importance (RONI).
- 3.3. The new rail bridge will improve the efficiency of rail freight movements to Outer Harbor by the elimination of a circuitous route, which passes through residential areas of Rosewater and around the Port Adelaide Centre. The need for this bridge has been given additional impetus arising from the decision to build the Outer Harbor Grain Terminal.
- 3.4. Stage 1 of this project is the construction of a new 5.5-km, 4-lane link between Ocean Steamers Road and the Salisbury Highway/South Road Connector and the upgrading of Francis Street between Eastern Parade and Ocean Steamers Road. Hanson Road will be extended from Cormack Road to connect with the Expressway. This Stage will be delivered as a Design, Construct and Maintain (DCM) contract.
- 3.5. Stages 2 and 3 include a 4 lane, low level opening road bridge across the Port River with associated road connections to Francis Street and Victoria Road, and a single-track, dual gauge opening rail bridge across the Port River.
- 3.6. The stimulation of the Urban Regeneration projects within and adjacent to the Port Centre as a direct result of the removal of truck and rail traffic is expected to be significant. The potential multiplier effects of the development include: an increase in the patronage of public transport facilities; investment into degenerated parts of the Port Centre including the Wool-stores area; positive externalities such as property value increases; additional investment by local government including urban design elements; increased employment opportunities; health and amenity improvements; commercial and business activity improvements; increased health and community services; tourism investment; possible private sector investment into supporting utilities (power, water, gas etc.) and a reduction of public sector recurrent and holding costs in infrastructure, services, land and housing.

- 3.7. The removal of several goods train movements a day (some 2100 annual train movements), that currently skirt the outside of the development, will considerably improve the potential of the development. This includes the complete removal of the line to the north of the redevelopment project, significantly reducing noise, vibration and pollution to several of the main parcels of land. A restriction of only passenger rail services adjacent to the redevelopment parcels on the eastern bank will allow the redevelopment of the Glanville Station including the adjacent land parcels and possible 'air rights' over the station, following the principles of a 'Transit Oriented Development'. This will allow for a transport and residential hub with potential retail and commercial opportunities and provide an important link between the Semaphore Road Precinct and the Port Waterfront Redevelopment Project.

### Delivery of Stage 1

- 3.8. Stage 1 has sufficient economic justification to be constructed as a stand alone project, with a high benefit-cost ratio of 5.2, and should be delivered irrespective of the outcomes of Stages 2 and 3. However, the full benefits of the project will be realised with the delivery of all three stages. For further discussion refer to paragraph 4.5.
- 3.9. Stage 1 will be delivered as a Design, Construct and Maintain (DCM) contract. The decision to adopt this type of contract is based upon the intention to transfer to the private sector the construction risks associated with the geotechnical foundation conditions, which have construction and long term stability/performance implications. Further risks are created by some land contamination along this corridor. Refer to the Appendix on Project Risks for more information.
- 3.10. Under a DCM contract, the responsibility and hence the risk to undertake the design to specified criteria, to construct to specified standards and to maintain the infrastructure for a specified period is placed with the contractor. In projects such as this, this form of contract creates the best environment for innovative design and construction techniques. Since the maintenance responsibility also rests with the contractor, quality becomes a key focus during project construction. A maintenance period of 10 years is proposed.
- 3.11. Registration of Interest (RoI) documentation was released on 10 July. The call period closed on 9 August 2001. Transport SA will call for Tenders from selected pre-qualified contractors who have previously taken part in the RoI process. A recommendation will be made seeking Cabinet approval to award the contract to the preferred tenderer.
- 3.12. The Federal Government has approved \$18.5M funding under the Roads Of National Importance program. Additional funding of \$8.21M has been sought for Stage 1, and is currently being considered by the Federal Government. Tenders will not be sought until these funds have been approved.

Delivery of Stages 2 & 3

- 3.13. There are some significant cost and project time savings to be made by delivering Stages 2 and 3 concurrently. A estimated saving of \$2.7M would be made due to once only project start up and de-mobilisation costs and scheduling of resources and equipment. Furthermore, if the rail bridge were staged at a later time an additional road bridge would be required over the existing rail alignment on the western approach, at an estimated cost of \$5M-\$7M. In addition, delay in the provision of the rail bridge will impact on the full realisation of redevelopment opportunities of the Port Adelaide Inner Harbour area by the Land Management Corporation, and delay the benefits to the industries using rail freight on the LeFevre Peninsula, particularly the proposed Outer Harbor Grain Handling Facility. Construction of the bridges concurrently will also reduce the project time frame, and associated disruptions to the Port Adelaide district.
- 3.14. A Build Own Operate and Transfer (BOOT) contract is proposed for Stages 2 and 3, in which the private sector will fund the construction of the bridges and recoup its investment via the collection of tolls. The private sector consortia will also operate and maintain the infrastructure for the term of the concession period. Upon termination of that period, the infrastructure will transfer back to the Government. A 30 year concession period is envisaged.
- 3.15. There are important reasons for taking the BOOT path. A premium will be paid for the private sector's higher cost of capital. However, this premium would be paid in exchange for the risks transferred to the private sector associated with toll revenues and costs associated with construction and operation of the bridges over the concession period. These risks are detailed in the Appendix and in the discussion on Financial Modelling.
- 3.16. It also needs to be recognised that the BOOT approach avoids the need to find more than \$50M from budget headroom between now and 2004/05 that would be required from the Government to "go it alone". The other option of Government capitalising the toll revenue stream and using the proceeds to fund the bridges differs little from the BOOT approach anyway.
- 3.17. Expressions of Interest (Eoi) will be sought to obtain the involvement of the private sector in the delivery of Stages 2 and 3 of the project. An Eoi process is considered appropriate for these stages where the scope of available opportunities resulting from the project can be determined by the private sector. The Eoi process will result in a shortlisting of a number of consortia wishing to participate.
- 3.18. Information received from the Eoi will be used to refine the initial financial modelling (business case) and output specification with a more detailed assessment of the benefits to be derived from involving the private sector. A full business case will be prepared for Cabinet approval prior to seeking Requests for Proposal from the shortlisted consortia. Following assessment of the proposals, involving the Treasury Private Public Partnerships (PPP) Unit, a submission will be made to Cabinet requesting approval to award the contract to the preferred consortia.
- 3.19. The outcomes of the Eoi and Request for Proposal (RFP) processes will also determine the amount of direct capital contribution (if any) required by the State and Federal Governments. Transport SA has engaged the services of PricewaterhouseCoopers (PwC) to provide advice on optimising the financial structure of the project, in particular with respect to tolling and land development

proposals and assessing the risks to Government associated with alternative financial structures related to the construction, operation and maintenance of the bridge.

### Value for Money Analysis

- 3.20. PwC have constructed models which estimate the net cost to Government of the project under private and public sector delivery options. The models were built on a comparable basis in respect of all costs (construction and operation). The risks were identified and assigned a transfer value or cost. When the procurement models were compared, there is a net increase of \$10.7M in the cost of delivering the project under the Government delivery model.
- 3.21. This case depends upon the accuracy of the modelled data, which will be reviewed when proposals are received and benchmarked against the public sector comparator. In the event that the tender process delivers a materially adverse premium, Cabinet will be advised when a submission is prepared recommending acceptance or rejection of tenders.
- 3.22. PwC used a methodology based on their experiences in the UK and interstate. VicRoads and RTA NSW were consulted about the sorts of variations and risk transfers that may be applicable. The adjustments to the public sector comparator (detailed below) were made on the basis that the private sector is better able to manage these risks. It is acknowledged that such an analysis relies more on subjective opinions than factual data. Consequently there must be some uncertainty in these figures. It is therefore proposed that this information not be released to proponents.
- Capital Costs. Costs have been increased by 10% on the assumption that the private sector is better able to manage construction costs. The public sector historically experiences cost overruns due to variations and claims.
  - Operating Costs. Costs have been increased by 15% on the assumption that an experienced private sector operator can forecast or manage the impact of operating costs more accurately.

The individual factors impacting on the VFM result are set out below:

<i>Risk</i>	<i>Value</i>	<i>Percentage</i>
Construction	\$7.2M	67%
Operation/Maintenance	\$3.5M	33%
<b>TOTAL</b>	<b>\$10.7M</b>	<b>100%</b>

### Land Package

- 3.23. On 25 September 2000, Cabinet approved the inclusion of seven Government held land parcels as potential equity in this project. The LMC project managed further investigations of the subject land on behalf of Transport SA, and the land was independently valued by Colliers Jardine at an estimated net value of \$11.95M. Some of this land is waterfront land at the location of the river crossings, and some is industrial land along the alignment of the Expressway. The reason for offering the land to consortia as part of the project was the notion that the value of the land would be enhanced by the development, and the private sector consortia delivering the project would best be able to maximise the return on the land.

- 3.24. The original intention was to offer the land directly to the consortia delivering the bridges as part of the competitive tendering process. However, the market sounding exercise undertaken by PwC revealed that infrastructure proponents and property developers are not best suited to being project partners, given their different views and expectations in relation to project return, life and risk.
- 3.25. The Land Management Corporation (LMC) is currently undertaking the Port Adelaide Waterfront Redevelopment Project, which entails the development of Government held waterfront land in the Inner Harbour. As a result of the Cabinet decision of 4 June 2001, three of the Transport SA parcels have been included within the LMC's project boundary, to ensure that development of these parcels will be in accordance with a coordinated master strategy for the whole of the inner harbour area.
- 3.26. Given the advice received from PwC concerning incompatibility between infrastructure proponents and property developers, it is proposed that responsibility for realising the best value from the land be transferred to the LMC, with a transfer of the necessary funds from LMC to Transport SA. The LMC is best able to manage the risks of redevelopment of the land and hence maximise its value. A decision on the quantum of funds to be transferred will be deferred until the results of the Request for Proposals for Stages 2 and 3 are known. Colliers Jardine was engaged by a combined LMC/DTUPA Committee to value the subject land. It was valued by them at \$11.95 million.

#### Setting of Tolls

- 3.27. Income for Stages 2 and 3, for which private sector involvement will be sought, will be generated by the application of tolls over the road and rail bridges. The Government will set the maximum toll to be charged in order to protect the public (the Minister for Transport has the legislative powers to do so). The private sector can set any toll lower than the maximum.
- 3.28. Extensive traffic modelling has been undertaken by Transport SA's in house experts, and has been reviewed by external consultants, QED and Maunsell McIntyre. It is recognised that how motorists perceive the toll charges relative to the travel cost savings, and the availability of alternative routes, will influence the level of diversion from the bridge (note that there will remain a free route for cars and light commercials through Port Adelaide and over Birkenhead Bridge). The level of traffic leakage or diversion will have a significant impact on the toll revenues.
- 3.29. Consultants Maunsell McIntyre and PPK have both provided advice on the likely levels of diversion. Without any local experience with tolls to go by, similar or typical interstate projects were examined. For the purposes of financial modelling, a conservative (high) leakage factor of 50% for the first year, and ramping down to a steady-state 40% leakage thereafter has been adopted.
- 3.30. It is proposed that traffic management measures will be implemented as part of this project to minimise the amount of leakage on to the free route. These measures and incorporated in the project budget and include the establishment of gazetted over-dimensional vehicle routes and the placement of a load limit on Birkenhead Bridge (also a possibility of reducing the bridge to one lane in each direction). This approach will compel commercial vehicles to use the new toll bridge. Other measures to discourage cars range from a reduction in the number of lanes through the Port Adelaide Centre, changes to street parking

configurations, creation of cycle lanes and the introduction of lower speed limits. One of the objectives of the project is to improve the amenity within the Port Adelaide Centre. The delivery of this objective will discourage traffic within Port Adelaide, which will result in creating a more pedestrian friendly environment.

- 3.31. Proponents will be required to bid on the basis of toll levels determined by Government (to simplify tender comparison). Proponents will also be able to submit proposals on alternative tolls at their discretion.
- 3.32. For the purposes of financial modelling undertaken by PwC, toll charges of \$1 for cars and light commercials, \$5 for heavy commercials and \$10 for road trains and overdimensional vehicles were used. The private sector will be provided with the assumptions used for the modelling, and proponents will be required to use the above rates as their base model in their proposal.

### Rail Bridge Issues

- 3.33. Cabinet has previously approved the construction of the rail bridge, however no funding source was identified. All analysis since that Cabinet approval has reinforced the operational efficiencies and economies of building the rail bridge at the same time as the road bridge. It is therefore proposed to seek private sector funding as a package together with the road bridge over the Port River.
- 3.34. The provision of the rail bridge will contribute significantly to achieving the objectives of the project. There are a number of changes to the activities at Outer Harbor and the LeFevre Peninsula that will bring about a large increase to both the tonnage and frequency of freight trains operating in the area. These include the Ausbulk Grain Handling facility, proposed new container terminal, direct transfer of cars from manufacturing plants, and SouthCorp Wines railing of wines in containers. There are currently approximately four trains to the LeFevre Peninsula per day. The aforementioned developments would raise the frequency to about 10 trains (20 movements) per day.
- 3.35. Many of these changes are being brought about by the development of Outer Harbor and deepening of the port to take larger sized Panamax vessels as part of the Ports Corp sale. It should be noted that the Government has given a commitment to the developers of the Ausbulk Grain Terminal that it would use its "best endeavours" to provide the new freight rail infrastructure. The impact of the increased freight movements has raised two issues, which are currently being investigated, and include changes to the rail alignment and the operation of the rail bridge. These are discussed in the following paragraphs.
- 3.36. The curve of the rail track leaving the bridge and heading north on to the LeFevre Peninsula is presently at a minimum radius, in order to reduce the length (and hence cost) of the rail bridge itself over the Port River. The tightness of this curve would result in a certain degree of "wheel squeal" as the flanges of the wheels rubbed along the rail head. This was not considered to be a major issue during the concept development phase, as the volume of rail traffic was relatively low, and the disturbance caused by the wheel squeal was considered to be of an acceptable level. However, with the increased rail traffic, this is now considered to be a major issue and has been raised by Council, the Environment Protection Authority and community groups. Alternative alignments which increase the radius, ie ease the curve, are being examined. In order to improve this curve radius, the rail bridge will need to be shifted to the north by approximately 60 metres, which will impinge on the Ports Corp Sale boundary. This issue is a sensitive one, given that negotiations for the sale are currently underway. This

matter is being discussed with DAIS. It is not known at this stage if this development is beneficial or prejudicial to the sale negotiations. However any increased certainty of providing the rail bridge should be seen positively.

- 3.37. The increased freight rail traffic will also have an impact on the operation of the rail bridge, namely the frequency and duration of the opening and closing. The original intention was that a low level (wharf to wharf) bridge, would remain in an open position, thus allowing passage for river traffic, until a train arrived. With the increased frequency of rail traffic, the rail bridge would remain in a closed position for up to 9 hours per day. This would have a significant impact on the operation of the inner harbour, and may entail the relocation of the inner harbour users, or some other compensation. Furthermore, this may have an impact on the value of the LMC land and the inner harbour redevelopment project. Several options are currently being considered.
- 3.38. One option is to have limited opening times at specified time slots, similar to the proposed operating regime of the road bridge. However, the road bridge is at a 6 metre clearance level and does allow the passage of smaller vessels during non-opening times. The wharf level height of the rail bridge would preclude the passage of any vessels until the bridge was opened. Raising of the rail bridge to the same six metre clearance as the road bridge, is another possible solution. However, this would increase the cost of the rail bridge by some \$5M-\$6M. A third option is to lower the road bridge to the same height as the rail bridge, which would reduce the cost of the road bridge.
- 3.39. The intention is to return to Cabinet with the results of investigations of these matters at the same time that advice is provided to Cabinet on the finalisation of the Commonwealth's commitment. The EoI will not be issued until both issues are resolved with Cabinet. In the interim, it is proposed to progress the Public Works Committee submission as is and to notify the Committee when and if any material change is agreed by Cabinet. This process has been advised to the Prudential Management Group.
- 3.40. If the existing rail loop around Port Adelaide was retained, upgrading of the existing infrastructure would be required. The existing alignment over the Commercial Road Viaduct and existing Port River bridge (adjacent to the causeway at Bower Road) would need significant upgrading to withstand these increased axle loads. The viaduct is currently in poor structural condition and is undergoing urgent repairs. Further strengthening of the structure to carry the increased axle loads would cost an estimated \$1.5M. Furthermore, the existing viaduct is only single track operation which will result in significant interference from the TransAdelaide passenger operation (which has priority).
- 3.41. It should be noted that the existing agreement between the Government and the grain industry requires the provision of a 60 kph speed environment between Dry Creek and Outer Harbor. This cannot be achieved on the existing loop around Port Adelaide, and in fact significant delays can be expected by freight trains whilst waiting for the loop to be cleared by passenger trains. The initial alignment, with tight radius curve would also have not been able to entirely achieve the desired speeds (only 25-30 kph around the curve). However, the new alignment currently being investigated to reduce the wheel squeal problem will assist in meeting this requirement. There will be no restrictions due to passenger operations.
- 3.42. It is proposed to toll the freight rail traffic at the same per freight tonne rate as road freight to maintain equity between the modes. This equates to

approximately \$500 per train, and represents approximately 12% of the capitalised value of the combined road/rail revenue stream.

3.43.

Clause 10(1) Legal Professional Privilege

The ARTC is the owner of all track Australia wide and levees an access charge on rail operators. Discussions have been held with ASR (rail operator) and the ARTC (track owner) on the issues of implementation and operation of the rail bridge. Further discussions have also been held with DAIS (who are managing the Grain Terminal project), Ausbulk and the Australian Wheat Board.

- 3.44. The existing freight line passes through residential sections of Rosewater, and shares part of the route with suburban passenger trains around the periphery of the Inner Harbor. The new rail bridge will remove freight rail traffic from these areas and thereby improve the amenity and hence remove a significant constraint on the 'Port Adelaide Waterfront Redevelopment' project, assisting in the urban regeneration of Port Adelaide and its districts. The Port River Expressway will: generate new residential and commercial activity within the Port Centre; significantly contribute to the amenity of the housing adjacent to the rail line proposed as part of the Port Waterfront Re-development project and create a number of open space opportunities including better linkages across it to adjacent areas.

#### Market Appetite

- 3.45. PricewaterhouseCoopers (PwC) undertook a market sounding exercise on behalf of Transport SA during April and May of 2001. The exercise was designed to assist Transport SA to understand the key issues of importance to the project and the manner in which the private sector may address these issues. In order to obtain a wide range of views on the project PwC approached construction companies, financiers and property development companies. Overall, the project has a fairly high profile throughout Australia, and the market sounding exercise succeeded in raising a number of issues of concern and providing valuable feedback on the private sector's perception of the project and process. The major issues raised will be used to ensure that the project package as put to the market will have sufficient scope and flexibility to be attractive and hence ensure a wide range of interest.
- 3.46. There has also been a great deal of interest from the construction industry over the past 18 months. Transport SA has maintained an Australia wide mailing list, and regular contact has been made by industry regarding the project status and developments. Numerous consortia interested in the project have already formed, and have had individual briefings with the Project Director and Project Manager. An industry information session and release of the Registration of Interest documentation for Stage 1 occurred on 10 July 2001, and was attended by 35 organisations, many from interstate, which again indicates a high level of interest for this project.

Project Risks

3.47. A formal risk assessment has been undertaken for the Project. A number of the risks relating to the market, traffic volumes, tolling, rail issues and the land package are discussed within the body of this submission. Other major risks identified together with mitigation strategies are detailed in the Appendix to this submission. The risks discussed include:

- Geo-technical
- Funding
- Adelaide Brighton Cement
- Local Government
- Political

3.48 It should be noted that although Port Adelaide Enfield Council (PAE) is supportive of the project in principle, Council's elected members do not support the location of the bridges, preferring a crossing further to the north. Furthermore, the Council is in a position organisationally where decision making is difficult. The risk of this to the project is discussed in section 3.50 and in the Appendix.

Planning Issues and Processes

3.49

Clause 10(1) Legal Professional Privilege
---

Clause 10(1) Legal Professional Privilege
---

This process is managed through the Development Assessment Commission (DAC), and requires that the application must be submitted to Council for comment, for which Council have a prescribed time (2 months) to respond. As discussed earlier, PAE elected members do not support the location of the bridges, and there is some concern over the ability of Council to make timely and constructive decisions which will contribute to this project. The Council has 2 months to comment on the application. Any report from Council opposing the proposed development must be included in DAC's report to the Minister.

3.50 After receipt of the report, the Minister may approve the development, or direct that it be assessed and dealt with under the 'major development' provisions of the *Development Act*. In this case, it will be necessary to appoint a Delegate Minister to make a determination in relation to the application. The Minister's decision is not subject to any appeal. If the Minister approves a development opposed by the Council, or that DAC has assessed at serious variance with the Development Plan, the Minister must prepare a report on the matter before both Houses of Parliament.

4. **ECONOMIC, FINANCIAL AND BUDGET IMPLICATIONS****Project Cost**

- 4.1. The total project cost is estimated at \$131.6 million and includes the Hanson Road extension. This is an increase on the previous strategic estimate of \$120 million undertaken in 1999, which was primarily a CPI increase of the 1997 estimate. The principal reasons for this increase are inflation and the geotechnical conditions encountered along the alignment.
- 4.2. The breakdown for each of the three stages of the Project is as follows:

<b>Stage</b>	<b>Description</b>	<b>Estimated Cost</b>
Stage 1	Expressway (including Hanson Road)	\$58.1M
Stage 2	Road Bridge	\$54.2M
Stage 3	Rail Bridge	\$19.3M
<b>TOTAL ESTIMATE</b>		<b>\$131.6M</b>

**Economic Evaluation**

- 4.3. An Economic Evaluation has been undertaken by consultants PPK, with the assistance of the Adelaide University's School of Commerce. The benefit-cost ratio of the proposed project has been estimated to be within the range of 2.5 to 3.3.
- 4.4. The Expressway (Stage 1) on its own has a benefit-cost ratio of 5.2. The benefit-cost ratio of the combined Stages 1 and 2 is 3.7 (assuming that one would not construct Stage 2 in isolation). The rail bridge on its own has a benefit-cost ratio of 1.2.
- 4.5. Although each Stage is economically justifiable in its own right, concurrent delivery of all the Stages will realise the full benefits of the project. In summary, delay in the delivery of Stage 2, the road bridge, will delay the reduction of heavy freight through the centre of Port Adelaide. Similarly, exclusion or delay to the provision of the rail bridge will impact on the full realisation of redevelopment opportunities of the Port Adelaide Inner Harbor areas by the Land Management Corporation, and eliminate or delay the benefits to the industries using rail freight on the LeFevre Peninsula, particularly the proposed Outer Harbor grain handling facility.

**Reconciliation to Treasury Forward Estimates**

4.6. The tables below set out the current estimated funding from each of the funding sources. This is based on the current financial modelling and application for additional Federal funding, and reconciles with the Treasury Forward Estimates.

<b>State Funding</b>	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	Total
Concept Development	1.1						1.1
State Funded Roadworks		3.8	1.9	12.0	0.8		18.5
Additional Funding April 2001				3.3	8.5	0.2	12.0
<b>Total State Treasury Funds</b>	1.1	3.8	1.9 <sup>(2)</sup>	15.3	9.3	0.2	31.6 <sup>(1)</sup>
Grand Junction Rd Stockpile				1.5			1.5
LMC Land Package <sup>(3)</sup>				11.95			11.95
<b>TOTAL STATE CONTRIBUTION</b>	1.1	3.8	1.9	28.8	9.3	0.2	45.1

<b>Federal Funding</b>	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	Total
Federal Funds Approved – Stage 1			5.0 <sup>(2)</sup>	6.0	7.5		18.5 <sup>(1)</sup>
Additional Sought – Stage 1				5.36	2.85		8.21
Additional sought – Stage 2				4.14	3.95		8.09
				9.5	6.8		16.3
<b>TOTAL FEDERAL FUNDS</b>			5.0	15.5	14.3		34.8

<b>Private Sector Funds</b>	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	Total
Required			1.1	12.0	29.4	9.2	51.7
<b>TOTAL PRIVATE FUNDS</b>			1.1	12.0	29.4	9.2	51.7

<b>Combined funding</b>	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	Total
<b>TOTAL COMBINED FUNDS</b>	1.1	3.8	8.0	56.3	53.0	9.4	131.6

- (1) Approved Forward Estimates of \$50.1M. Note that the Capital Investment Statement identifies total approval of \$49.3M. This will be amended to \$50.1M when the Forward Estimates are next updated.
- (2) Agrees with proposed expenditure 2001/02 in the Capital Investment Statement (\$11.2M), but adjusted for deferral of Federal Funding of \$4.3M to outer years.
- (3) Assumed payment from LMC for the land package subject to outcomes from RFP process for Stages 2 & 3.

4.7 If the project were constructed with public funds, the additional cost to Government would be \$51.7M. Furthermore, there would be an additional \$10.7M in costs as identified in the Value For Money analysis discussed in section 3.20. In addition, there would be approximately \$2.0M per annum of ongoing maintenance and operation costs associated with the bridges.

- 4.8 The table below summarises the funding contribution by Stage and source:

	<i>State Contribution</i>	<i>Federal Contribution</i>	<i>Private Funding</i>	<i>Total</i>
Concept Development	\$1.1m			\$1.1m
Stage 1- Expressway	\$26.6m	\$26.7m		\$53.3m
Stage 1 – Hanson Road	\$3.7m			\$3.7m
Stage 2 – Road Bridge	\$10.6m	\$8.1m	\$35.5m	\$54.2m
Stage 3 – Rail Bridge	\$3.10m		\$16.2m	\$19.3m
<b>TOTAL CONTRIBUTION</b>	<b>\$45.1m</b>	<b>\$34.8m</b>	<b>\$51.7m</b>	<b>\$131.6m</b>

- 4.9 The table below details the State's funding contribution by Stage and financial year:

<i>Stage</i>	<i>99/00</i>	<i>00/01</i>	<i>01/02</i>	<i>02/03</i>	<i>03/04</i>	<i>04/05</i>	<i>Total</i>
Stage 1 incl Hanson Rd	\$1.1M	\$2.7M	\$1.6M	\$18.1M	\$7.9M		\$31.4M
Stage 2 – Road Bridge		\$1.0M	\$0.3M	\$9.1M		\$0.2M	\$10.6
Stage 3 – Rail Bridge		\$0.1M		\$1.6M	\$1.4M		\$3.1M
<b>TOTAL</b>	<b>\$1.1M</b>	<b>\$3.8M</b>	<b>\$1.9M</b>	<b>\$28.8</b>	<b>\$9.3</b>	<b>\$0.2M</b>	<b>\$45.1</b>
<i>Comprising:</i>							
Treasury Funds	1.1	3.8	1.9	15.3	9.3	0.2	31.6
Land Proceeds				13.5			13.5

### Financial Modelling

- 4.10 Financial advisors, PricewaterhouseCoopers (PwC), have been engaged to provide advice to Government in relation to the project. As part of that role, they have tested the financial feasibility of the project under a range of scenarios, using a financial model developed by them in conjunction with Transport SA.
- 4.11 The level of private capital investment in this project, and hence the level of any Government capital input, is dependent on the amount of revenue that can be raised from the application of tolls. PwC advise that the project feasibility is highly sensitive to traffic volumes and traffic diversion or "leakage" around the bridge site. Hence TSA officers have undertaken extensive traffic modelling which has been reviewed by external consultants, QED. Four alternative scenarios have been developed which represent a range of traffic volumes over a 30-year period.
- 4.12 Further advice was sought from consultants PPK and Maunsell McIntyre on the likely levels of traffic leakage as this also has a significant impact on toll revenues (refer to 3.29).

- 4.13 The results of the modelling undertaken to date are tabled below, and are represented in terms of Government subsidy as a net cash outflow (capital expenditure) or net cash inflow (capital income). In all cases the modelling assumes that traffic management measures to reduce the level of leakage have been implemented.

Case	Assumptions	Government Subsidy/Income	
		Equity Return 15%	Equity Return 16.5%
Downside Case	Construction Cost +10% Operating Costs +5% Operating Revenue -5%	\$13.2M (expenditure)	\$16.8M (expenditure)
Intermediate Case	Traffic Scenario 2 – (Traffic Scenario 3 less 15%)	\$2.0M (expenditure)	\$5.8M (expenditure)
Upside Case	Traffic Scenario 3 – (Traffic generation assuming moderate development of LeFevre Peninsula)	(\$16.0M) (income)	(\$11.3M) (income)

- 4.14 The original financial modelling indicated a \$6.0 million income for the Government i.e. a point between the Intermediate Case and the Upside Case. This was the number which formed part of the overall financial model on which the contributions from the Federal and State Government as well as the private sector were based. Although the above table suggests the \$6.0 million is optimistic, both DTUPA and PricewaterhouseCoopers still believe it is realistic. It also needs to be recognised that this is only a modelled number and that the actual result is likely to fall anywhere within the sensitivities shown above. Attached is a summary report from PwC, which details the assumptions and results.

### Surplus Value

- 4.15 The financial analysis identifies that the returns to Government are very sensitive to traffic forecasting. Although the best advice, techniques and analyses were used, actual traffic volumes invariably differ from those forecast. Private proponents of toll roads are not generally protected by Government in the event that the traffic forecasts are lower than expected. This is a risk borne by the private sector. However, concession deeds do usually include some mechanism for recouping excess returns in the event that the project exceeds forecasts. The Expression of Interest documentation will reflect the intention of the Government to capture excess returns.
- 4.16 In determining a mechanism for recovery of excess returns, it needs to be recognised that the private sector must be able to recover a certain amount of any excess return as a reward for the risk it is taking. Since the private sector takes the risk that returns may be lower than expected, a certain amount of upside should be allowed before the Government takes a share. Consequently, mechanisms for recovery of excess returns generally do not apply until a threshold return has been met and, only from that point, are these benefits usually shared between the private and public sectors.

4.17 There are three methods for sharing of excess returns:

- Sharing after a threshold is met. In this method the concessionaire provides its financial model to the Government, and when the capital is fully recovered and return expectations are met, a formula will apply whereby any future returns from the project are shared with the Government. The downside is that the Government may have to wait for 10 to 15 years before realising any returns itself.
- Sharing excess cashflows over the life of the project. Under this mechanism, the project model is again incorporated by reference in the concession deed. In each year, the cashflows forecast are compared with the cashflows generated by the project and, should cashflows actually generated exceed the cashflows forecast, a certain proportion of these are remitted to Government. The downside of this mechanism is that it is complex to administer and allows for gaming by the private sector in certain circumstances. For example, the concessionaire will have an incentive to bring forward expenditure or increase management fees in profitable years to avoid payment of surplus value.
- Reduction in Price. While it is unusual, it would be possible to negotiate a mechanism whereby, when excess returns are achieved, the tolls applicable to the bridge could be reduced, thereby sharing the excess returns with the users of the bridge. Alternatively, the concession period could be shortened and the bridge revert back to Government ownership sooner.

4.17 Although the most complex to administer, the preferred option is the sharing of excess cashflows, as this provides a return to Government earlier, rather than later. The specific details of Government requirements with regards to surplus value will be stated in the Request for Proposal documentation. This is consistent with advice and practice from interstate.

#### Excess Losses

4.18 In the event that the project's traffic forecasts are significantly lower than expected, the practice is more clear cut. Generally speaking, the private sector is required to bear its own losses. Nonetheless, this will be affected somewhat by the step-in rights retained by Government. These step-in rights will provide that, if the concessionaire abandons the project, the Government will have the right to step-in and operate it. In this event, the law will generally operate to require some compensation to be paid to the concessionaire and this will generally be determined with reference to the value of the project (if any) less any Government costs and any accumulated penalties incurred by the contractor.

4.19 Recent interstate transactions have also introduced a new concept to the toll road market whereby the concession could be extended in the event that forecast returns were not achieved. In these arrangements, the concession extension is limited to a specific additional period above the original term, but provides additional assurance to the concessionaire on the likelihood of achieving return aspirations.

## 5. CONSULTATION

5.1 Consultation has been managed through the membership of the Project Steering Committee and includes the following organisations:

- Transport SA,
- DAIS (Land Management Corporation),
- Planning SA,
- Treasury & Finance,
- Premier & Cabinet,
- Industry & Trade,
- Attorney General's, and
- Commonwealth Department of Transport & Regional Services.

5.2 In addition, the Environmental Protection Authority (EPA) and Ports Corp have been consulted regarding land contamination issues and land boundary issues respectively.

5.3 An Environmental Report has been produced for the project which involved consultation with a broad cross section of the community. This report was released for public comment and display in November 2000 for five weeks. Meetings were arranged with representatives from a wide range of organisations, groups and agencies. A total of 175 comments were received which have been investigated in detail and documented in the Supplement to the Environmental Report. The supplement was approved for release on 13 July 2001.

5.4 A presentation on the processes and procedures to be followed was made to the Prudential Management Group (PMG) on the 8<sup>th</sup> November 2000. A further presentation was made on the 17<sup>th</sup> July 2001.

## 6. BENEFITS OF THE PROPOSAL

6.1. The key direct benefits arising from the project include:

6.1.1 Estimated travel time saving of 15 minutes for travel from Port Wakefield Road to Port Adelaide in peak times.

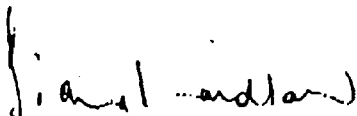
6.1.2 Vehicle distance and fuel cost savings – the project design and modelling suggests that travel distance from Port Wakefield Road to the LeFevre Peninsula will be reduced by 3 kilometres. As well as the direct reduction for users of the Expressway, there will be even more substantial reductions for vehicles that “divert” from alternative routes onto the Expressway.

- 6.1.3 Operating cost savings will be achieved on the rail network due to a 4 km reduction in travel distance, with a further saving due to reduced grade in other areas of the track, with other savings including reductions in track maintenance costs, for example, TransAdelaide's Commercial Road viaduct.
- 6.1.4 A study has indicated that the efficient operation of the Outer Harbor Grain Terminal will be extremely difficult without the construction of the new rail bridge, as the operation is dependent on just-in-time delivery of high volumes of grain.
- 6.1.5 Associated with these effects will be the reduced risk of accident and environmental impacts.
- 6.2. It must be noted that a significant proportion of the road time savings benefits are connected with the freight rail diversion, which includes the removal of six level crossings from the road system – one of which is on the major arterial of Grand Junction Road. This indicates that the rail component is an integral part of the overall project.
- 6.3. The key indirect benefits arising from the project include:
  - 6.3.1 The construction stage will have an impact on the economy through the creation of jobs and regional incomes.
  - 6.3.2 The cost savings involved in improved access to the area will lead to an improvement in industry cost competitiveness in a general sense, and thereby have broader economic development implications. For example, these cost savings will lead to increased competitiveness and therefore increased exports and local supply.
  - 6.3.3 Increased property values in Port Adelaide and surrounding areas due to greater amenity resulting from the removal of road and rail freight.
  - 6.3.4 A number of specific economic development opportunities, for example the urban regeneration of the Port Adelaide area.

## 7. RECOMMENDATIONS

It is recommended that Cabinet:

- 7.1 Endorses the attached Report to the Parliamentary Public Works Committee.
- 7.2 Approves the calling of Tenders for Stage 1 of the project subject to Federal Government approval of additional matching funding under the Roads of National Importance program.
- 7.3 Notes that Private Sector Involvement will now be sought for Stages 2 and 3 (Road and Rail Bridges) in the one package.
- 7.4 Approves the calling of Expressions of Interest for Stages 2 and 3 of the project, and approves Stage 1 progressing irrespective of the outcome of this process but subject to the normal requirement to return to Cabinet for acceptance of the Stage 1 tender.
- 7.5 Notes that the revised total cost estimate for the project is \$131.6 million. This estimate is exclusive of the capital costs of raising the height of the rail bridge. In the event this is required, it is anticipated costs in the order of \$5 million will be added to the project. The impact of this upon the Government's required financial contribution will not be known until the results of the BOOT have been received and the contributions from the Commonwealth and LMC land development are known.
- 7.6 Approves the future transfer of land previously approved as equity for this project to the Land Management Corporation (LMC) for development with a decision on the terms to be deferred until the results of the Request for Proposal for Stages 2 and 3 are known. (Note: quantum of funds was earlier estimated by Colliers Jardine for DTUPA Committee at \$11.95 million).
- 7.7 Notes that it is proposed to give the private sector a major participating role by advancing Stages 2 and 3 as a SOOT. This involvement introduces some uncertainties in addition to the normal project delivery uncertainties that form part of all major engineering works. The specific uncertainties associated with the BOOT are pricing of tolls; extent of traffic diversion; bridges operating regimes; and, ultimately, provision of a value for money outcome for government.  
  
Other identified uncertainties not associated with the SOOT are:
  - Proceeds from the sale of subject land being less than original forecast of \$11.95 million.
  - Confirmation of anticipated contribution from the Commonwealth Government;
  - Cost of raising rail bridge, if required
  - Impact on Ports Corp sale of proposed realignment of rail bridge (DAIS anticipates this is unlikely to be material).
- 7.8 Notes that the net benefit to Government of relocating Heini Becker Park has been incorporated into the financial analysis and agrees, in principle, to the relocation being to another site on Government Land.



Diana Laidlaw, MLC

MINISTER FOR TRANSPORT AND URBAN PLANNING

28 / 6 / 2001

## APPENDIX - PROJECT RISKS

1. Geo-technical Risks

Extensive geotechnical and environmental investigations by a number of engineering consultants have been undertaken along the project alignment, including the construction of three trial embankments to monitor settlement. The result showed that Stage 1, in particular, has very poor geotechnical foundation conditions, which have construction and long term stability/performance implications, and some land contamination.

Analysis of the results has shown that embankment heights above 3 metres cannot be supported on insitu ground. The design of structures has been such to take these conditions into account, and this has been scoped into the project cost estimates. An allowance of \$1.7M has been included for the remediation of contaminated land.

In order to manage the risks associated with the geotechnical and contamination issues, Stage 1 will be delivered as a Design, Construct and Maintain (DCM) contract as distinct from a Construction only contract.

In a traditional construction only contract, the Principal manages the design and hence is exposed to latent condition claims and retains the responsibility for the completed product. In a DCM contract, the Contractor is responsible for all the aspects of delivery and hence bears the risk for any problems or conditions encountered. It is usual for a builder to form a consortium or partnership with a designer. This also creates the best environment for innovative design and innovation in construction techniques, as well as presenting an opportunity for cost savings.

Given the poor foundation conditions, and the possibility of long term stability problems, a maintenance period of 10 years is proposed as part of this contract. Any defects in either the design solution or construction practice should develop during this time, and would be the responsibility of the contractor to rectify.

All geotechnical information collected to date will be made available during the EoI/RoI and tendering process. How tenderers respond to these issues will form part of the evaluation. If further testing is required, Transport SA will undertake the work and distribute the results to all tenderers.

2. Funding Risk

In December 1999, Cabinet approved the route of the Port River Expressway, and the construction of the road and rail bridges. However, sources of funds for the bridges were not identified at the time. There are two risks associated with the lack funding commitment:

- Proceeding with Stage 1 prior to obtaining funding commitment to Stages 2 & 3, and
- Insufficient competition in the bidding process to fund Stages 2 and 3 leaving the Government (State and Federal) to fund all or most of these stages

Funding for Stage 1 has been largely secured, with the Federal Government committing \$18.5M under the Roads of National Importance Program, and is at present considering an application for a further \$8.2M. The State Government has committed the balance of the funding (\$31.4M) for this stage. Should the Commonwealth Government not

approve this funding, or the required cash flow projections not be met, then there would be a significant shortfall. However, the indications from discussions with Federal officers are positive.

The economic evaluation undertaken for the project has shown that Stage 1 has a high benefit-cost ratio of 5.2 and is highly justifiable in its own right. However, delivery of this stage on its own will not realise the full benefits of the project, ie it will reduce the pressure on Grand Junction Road and South Road, and will reduce the travel times to the LeFevre Peninsula, but will not remove the heavy road freight traffic from the Port Adelaide Centre.

The Federal Government is also considering funding of \$8.09M towards Stage 2 of the project, with the State Government contributing \$8.24M. The balance of \$37.8M is to come from private sector investment. Similarly Stage 3, the rail bridge has only \$3.1M of State Funds committed with \$16.3M to come from the private sector.

Intelligence to date has shown that there is a high degree of interest in this project (refer to the section on Market Appetite within the main body of the Cabinet Submission). The financial modelling has shown that the project is feasible, and that under a worst case scenario there will be a requirement for some further Government funding. The market sounding exercise undertaken by PwC has raised a number of issues of concern which will be used as input into the project documentation to ensure that the project has sufficient scope and flexibility to be attractive and hence ensue a wide range of interest.

The scheduling of ROI/EOI, and letting of contracts for Stages 1 and 2 & 3 has been designed around protecting the interests of both Governments, whilst ensuring some certainty of private sector investment. That is, there will be increased uncertainty in its tender submission unless the private sector has some confidence that the road component Stage 1 will be delivered in the time frames consistent with its works on Stage 2 (note that Stage 1 is essential to bring traffic to the road bridge). The contract award for Stage 1 is scheduled for February 2002, by which time the shortlist for Stages 2 and 3 would have been decided and Request for Proposal documents issued.

### 3. Adelaide Brighton Cement

A portion of land is to be acquired from Adelaide Brighton Cement Pty Ltd (ABC) on the western approach of the road bridge. ABC have been acquiring land in this area over a number of years to comply with EPA requirements and provide a buffer from their operations. The land acquired by Transport SA which will be surplus to the project will be included as part of the LMC's land package. ABC are concerned that any development of the subject land would interfere with their buffer zone. The Land Management Corporation has given an undertaking to the ABC that there will be no sensitive developments (ie residential, schools, hospitals) in the area within a ten-year timeframe. Despite this, the ABC is not prepared to cooperate with Transport SA with the land acquisition process.

Transport SA's planning for the project has always assumed that the subject land would have to be acquired compulsorily. The risk involved is more in terms of time rather than cost. Hence this process has already been built into the program, and will not cause delays to the project. Costs for acquisition have been scoped as part of the project. Of note is that ABC may be eager to purchase some land which they currently lease from the Government, and this may be used as leverage in any negotiations.

4. Local Government

The Port Adelaide Enfield Council (PAE) have not endorsed the Environmental Report as the elected members do not support the location of the bridges, preferring a location further to the north. PAE appear to be in a position organisationally where decision making is difficult. This creates a risk to the project as they are the planning authority, and Stage 2 requires Development Assessment Commission (DAC) approval. Discussion on this aspect is included in sections 3.43 and 3.44.

The Port Adelaide Enfield Council acknowledges the benefits of the project, as one of the key objectives is to improve the amenity of Port Adelaide by the removal of heavy commercial vehicles from its centre. Most of the traffic management measures are to be undertaken along roads which are managed by Transport SA, however Council support is generally sought for such measures. A load limit needs to be applied on the Birkenhead Bridge and Council is supportive of this.

Whilst it is desirable to have Council support, and Transport SA will continue to work with Council, it is not essential and the work can be performed without Council approval. It should be noted that part of the project involves Transport SA taking responsibility for the maintenance of some of Council roads, ie Hanson Road and St Vincent Street East, and Council staff are viewing this trade off in a positive light.



**LEGEND**

- Existing National Highway
- Existing Arterial Roads
- Existing Freight Rail Line
- Existing Freight Rail Line to be Decommissioned
- Existing passenger Rail Line
- Stage 1 - Expressway
- Stage 2 - Road Bridge
- Stage 3 - Rail Bridge

**LOCALITY & NETWORK CONTEXT PLAN**  
NOT TO SCALE

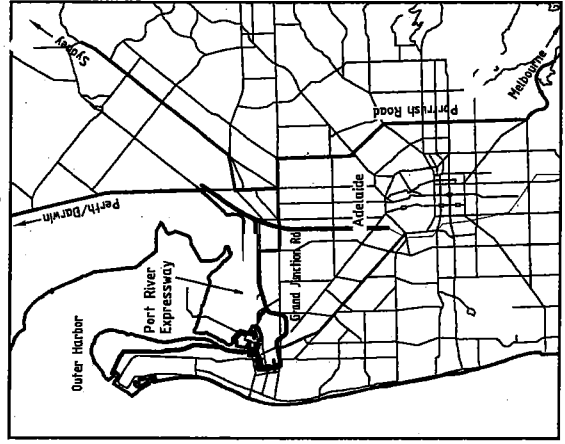


Figure 1





LMC PORT  
WATERFRONT  
REDEVELOPMENT LAND

PREXY LAND TO BE  
TRANSFERRED TO LMC



INNER HARBOUR URBAN REGENERATION



Figure 2

Private and Confidential

Mr Tim O'Loughlin  
Chief Executive  
Transport SA  
Level 9, Roma Mitchell House  
136 North Terrace  
ADELAIDE SA 5000

6 August 2001

Dear Mr O'Loughlin

Transport SA has requested us to provide some background to the financial modelling we have completed on its behalf, comment on recent changes to the model, and summarise the most recent results. We have been asked to keep our comments to two pages in length.

#### Assumptions

It is not possible in a document of this length to fully detail the assumptions used in the financial modelling. Assumptions used, such as capital and recurrent costs and traffic, were provided by Transport SA and consequently this letter should not be viewed as confirmation of their accuracy. Assumptions in relation to the private sector's expected financing structure for the project, however, were based on our experience and on indications from the private sector during the market sounding exercise conducted by us. These financing assumptions therefore represent our best estimate of what the private sector might require from the project. A selection of these assumptions are set out below:

Revenue		Costs		Finance	
Traffic scenario (Road)	Scenario 2 (see below)	Construction - start - end	\$66.1 million 1 April 2002 31 Oct 2004	Base interest rates	6.25%
Tolls	Cars \$1.00 Trucks \$5-10	Operating and Maintenance costs	\$1,879 million pa	Construction debt margin	0.80%
Toll increments	20c increments in line with CPI	Future Capital Expenditure including ITS	\$21.5 million	Operating debt margin	1.25%
Diversion due to tolling	50% for 12 months, 40% thereafter	Insurance - construction - operation	\$141,000 pa \$75,000 pa	Debt:equity	57%:43%
Trains per day	5 in 2004 to 8 in 2015			Sources of funding (private)	1. Bank debt 2. Equity
Toll per train	\$500 return			Debt Term	16 years
Proceeds from sale of land	\$13.5 million	Concession Term	30 years operations	Sources of funding (public)	1. Proceeds from land 2. Government subsidy

Note: All figures are in July 2001 dollars unless otherwise stated.

#### Recent Changes to the Model

Throughout the project development process, it can be expected that new and better information will frequently become available. Consequently changes to forecasts of project returns frequently occur. Recent changes have included the reflection of new rail forecasts derived from the Outer Harbour Grain Terminal work, changes to interest rates to reflect changes in the market, changes in traffic volumes to reflect revised traffic forecasts from TSA, inclusion of new construction cost estimates and changes in assumptions as to the timing of Government contributions to the project.

## Results & Sensitivities

Our analysis uses a discounted cash flow methodology for assessing the returns to project developers, which is the kind of analysis generally used by developers for projects of this nature. Based on this analysis and the assumptions provided by TSA, we calculated the results set out below. This represents the nominal cost of the subsidy to Government over the project's life.

Case	Assumptions	Government Subsidy / (Income) (\$000's)	
		Equity Return = 15% Post tax, nominal	Equity return = 16.5% Post tax, nominal
Downside Case	Construction Costs + 10% Operating Costs + 5% Operating Revenue - 5%	\$13,340	\$16,865
Base Case	Traffic Scenario 2 (Traffic Scenario 3 less 15%)	\$2,137	\$5,884
Upside Case	Traffic Scenario 3 (Traffic Generation assuming moderate development on LeFevre Peninsula)	(\$15,890)	(\$11,250)

We note that the \$(6 million) inflow to Government which we are advised was submitted in the March Treasury Forward Estimates process, and which was based on previous assumptions, is within the range of results highlighted in the table above.

The Government funding requirement is sensitive to a range of key variables. We undertook sensitivity analysis on numerous variables, including various traffic scenarios and movements in construction and operating costs. The Government subsidy was most sensitive to changes in traffic volume and construction costs. Consequently, it is our opinion that the attractiveness of the bids presented will depend most heavily on the private sector's views on these two inputs, allied with its overall confidence in the procurement process. Confidence in Australian governments' commitment to these processes has been eroded as a result of recent processes like Brisbane Light Rail, Perth Urban Rail, Speedrail and the Parramatta to Chatswood Rail Link, all of which projects were put to the private sector for Expressions of Interest but subsequently deferred or abandoned. It is therefore important to ensure that this Government and any future Governments are seen to be clearly committed to the process and that the Government is entering the process on the basis of well developed analysis. To this end, we are advised that TSA has consulted with two independent engineering consultancies in relation to the traffic forecasts and traffic diversion rates. We are also advised that the construction costs have been reviewed in detail by TSA as well as local and overseas experts.

### Supporting Analysis

This letter represents a short summary of a number of key issues in relation to which TSA has sought our advice. As TSA's financial adviser, we have provided a number of reports in relation to this project and this letter should be read in conjunction with those reports. In particular, we have provided:

- a detailed report in relation to the financial forecasts summarised here;
- indicative advice which, based on assumptions provided by TSA, suggests that private procurement of this project is likely to represent value for money; and
- a summary of the many issues raised by potential private sector consortium members in our consultation with them. Comments were received in relation to traffic forecasts, construction costs, operating costs and financing assumptions, as well as the expected process for procurement of the project.

This report has been prepared for Transport SA for the purposes of briefing State Cabinet and should not be used or relied on by any other person for any other purpose without prior written consent from an Authorised Representative of PricewaterhouseCoopers Securities Ltd. This report is not intended for general circulation or distribution, nor is it to be reproduced or used for any purpose other than as outlined above, without prior written consent in each specific instance. None of PricewaterhouseCoopers Securities Ltd, its directors and staff, nor PricewaterhouseCoopers, its partners and staff assume any responsibility for liability for any losses suffered as a result of the circulation, publication, reproduction or other use of this report contrary to the provisions of this paragraph.

This report contains forecast financial information. These forecasts rely on assumptions as to the occurrence of future events. Actual events frequently differ from those forecast. These differences may have a material effect on the achievement of these forecasts.

I trust that this letter satisfies your requirements. If you have any further questions, please do not hesitate to contact me on (07) 3257 8166.

Yours sincerely

Matthew Custance  
Authorised Representative