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INFRASTRUCTURE FINANCE: THE SYDNEY CROSS CITY TUNNEL

In September 2000, the directors of Cheung Kong Infrastructure Holdings Limited (CKI) were excited about an unprecedented opportunity to invest in a transportation project in Australia. CKI had a vision to become an international infrastructure enterprise and was keen to extend its footprint beyond mainland China and Hong Kong. The group found that Australia, with its stable regulatory environment and sound economic prospects, provided an excellent environment for infrastructure investment. In 1999, CKI made its first foray into energy assets in Australia with the acquisition of a 19.97% stake in Envestra Limited, the largest natural gas company in the country. Envestra proved to be a prime asset and generated robust financial returns to CKI.

In 2000, CKI was vying for further opportunities to invest in transportation projects in Australia when the Roads and Traffic Authority (RTA) in New South Wales invited tenders for the Sydney Cross City Tunnel (CCT) Project [see **Exhibit 1** for the chronology of events]. CKI was particularly interested in tolled transportation investments because they were usually regulated under a finite-life concession period and carried relatively low political and regulatory risks. The nature of these investments usually determined that competition for the services generated by the assets was also limited, which meant investing in such projects could possibly provide stable and predictable returns to the group. Although transportation investments could entail significant construction and patronage risks, CKI believed that these risks were manageable and could be mitigated through careful planning and negotiation with the relevant government authorities. If CKI won the tender for the CCT project, it would be no small accomplishment, as the group's existing transportation assets were all located in greater China. Given CKI's strategy of globalisation, was the project too good to miss?

Mary Ho prepared this case under the supervision of Dr. Frederik Pretorius for class discussion. This case is not intended to show effective or ineffective handling of decision or business processes.

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History of the CCT Project

Background

As in most big cities, road traffic congestion had long been a significant problem in central Sydney. In 1998, the minister for transport of NSW produced a manifesto entitled “Action for Transport 2010”, which aimed to expand the road infrastructure and thus improve traffic flows in central Sydney. The manifesto was followed by a public consultation report prepared by the RTA in October 1998. The report proposed the construction of an east-west road tunnel that would cross under the heart of the Sydney Central Business District (CBD). The primary objectives of the CCT project were to relieve traffic congestion in central Sydney, improve the reliability of public transport and provide a safer environment and improved amenities to vehicles, cyclists and pedestrians. By removing east-west through-traffic on surface streets and reallocating road space for public transport and pedestrian use, the CCT was expected to provide a number of benefits to the Sydney community, including:¹

- reduced congestion, as drivers could bypass 18 sets of eastbound traffic lights or 16 sets of westbound traffic lights on the old routes
- improved travel times, with estimated savings of up to 20 minutes during peak hours
- higher service reliability for buses through the introduction of bus priority measures
- improved access to and movements for pedestrians and vehicles
- safer and more pleasant environments with better urban designs, wider footpaths and the removal of intrusive through-traffic
- better air quality and reduced traffic noise levels.

In August 2000, following extensive environmental investigation and consultation, the RTA issued an Environmental Impact Statement (EIS) detailing the potential environmental impacts. After considering response from the community, the RTA made some amendments to the original design concepts. These modifications were approved by minister for planning in October 2001.

According to the construction plan, the CCT project comprised two stages. Stage One encompassed two east-west tunnels that spanned 2.1 km under the Sydney Central Business District and Darlinghurst/Woolloomooloo. The tunnels would run between the eastern side of the Darling Harbour and Kings Cross. Stage One works also involved the construction of associated tunnelled links to Sir John Young Crescent, the Cahill Expressway and the Eastern Distributor (see **Exhibits 2A to 2D**). It was envisaged that Stage One works would be completed in 2004 or 2005.²

Most of the tunnel would be excavated using a driven tunnel method, a proven and widely used construction technology. This involved the use of tunnelling machines that cut their way through the underground rock mass. The remainder of the tunnel would be constructed using the cut-and-cover method, whereby rock was excavated and then covered with concrete beams or planks to form a tunnel.³ No extraordinary construction risks were envisaged, though it was fully understood that this was a complex and risky project from site access, logistics and project planning perspectives.

¹ RTA (June 2003) “Cross City Tunnel Summary of Contracts”.

² Parliament of New South Wales (February 2006) “Joint Select Committee on the Cross City Tunnel, First Report”.

³ CrossCity Motorway Pty Ltd, “Construction”, <http://www.crosscity.com.au/DynamicPages.asp?cid=7&navid=7> (accessed 30 August 2006).

Subsequent to the opening of the tunnel, Stage Two surface works would begin to take advantage of the opportunities afforded by reduced traffic congestion. There would be improvements to surface roads, including new bus and bicycle lanes and other improvements to pedestrian facilities. **Exhibit 3** presents the different proposals for the CCT.

Public or Private Financing?

The NSW government considered a number of options for financing the CCT project. These included the utilisation of public funds or government borrowings. Alternatively, the NSW government could limit the commitment of public capital and finance the project through a public private partnership (PPP) arrangement [see **Exhibit 4**]. A privately financed project (PFP) was a specified form of PPP that involved not only private sector financing but also controlling ownership. Hence, PFPs differed from the outsourcing of infrastructure services or the procurement of design and construction services by the government. Under a PFP arrangement, the infrastructure would be created with a concession agreement whereby the private sector provided the capital to finance, construct, operate and maintain the assets for a specified contract period (the “concession period”). Such concession agreements typically formed part of the overall regulatory framework under which such investments were operated. When the contract period expired, the operation and maintenance of the asset would revert to public (government) ownership. While construction and operating risks could be transferred to the private sector through the use of a PFP arrangement, the market risk could still be shared by the government through an appropriate compensation arrangement. This essentially followed a project finance model where the assets were returned to the NSW government after the concession expired.

Although a number of infrastructure projects in NSW had been financed through public funds or other forms of PPP, the NSW government considered that PFP was the most appropriate method for financing the CCT project. This was largely because the NSW government was pursuing a debt reduction strategy at the time and thus, at least for the purposes of this project, imposed a budgetary constraint on itself.⁴ If the project was financed through the use of public funds or government borrowings, the construction of the tunnel could be delayed due to competing demands for public funds and the Government could risk its AAA credit rating by increasing total state debt.⁵ Alternatively, financing the project through PFP could avoid public debt altogether and result in early delivery. The RTA’s total costs on the CCT project were expected to be AU\$98 million.⁶ The sum represented project preparation costs, work on utility networks and other ancillary works associated with the project and could thus be viewed as normal spending on infrastructure improvement. Furthermore, by allowing non-conforming proposals during the tender process, the government could possibly bring in innovative approaches from the private sector and find ways to recoup its project expenses. The ultimate objective of the government was to minimise its financial exposure, delivering the project at no cost to itself.

Cheung Kong Infrastructure Holdings Limited

Listed on the main board of the stock exchange of Hong Kong in 1996, CKI was one of the leading companies in the infrastructure sector in mainland China and Hong Kong. The group had a diversified portfolio of investments in energy infrastructure, transportation infrastructure and infrastructure-related business [see **Exhibit 5A** for a list of project assets of CKI]. In 1997, CKI acquired a controlling interest in Hongkong Electric Holdings Limited,

⁴ Parliament of New South Wales (February 2006) “Joint Select Committee on the Cross City Tunnel, First Report”.

⁵ Standard & Poor's and Fitch assign bond credit ratings of AAA, AA, A, BBB, BB, B, CCC, CC, C, D. (see Wikipedia, “Bond Credit Rating, [http://en.wikipedia.org/wiki/AAA_\(credit_rating\)](http://en.wikipedia.org/wiki/AAA_(credit_rating)))

⁶ “Cross City Tunnel Parliamentary Notice”, <http://www.lee.greens.org.au/campaigns/crosscity.htm> (accessed 7 October 2006).

the sole electricity company serving residents on Hong Kong Island and Lamma Island in Hong Kong. The acquisition substantially boosted CKI's recurring revenue and strengthened its capital base. CKI and Hongkong Electric's investments in ETSA Utilities and Powercor made the group the largest electricity distributor in Australia.

With a turnover of HK\$3.345 billion and net profits of HK\$3.228 billion⁷ in 2000⁸ [see **Exhibit 5B**], CKI had a strong financial position and a good reputation for quality infrastructure projects. During the year, the energy division was the largest profit contributor, accounting for 78% of CKI's profit contribution. Investments in China and Hong Kong accounted for 86% of the group's overall profits, while investments in Australia, Canada and other countries accounted for the remaining 14%.

In 2000, CKI was actively seeking investment opportunities in three major infrastructure areas:⁹

- hedged electricity generation positions, wherein generation volume was contracted under a secure power purchase agreement structure
- near-monopoly transportation business, including toll roads, bridges, tunnels, airports and possibly sea transport facilities
- regulated monopoly network businesses, including electricity wires, gas and water pipelines.

In mid-September 2000, the RTA invited tenders for the construction, financing and 30-year operation of the Sydney CCT. The project presented an unprecedented opportunity for CKI to further achieve its global ambitions in transportation infrastructure project investment. In response to the invitation of Registrations of Interest from the RTA, CKI together with its major business partner, Bilfinger Berger Aktiengesellschaft (AG), decided to bid for the project in October 2000. Bilfinger Berger AG was one of the world's leading construction companies. Based in Mannheim, Germany, it had global operations in civil engineering and real estate, and had actively participated in privately financed build-operate-transfer (BOT) projects. With equity support from the minority superannuation trust investors, they formed the CrossCity Motorway Consortium (the CCM consortium) and obtained commitment to participate in financing from the Deutsche Bank AG, a major German bank. Bilfinger Berger AG and its wholly owned Australian subsidiary, Boulderstone Hornibrook Pty Limited, also played a sponsorship role for the tender. Boulderstone Hornibrook had a number of infrastructure projects in Australia, including the M5 East Freeway and Anzac Bridge in Sydney, the Western Link section of the Melbourne City Link and the Graham Farmer Freeway in Perth.¹⁰

The Bidding Process

In February 2001, the RTA short-listed three consortia out of eight competing for the CCT project. The CrossCity Motorway consortium was one of the three short-listed consortia for the final bid. The other two short-listed consortia were the E-Tube consortium (sponsored by Leighton Contractors Pty Limited and Macquarie Bank) and Sydney City Tunnel Company (sponsored by Transfield Holdings Pty Limited and Multiplex Constructions Pty Limited). All three selected consortia had to submit their detailed proposals for implementation on or before 24 October 2001. The proposals would be reviewed by an assessment panel from the RTA,

⁷ AU\$1 = HK\$4.3673 on 31 December 2000.

⁸ Per Cheung Kong Infrastructure Holdings Limited Consolidated Income Statement for the year ending 31 December 2000.

⁹ Morgan Stanley (28 April 2004) "Cheung Kong Infrastructure".

¹⁰ RTA (June 2003) "Cross City Tunnel Summary of Contracts".

which would select the preferred proponent based on various pre-determined criteria. The panel would conduct a comparative value assessment against a public sector comparator (PSC). A PSC was a model of the hypothetical, risk-adjusted costs of delivering the project under a government-financed method. The panel would also evaluate the tender submissions based on various non-price determined criteria, which included:¹¹

- project structure, participants and organisation
- design and construction
- initial traffic management and safety plan
- initial project plans for quality assurance, project management, environmental management, design, construction, operation and maintenance, community involvement, incident responses, occupational health, safety and rehabilitation management and project training
- operation and maintenance.

Preparing the Proposal

The CCM Consortium had to submit detailed proposals showing how it planned to complete the design, construction and operation of the CCT. According to the tender documents from the RTA, “business consideration fees” were potential areas that were available for further exploration if there was potential excess revenue over cost during the term of the concession. All short-listed consortia could nominate a business consideration fee to the RTA, which was intended to contribute towards RTA costs associated with the project.

The CCM Consortium was aware that the RTA was likely to prefer proposals that were consistent with its objective of delivering the project at “no cost to government”.¹² Given RTA’s policy, the CCM Consortium felt that the payment of a reasonable business consideration fee would be effective in meeting the objectives that the government had set. By putting forward a proposal that would focus their bid on the business consideration fee, the CCM Consortium was confident that its proposal could offer superior value for money over traditional methods of government delivery.

Since there was no mandatory requirement to submit a conforming proposal to meet all conditions set by the RTA, there was an opportunity for the CCM Consortium to bring in critical changes to the original project plan to reap maximum returns and recoup the costs incurred by the business consideration fee. For environmental and traffic reasons, the CCM Consortium considered that the length of the tunnel could be increased by 300 metres while the depth at the eastern end could be increased by 30 metres. Such changes would increase the tunnel's daily capacity by an extra 17,000 vehicles.¹³ However, the extra work required for this “long 80 tunnel” proposed by the CCM consortium could result in an increase in construction cost of US\$135.7 million.¹⁴ The total projected construction cost would therefore become AU\$680 million.

Valuing the Project

The value of the CCT project would depend principally on the revenues generated by traffic volume and tolls charged during the term of the concession. The CCT was comprised of two main tunnels. Both of the main tunnels would have two lanes, while the other entry and exit

¹¹ RTA (June 2003) “Cross City Tunnel Summary of Contracts”.

¹² NSW Audit Office (2006) “Performance Reports 2006: The Cross City Tunnel Project—Executive Summary”, http://www.audit.nsw.gov.au/publications/reports/performance/2006/cross_city_tunnel/execsum.htm (accessed 6 January 2007).

¹³ “Cross City Contract Signed”, (2003), *Tunnels and Tunneling International*, 35 (1), p. 15.

¹⁴ AU\$1 = US\$0.5115 on 31 December 2001.

tunnels would have single lanes. Both tunnels would be electronically tolled. Users of the CCT had to purchase an electronic pass or hold a toll account and have a valid electronic tag. The CCM consortium felt it was necessary to apply a differential pricing scheme. Under this scheme, the toll charged would depend on the size of the vehicle and the route that it took. Passenger vehicles such as motorbikes, sedans, station wagons, taxis and vehicles towing trailers were classified as Class 2.¹⁵ Heavy vehicles were classified as Class 4.¹⁶

The CCM consortium considered that the initial toll charges for vehicles other than buses could be set as follows [see **Exhibit 6**]:¹⁷

- for vehicles using the main tunnels to and from Darling Harbour, including vehicles entering from or exiting to the Eastern Distributor, AU\$2.5 for Class 2 passenger vehicles and AU\$5 for Class 4 heavy vehicles (March 1999 prices, including GST)¹⁸
- for vehicles entering the westbound tunnel at Rushcutters Bay and then using the Riley Street tunnel to exit onto Sir John Young Crescent, AU\$1.1 for Class 2 passenger vehicles and AU\$2.2 for Class 4 heavy vehicles (March 1999 prices, including GST).

Buses providing public transport services were not required to pay tolls, but higher charges could apply to vehicles without electronic tolling transponders. The CCM suggested an initial administrative charge between AU\$5 and AU\$8 for each casual use of any of the tunnels on top of the standard tolls. In addition, higher tolls might be charged for traffic exiting from the westbound tunnel onto Harbour and Bathurst Streets, to help reduce congestion in the western CBD. The extra revenue collected could be used for public transport, pedestrian, cyclist, air quality and other amenity improvements.

The CCM consortium believed that it was imperative to secure the right to increase future tolls at its discretion. It therefore proposed a toll escalation scheme, under which the tolls could be increased in line with inflation or in line with minimum quarterly rates of increase equivalent to 4% per annum until the June quarter of 2012 and then 3% per annum until the June quarter of 2018.¹⁹ From mid-2018, the maximum increases would be in line with inflation.

With advice from Hyder Consulting, the CCM consortium prepared traffic estimates for the CCT. According to the projections, the CCT would be used by over 90,000 vehicles per day by 2006 and over 100,000 vehicles per day by 2016.²⁰ By lengthening the tunnel, the consortium would be able to earn additional revenue of AU\$10.98 million per year based on the traffic projections.²¹ **Exhibit 7** shows the traffic forecast of the CCT. **Exhibit 8** summarises the results of the likely economic performance of the CCT project.

Under the Land Lease Agreement with NSW, the winning consortium would have to make rent payments for the first 12 months of the lease, each successive six-month period during the lease and then the final period of the lease, as follows:²²

¹⁵ Class 2: height less than or equal to 2.8m, length less than or equal to 12.5m.

¹⁶ Class 4: height greater than 2.8m, length greater than 12.5m.

¹⁷ RTA (June 2003) "Cross City Tunnel Summary of Contracts".

¹⁸ RTA (June 2003) "Cross City Tunnel Summary of Contracts".

¹⁹ RTA (June 2003) "Cross City Tunnel Summary of Contracts".

²⁰ RTA (August 2002) "The Cross City Tunnel Supplementary Environmental Impact Statement", p. 46.

²¹ "Cross City Contract Signed," *Tunnels and Tunneling International*, 35 (1), 15 January 2003.

²² RTA (June 2003) "Cross City Tunnel Summary of Contracts".

- AU\$1
- thirty-five percent of actual gross revenue—less any amount collected for GST or other taxes or government charges, other than income tax—from any non-toll business uses of the tunnels or the land leased, such as the use of the tunnels or land for telecommunications infrastructure
- if the actual toll and administrative charge revenue for the relevant period—less any amount collected for GST or other taxes or government charges—was more than 10% higher than that forecasted by the private sector participants' base case financial model for the project, a progressively increasing share of this extra revenue, as set out in **Exhibit 9**.

The CCM consortium considered that the toll escalation scheme could help to recover the business consideration fee. Therefore, in return for the RTA's granting it the right to undertake the project, the CCM consortium proposed payment of a business consideration fee in the sum of AU\$100.1 million plus GST to the RTA.²³ According to the tender documents, the fee had to be over and above the costs associated with the project. The fee could be used by the RTA to cover its ancillary costs associated with delivering the project, including work on utility networks affected by the tunnel and cost recovery for project preparation costs.

Assessing Project Risks

The CCM consortium was aware that substantial risks would be transferred from the government to the consortium if it won the tender. The consortium had identified various risks associated with the project. These included:²⁴

- risks associated with the financing, design, construction, operation, maintenance and repair costs of the project
- the risks that the tunnel might fail to deliver the anticipated traffic volumes or projected revenues
- the risks of over-estimation of the value motorists would place on the tunnel's benefits
- the risks that the capacity of the tunnel was not sufficient to allow for the projected traffic estimates
- the risks of overforecasting asset use—a study conducted by Standard and Poor's about traffic modelling on 104 international toll roads, bridges and tunnels showed that on average, across all toll roads, bridges and tunnels, forecasts overestimated traffic in the first year by 20–30%²⁵
- income tax risks
- the risk that their works or operational and maintenance activities might be disrupted by the lawful actions of other government and local government authorities or a court or tribunal.

To minimise patronage risks, the CCM consortium proposed certain changes to the road network or the introduction of "traffic calming" measures. One of the major changes involved removing access to the Harbour Crossings from Sir John Young Crescent and Cowper Wharf Road. Nevertheless, such changes would restrict road users' choice and could affect residents of the affected communities. The CCM consortium would thus also require the government to pay compensation if any changes to the Sydney public transport system had a material effect on the amount of traffic traversing the toll road tunnel. A material effect would include

²³ The quantum of the business consideration fee changed over the course of the contract negotiations between CCM and the RTA. The original figure changed following the acceptance by the RTA of the consortium's non-conforming "long 80 tunnel". As a consequence of the differing minister's Planning Conditions of Approval, and later requirements imposed by more stringent air quality standards (the construction of a third tunnel for ventilation purposes, with estimated cost of \$37 million) and through community consultation, CCM reduced the amount of the BCF to AU\$96,859,688 they proposed to pay the RTA.

²⁴ RTA (June 2003) "Cross City Tunnel Summary of Contracts".

²⁵ "Cross City Tunnel Parliamentary Notice", <http://www.lee.greens.org.au/campaigns/crosscity.htm> (accessed 7 October 2006).

blocking a lane or otherwise directly hampering traffic flow into the tunnel.²⁶ The compensation could be computed based on the consortium's expected profits every year until 2035. This could amount to as much as AU\$100 million annually.

To mitigate the risks of additional costs that could arise due to a change in the scope of works directed by the RTA, the CCM consortium would require the RTA to compensate it for the costs that reasonably arose from the change, including those associated with the contractors' overheads and profits and any delay costs or equity holding costs. If the RTA decreased the scope of works and subsequent operation, maintenance and repair obligations, the CCM consortium would pay to the RTA 75% of the direct cost savings.

Capital Structure

The Equity Investors

The CCM consortium had a complicated "Special Purpose Vehicle" structure that involved the use of trusts and corporate vehicles that were set up by the equity investors. A new company, known as CrossCity Motorway Nominees No. 2 Pty Limited (the trustee), was incorporated to serve as a trustee of the CrossCity Motorway Property Trust, which was established in October 2001. The Property Trust was held by CrossCity Motorway Nominees No. 1 Pty Limited, in its capacity as trustee of the CrossCity Motorway Holdings Trust, another unit trust set up in October 2001. In turn, all the shares in the trustee and the Holdings Trust were owned and controlled by CrossCity Motorway Holdings Pty Limited (CCM Holdings), which was owned by the following equity investors [see **Exhibit 10** for an overview of the structure of the CCT contracts]:²⁷

- CKI City Tunnel Investment (Malaysian) Limited, a wholly owned subsidiary of CKI (50%)
- Bilfinger Berger BOT GmbH, a wholly owned subsidiary of Bilfinger Berger AG (20%)
- DB Capital Partners, a private equity arm of Deutsche Asset Management (30%). It invested in the project on behalf of a number of Australian superannuation funds, including Development Australia Fund.²⁸
- All the units in the CrossCity Motorway Holdings Trust were owned in the same proportions by the same equity investors.

CCM Holdings set up a wholly owned subsidiary known as CrossCity Motorway Pty Limited (the Company). If the consortium won the bid, the trustee and the Company would be used as the vehicle to enter into the Cross City Tunnel Project Deed with the RTA.

The Contractor

The Contractor of the project would be the "Boulderstone Hornibrook Bilfinger Berger Cross City Tunnel Joint Venture", a partnership set up by Bilfinger Berger AG and Boulderstone Hornibrook Pty Limited.²⁹

²⁶ Scott, S. and Allen, L. (23 October 2005) "City Tunnel Contract in Doubt", *Australasian Business Intelligence*.

²⁷ RTA (June 2003) "Cross City Tunnel Summary of Contracts".

²⁸ CrossCity Motorway Media Release, 19 December 2002.

²⁹ RTA (June 2003) "Cross City Tunnel Summary of Contracts".

The Operator

The operation, repair and maintenance of the tunnel and its surface works would be undertaken by Boulderstone Hornibrook Pty Limited until reversion to public ownership.

The Borrower

Borrowings would be made by the CrossCity Motorway Finance Pty Limited, which was wholly owned by the trustee in its capacity as trustee of the property trust. The “borrower” would be the vehicle used to contract with the project’s debt financiers.

Debt Financing Strategy

The total capital required for the Cross City Tunnel project was estimated to be AU\$680 million. The consortium estimated that the project would be financed by AU\$580 million debt, and the balance by equity. Under the proposed debt financing plan, one-half of the initial debt finance would be provided by Deutsche Bank AG and Deutsche Australia Limited (a wholly owned subsidiary of Deutsche Bank AG), the other half by Westpac Banking Corporation, with further loan syndicate participation expected to reduce this large concentrated debt requirement if the project proceeded.

Completion of the Deal

In late October 2001, the three short-listed consortia submitted their proposals to the RTA. The CCM consortium was the only proponent that bid on the business consideration fee. Two other bidders did not bid an upfront payment of a business consideration fee. During the evaluation process, the RTA relied on estimates of traffic flow prepared by traffic consultant Masson Wilson Twiney Pty Ltd, to compare the value of the proposals against the PSC. The forecast produced by the consultant showed that the “long tunnel” proposed by the CCM consortium would be used by 86,300 vehicles per day in 2006 and 101,700 vehicles per day in 2016. Such forecast figures were lower than the estimates prepared by the CCM consortium. **Exhibits 11 to 13** present the projected financial statements and the assumptions used by the CCT for the period from 2003 to 2008.

In February 2002, the RTA’s assessment and review panel concluded that the proposals submitted by the CCM consortium represented better value for money than the PSC and the proposals submitted by the other two proponents. On 27 February 2002, the minister for roads formally announced that the CCM consortium was the preferred proponent. The submission from the CCM consortium was a non-conforming proposal that had incorporated various changes to initial concepts of the tunnel. As a result of the proposed changes, a number of additional environmental impacts would occur and a supplementary EIS had to be prepared. The execution of the project’s principal contracts was completed on 18 December 2002.

The CCT project heralded CKI's first transportation project outside mainland China and Hong Kong. Under the plan, the tunnel components of the project would be operated, maintained and repaired by the CCM consortium until they were returned to public ownership after 18 December 2035 or for 30 years and 2 months from the completion of the tunnels, if their completion was delayed.³⁰ Analysts expected that the equity IRR³¹ on CKI’s investment in this green field project would be around 15%. With sufficient cash on hand and reasonably low

³⁰ RTA (June 2003) “Cross City Tunnel Summary of Contracts”.

³¹ IRR stands for internal rate of return.

gearing, CKI itself had the necessary resources to finance this project. It was projected that in 2006, the CCT's annual contribution to CKI's bottom line would be HK\$28 million.³²

Project equity came from CKI (50%), DB Capital Partners (30%) and Bilfinger Berger BOT GmbH (20%). The CCM consortium completed the AU\$580 million project financing after 16 banks joined the transaction with the initial senior debt financiers. These new banks included Australia and New Zealand Banking Group Limited, Bank of China, BOS International (Australia) Limited, Bank of Western Australia Limited, Credit Industriel et Commercial, Credit Agricole Indosuez Australia Limited, Credit Lyonnais (Hong Kong Branch), Dexia Credit Local, KBC Finance Ireland, Kreditanstalt für Wiederaufbau, Landesbank Baden-Württemberg (Singapore Branch), Natexis Banques Populaires, Norddeutsche Landesbank Girozentrale (Singapore Branch), Sumitomo Mitsui Finance Australia Limited, United Overseas Bank Limited and WestLB AG (Sydney Branch).³³ The loan syndicate details were as follows:³⁴

- Arrangers: Westpac Banking Corp lending AU\$47 million and Deutsche Bank investing AU\$39 million
- Lead managers: ANZ Investment Bank, Bank of Scotland, Credit Agricole, Credit Lyonnais, KBC Bank, Kreditanstalt für Wiederaufbau, Landesbank Baden-Württemberg, NordLB, Sumitomo Mitsui Banking Corp and WestLB, with each manager taking AU\$39 million
- Managers: Bank West, Dexia Bank and Union Overseas Bank, each lending AU\$28 million, and CIC lending AU\$20 million
- Purpose: Project financing for the construction of the AU\$680 million CCT, with limited recourse to the equity investors³⁵
- Size: AU\$580 million
- Type: Seven-year term loan
- Margin: 150bp³⁶ over BBSY³⁷ (during construction)
- 160bp over BBSY (after construction)
- 170bp over BBSY (no rating)
- Fees for lead managers: 80bp for AU\$50 million
- Fees for managers: 60bp for AU\$35 million.

Project Outcomes

The CCT opened for traffic on 28 August 2005, less than two years and seven months after the commencement of construction. After opening, the CCT was often described as the “ghost tunnel”, due to its low volume of traffic. Statistics released by the CCM in February 2006 showed that around 30,000 vehicles used the tunnel each day, well short of the projected 90,000 per day. Many road users considered the toll too high for a short journey of 2.1 km. They would rather use a free alternative public road, even though it might take longer to reach the destination. Although many road users wanted to avoid the tunnel, a number of “traffic calming” measures—which many observers and media commentators suggested merely functioned to funnel traffic into the tunnel—were introduced. Instead of relieving congestion,

³² AU\$1 = HK\$6.1405 on 31 December 2006.

³³ RTA (June 2003) “Cross City Tunnel Summary of Contracts”.

³⁴ Anonymous (28 January 2003) “Australiasia (Syndicated Loans)”, *Euroweek*.

³⁵ Fislage, B. and Heymann, E. (10 June 2003), “Road Operation Projects: Lucrative for Institutional Investors”, *Deutsche Bank Research*.

³⁶ Bp stands for basis point. 1% change = 100 basis points, and 0.01% = 1 basis point (see Investopedia, <http://www.investopedia.com/terms/b/basispoint.asp>)

³⁷ BBSY stands for bank bill swap yield.

however, such changes actually increased traffic congestion and resulted in numerous disruptions. For instance, there were lane reductions at William Street and changes in light phasing at various intersections across the city. Road users also complained about misleading signage indicating the tunnel was the only route to reach certain destinations when in fact alternative public roads were available.

The huge upfront consideration demanded by the NSW government to achieve its “no-cost-to-government” objective also sparked public outrage. It appeared to the community that, in return for such consideration, the government allowed inflated tolls to be set by the operator, while it might have given assurances to the operators that sufficient traffic throughput might be achieved for the tunnel through traffic calming measures. Some analysts were also sceptical about the traffic projections derived by the CCM consortium. It was suggested that the projection method used by the CCM employed a “work back” (or implied) process, in which the projections were derived from an internal rate of return promised to equity investors. In other words, the traffic projections and tolls might have been financially reverse-engineered to provide the required toll revenue and the CCM had failed to consider land use and transport interaction factors properly. To increase patronage and public acceptance, the CCM introduced a toll-free period from 24 October 2005 to late November 2005 and also announced a freeze on toll increases for one year and a waiver-of-fee for casual users. In all, however, in its first six months of operation the Sydney CCT was operating at roughly one-third of projected throughput, nowhere near projected income and rumoured to be near financial collapse. It was also a public relations disaster, attracting significant negative media and political attention, and was subject to strong general-user resistance. In response to public pressure, in October 2005 the government released some contract terms to the public. A few days after the release, the head of the RTA stepped down due to his failure to disclose an amendment to the contract.

In February 2006, there was media speculation that the Sydney CCT was for sale and rumours of a “buy-out” by the NSW government began and persisted throughout 2006, despite denials that the CCT was for sale and that NSW was not a potential buyer. The rumoured price was over AU\$1 billion. However, despite denials by the government and the CCM, NSW roads minister Eric Roozendaal said that “any prospective buyers would be well advised to consider the cost of a trip through it”, while NSW opposition roads spokesman Andrew Stoner said “taxpayers would be the ones to suffer most of if the government was forced to pay compensation to the tunnel operator”.³⁸ It was clear that, in addition to being financially problematical, the CCT was starting to attract significant political interest and had the potential to severely embarrass the NSW government that championed it.

The bottom line was looking unpleasant. With the poor operating performance of the CCT project, it seemed inevitable that CKI and other partners of the CCM might have to incur a significant impairment loss in the next financial quarter. It further seemed that the Sydney CCT investment was rapidly turning into a liability for CKI, a prospect that was not comforting to a company that had in the past been highly successful in Australia, whilst remaining relatively low key.

³⁸ Hassett, S. (16 November 2006) “NSW Government Baulks at Tunnel Bid”, *The Weekend Australian*, <http://www.theaustralian.news.com.au/printpage/0,5942,20769578,00.html> (accessed 6 January 2007).

EXHIBIT 1: THE CROSS CITY TUNNEL CHRONOLOGY

Date	Event
22 Oct 1998	The premier (Mr Carr) and the minister of roads (Mr Scully) released an exhibition for comment on the initial concept (the “short tunnel”) in a 16-page report titled “The Cross City Tunnel: Improving the Heart of the City”. AU\$2 toll is flagged.
April 1999	The City of Sydney Council released the Cross City Tunnel Alternative Scheme. This was a longer tunnel than the one proposed in the 1998 “Improving the Heart of the City”, running to the eastern end of the Kings Cross Tunnel and included narrowing William Street.
15 Sept 2000	The RTA invited registrations of interest from private sector parties “for the financing, design, construction, operation and maintenance of the Cross City Tunnel project”.
23 Oct 2000	Closing date for registrations of interest to construct and operate the tunnel.
Feb 2001	The minister for roads (Mr Scully) announced that three consortia had been short-listed to prepare detailed proposals: CrossCity Motorways (CCM), E-TUBE and Sydney City Tunnel Company.
Oct 2001	Detailed proposals for implementation of the project were lodged by the three consortia and reviewed by assessment panel.
Feb 2002	The Budget Committee of Cabinet approved CCM to be selected as the preferred proponent and for the CCM “long 80 tunnel” option to be selected as the preferred proposal.
27 Feb 2002	The minister for roads (Mr Scully) announced that CCM was the preferred proponent. The tender submission from CCM incorporated changes to the approved activity that the minister for roads believed would provide more benefits and reduce construction related impacts on the community. As a result of the proposed changes, a number of additional environmental impacts would occur. A supplementary EIS was prepared.
14 Mar 2002	A letter was sent from the treasurer (Mr Egan) to the minister for roads (Mr Scully) stating “A key objective of the project has been its development at no net cost to government” and “it is not certain at this time that the project can achieve a ‘no net cost to government’ outcome. If the project cannot proceed without a government contribution, any such contribution would need to be funded out of the RTA’s existing forward capital program”.
16 Dec 2002	Approval was given by the treasurer (Mr Egan) to sign the project deed under the Public Authorities (Financial Arrangements) Act 1987.
18 Dec 2002	A contract between the CCM consortium and RTA was signed to finance, construct, operate and maintain the CCT. Differential tolling was set, AU\$2.5 per car and AU\$5 for heavy vehicles.
28 Jan 2003	Major works started on the AU\$680 million Cross City Tunnel.
21 Dec 2004	The treasurer (Mr Egan) approved the RTA to enter into the Cross City Tunnel Project First Amendment Deed with the CCM under section 20 of the Public Authorities (Financial Arrangements) Act 1987. This deed included provision that “in consideration for the CCM’s agreement to fund and carry out certain [changes if required by the RTA], CCM might increase the Base Toll to be collected from motorists on the terms set out in the First Amendment Deed”.
23 Dec 2004	The First Amendment Deed was entered into by RTA and the CCM, enabling AU\$35 million of additional works to be paid for through a higher base toll (increased by \$AU0.15).
28 Aug 2005	The Cross City Tunnel opened.
Nov 2005	The Summary of Cross City Tunnel Project Deed was made public.
19 Dec 2035	The Cross City Tunnel was due to be returned to public ownership.

Source: Parliament of New South Wales (February 2006) “Joint Select Committee on the Cross City Tunnel, First Report”.

EXHIBIT 2A: THE CCT HORIZONTAL ALIGNMENTS

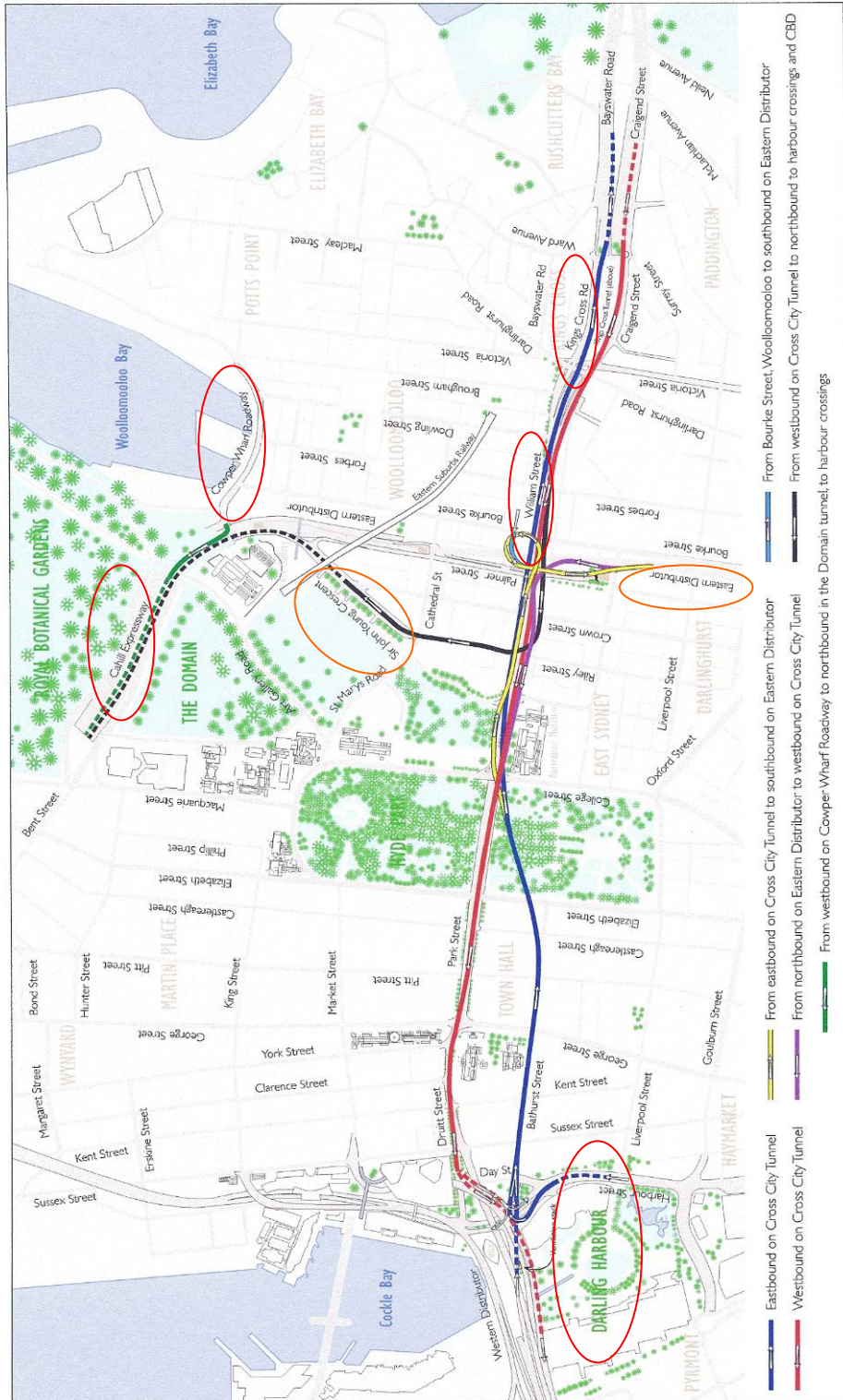
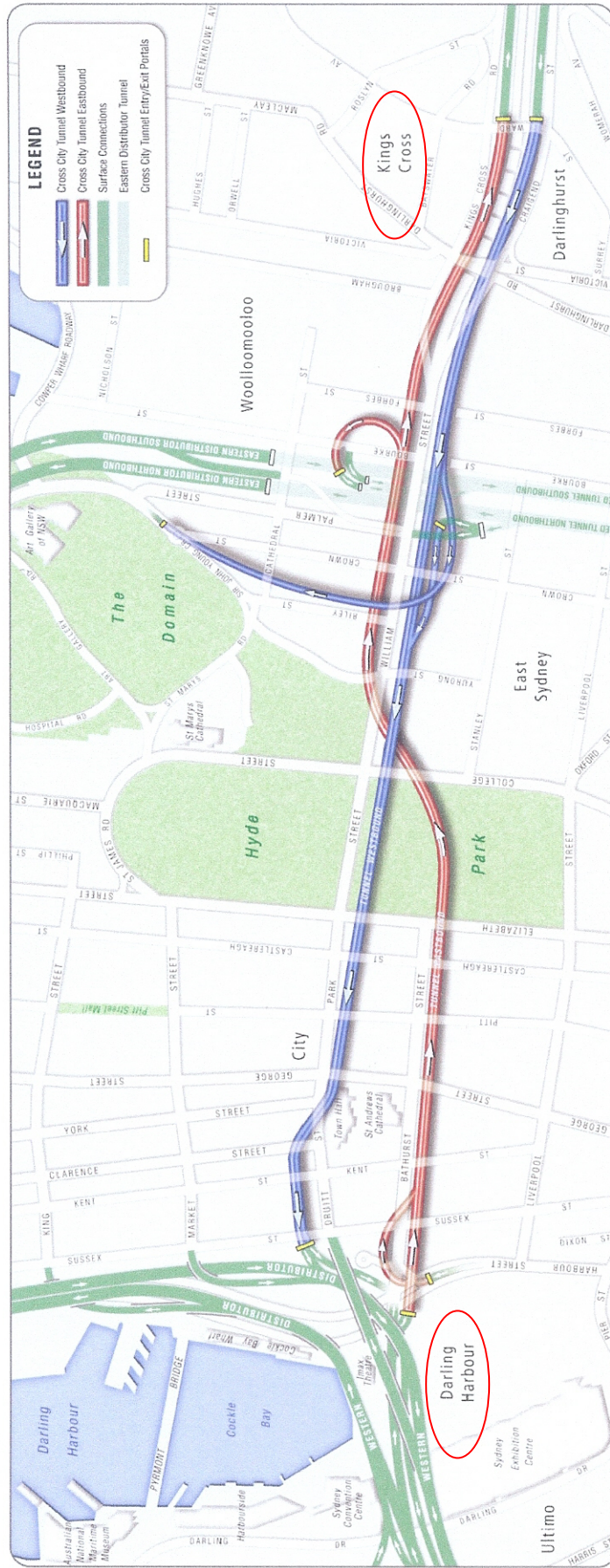


Figure 1. Cross City Tunnel horizontal alignments.

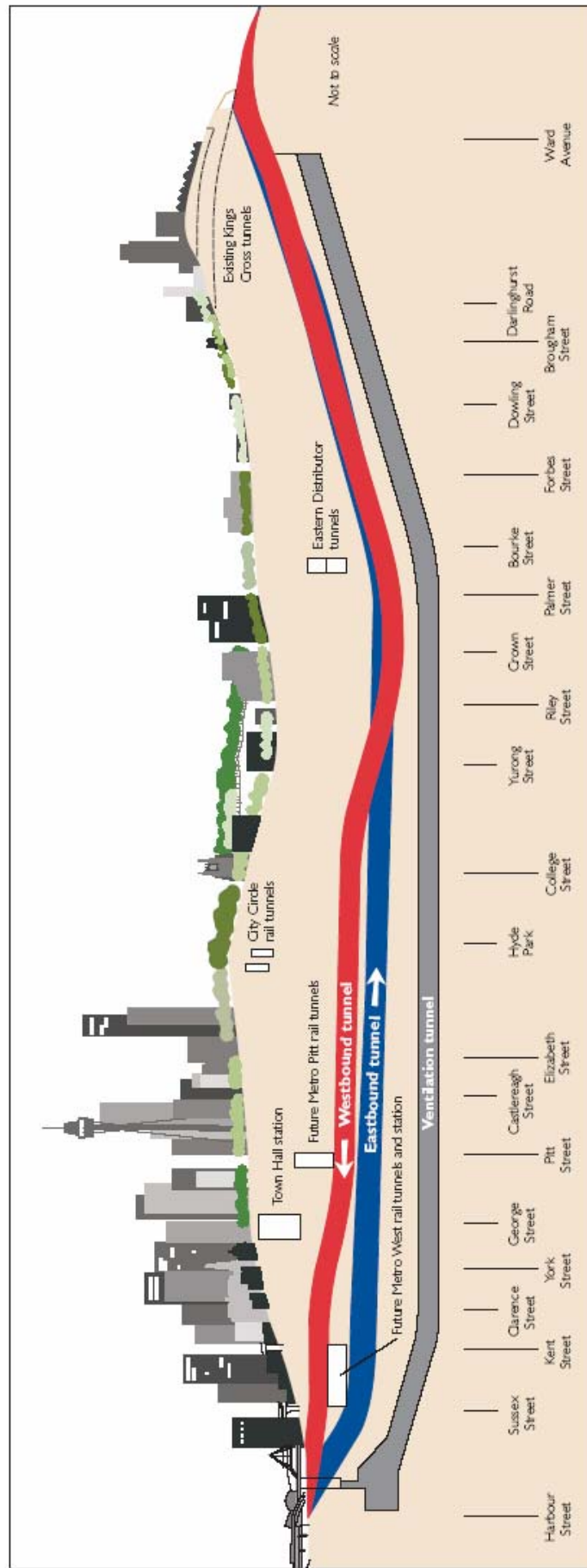
Source: RTA (June 2003) "Cross City Tunnel Summary of Contracts".

EXHIBIT 2B: THE CCT ROUTE MAP



Source: CrossCity Motorway Pty Ltd, "Tunnel Route Map", <http://www.crosscity.com.au/DynamicPages.asp?cid=81&navid=19> (accessed 2 October 2006).

EXHIBIT 2C: INDICATIVE VERTICAL ALIGNMENTS OF THE MAIN TUNNELS



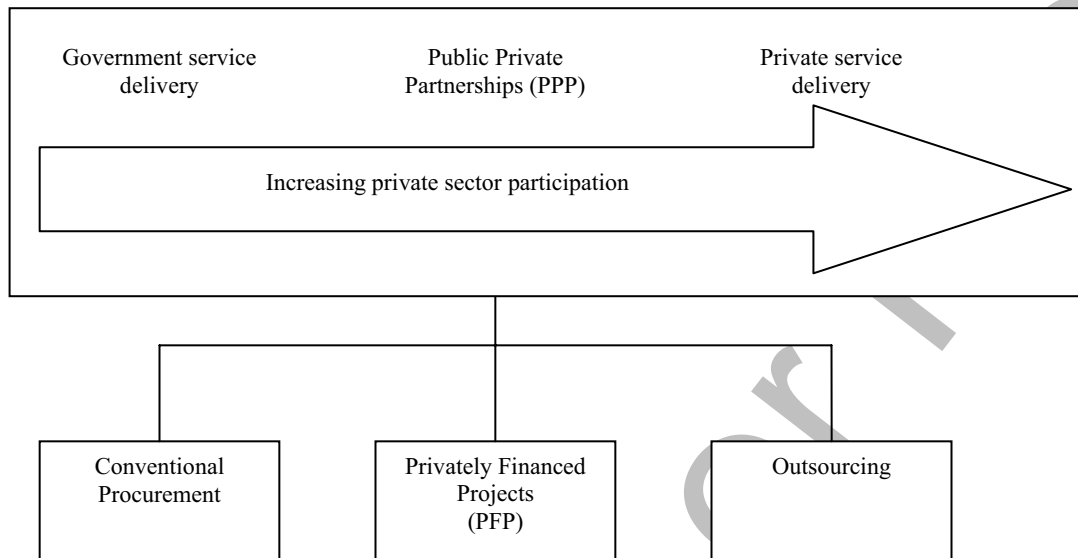
Source: RTA (June 2003) "Cross City Tunnel Summary of Contracts".

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EXHIBIT 3: THE CCT TUNNEL MODELS

Model	Details
The “short tunnel”	1.2km tunnel, exiting William Street near Museum of Sydney. Taking approximately 40,000 vehicles. Two way toll of AU\$2. Cost estimated at AU\$273 million. Published in “Transforming the Heart of the City” (1998).
The “long tunnel”	Approximately 2km tunnels exiting in the Kings Cross Tunnel to the east and connecting to the Western Distributor in the west. Two-way toll of AU\$2.5. First described in the initial Cross City Tunnel Environmental Impact Statement (2000).
The “long 80 tunnel”	Approximately 2.1km tunnels exiting east of the Kings Cross Tunnel to the east and connecting to the Western Distributor in the west. Two-way differential tolling of AU2.5 and AU\$5 (later increased to AU\$2.65 and AU\$5.3). First described in the Supplementary Environmental Impact Statement (2002).

Source: Parliament of New South Wales (February 2006) “Joint Select Committee on the Cross City Tunnel, First Report”.

EXHIBIT 4: RELATIONSHIP BETWEEN PFPS AND PPPS

Source: New South Wales Government (November 2001) “Working with Government Guidelines for Privately Financed Projects”.

EXHIBIT 5A: MAJOR PROJECTS OF CKI IN 2000

Project	Business	CKI shareholding
<i>Energy</i>		
Hongkong Electric, Hong Kong	Exclusive right to generate and distribute electricity to Hong Kong Island, Ap Lei Chau Island and Lamma Island	38.87%
Envestra Limited, NSW, Australia	Distribution of natural gas in the states of South Australia, Queensland, the Northern Territory, Victoria and New South Wales	19.97%
ETSA Utilities, South Australia, Australia	Right to operate the electricity distribution network in the state of South Australia for 200 years	50% (another 50% held by Hongkong Electric)
Powercor Australia Ltd, Victoria, Australia	Right to operate the electricity distribution network covering an area of over 150,000 sq. km in the state of Victoria and retail operation in certain areas of Australia	50% (another 50% held by Hongkong Electric)
Fushun Cogen Power Plants, Liaoning, China	Operational	60% interest in the JV
Nanhai Power Plant I, Guangdong, China	Operational	30% interest in the JV
Qinyang Power Plants, Henan, China	Operational	49% interest in the JV
Shantou Chaoyang Power Plant, Guangdong, China	Operational	60% interest in the JV
Shantou Chenghai Power Plant, Guangdong, China	Operational	60% interest in the JV
Shantou Tuopu Power Plant, Guangdong, China	Operational	60% interest in the JV
Siping Cogen Power Plant, Jilin, China	Operational	45% interest in the JV
Zhuhai Power Plant, Guangdong, China	Operational	45% interest in the JV
<i>Transportation</i>		
Eastern Harbour Crossing Rail Tunnel, Hong Kong	Rail franchise period 1986–2008	50%
Changsha Wujialing and Wuyilu Bridges, Wunan, China	Operational	44.2% in the JV
Guangzhou East-South-West Ringroad, Guangdong, China	Operational	44.4% in the JV
Jiangmen Chaolian Bridge, Guangdong, China	Operational	50% in the JV
Jiangmen Jianghe Highway, Guangdong, China	Operational	50% in the JV

Jiangmen Jiangsha Highway, Guangdong, China	Operational	50% in the JV
Nanhai Road Network, Guangdong, China	Operational	49% – 64.4% in the JV
National Highway 107 (Zhumadian section), Henan, China	Operational	66% in the JV
Panyu Beidou Bridge, Guangdong, China	Operational	40% in the JV
Shantou Bay Bridge, Guangdong, China	Operational	30% in the JV
Shen-shan Highway (Eastern Section), Guangdong, China	Operational	33.5% in the JV
Shenyang Changqing Bridge, Liaoning, China	Operational	30% in the JV
Shenyang Da Ba Road and South-West Elevated Sections, Liaoning, China	Operational	30% in the JV
Shenyang Gongnong Bridge, Liaoning, China	Operational	30% in the JV
Shenyang Shensu Expressway, Liaoning, China	Operational	30% in the JV
Tangshan Tangle Road, Hebei, China	Operational	51% in the JV
Zengcheng Lixin Road, Guangdong, China	Operational	51% in the JV
Infrastructure materials and Infrastructure-related Businesses		
Anderson Asphalt, Anderson Asia, Hong Kong	One of Hong Kong's largest asphalt producers	
Asia Stone, Anderson Asia, Hong Kong	One of Hong Kong's four contract quarries	
Bonntile, Anderson Asia, Hong Kong	Exterior wall spray-coating system specialist	
Ready Mixed Concrete, Anderson Asia, Hong Kong	One of Hong Kong's largest concrete producers	
Green Island Cement, Hong Kong	Only integrated cement producer in Hong Kong	
Shantou Cement Grinding Plant, Guangdong, China	Operational	100%
Yunfu Cement Plant, Guangdong, China	Operational	67% interest in the JV
Siquijor Limestone Quarry, Philippines	Operational	40% interest in the JV
Polyphalt Inc, Canada	Developed and commercialised polymer modified asphalt technology, products and services. The company blended several of its asphalt technologies with plastics and rubbers, including recycled materials	63.7%

Stuart Energy Systems Corp., Canada	Developed and supplied hydrogen generation and supply systems through its proprietary water and electrolysis technology	12.9%
Shenyang LPG Business, Liaoning, China	LPG filling stations and vehicle conversion facilities	51% interest in the JV
Yueyang Water Plants, Hunan, China	Operational	49% interest in the JV
e-Smart System Inc, Hong Kong	Applications of the patented “Eyecon” microprocessor-based contactless smart card technology in the Asia Pacific region	50%

Source: Cheung Kong Infrastructure Holdings Limited (2000) “Annual Report”,
http://www.cki.com.hk/english/PDF_file/annualReport/2000/2000_AR_projectProfile.pdf,
 (accessed 2 October 2006).

**EXHIBIT 5B: CKI CONSOLIDATED INCOME STATEMENT FOR
YEAR ENDING 31 DECEMBER 2000**

Figures in HK\$ millions

	<u>2000</u>
Turnover	
Group turnover	2,567
Share of turnover of jointly controlled entities	778
	<u>3,345</u>
group turnover	
Other revenue	2,567
Operating costs	1,373
Finance costs	(2,819)
Operating profit	<u>(621)</u>
	500
Share of results of associates	2,413
Share of results of jointly controlled entities	588
Profit before taxation	<u>3,501</u>
Taxation	(288)
Profit after taxation	<u>3,213</u>
Minority interests	15
Profit attributable to shareholders	<u>3,228</u>
Dividends	(1,353)
Profit for the year retained	<u>1,875</u>
Earnings per share	HK\$1.43

Source: Cheung Kong Infrastructure Holdings Limited (2000) "Annual Report".

EXHIBIT 6: PROPOSED TOLL CHARGES

	Eastbound Tunnel Darling Harbour to Eastern Distributor exit or Rushcutters Bay	Westbound Tunnel Rushcutters Bay to Darling Harbour	Sir John Young Crescent Exit From the east
Class 2	AU\$2.5	AU\$2.5	AU\$1.1
Class 4	AU\$5	AU\$5	AU\$2.2

Note: all tolls are inclusive of GST

Source: RTA (June 2003) "Cross City Tunnel Summary of Contracts".

EXHIBIT 7: TRAFFIC FORECAST

	Eastbound	Westbound	Sir John Young Crescent
Capacity	60,000	60,000	50,000

Annual Average Daily Traffic (AADT)				
Year ending	Eastbound	Westbound	Sir John Young Crescent	Total
31 Dec 04	30,041	36,626	22,433	89,100
31 Dec 06	30,713	37,597	22,796	91,106
31 Dec 11	32,433	40,137	23,695	96,265
31 Dec 16	34,250	42,848	24,629	101,727
31 Dec 21	35,507	44,409	25,315	105,231
31 Dec 26	36,811	46,027	26,021	108,859

Semi Annual Growth Rate				
Year ending	Eastbound	Westbound	Sir John Young Crescent	Average
31 Dec 04	0.56%	0.66%	0.40%	0.56%
31 Dec 06	0.56%	0.68%	0.39%	0.55%
31 Dec 11	0.56%	0.67%	0.39%	0.41%
31 Dec 16	0.37%	0.36%	0.28%	0.34%
31 Dec 21	0.37%	0.36%	0.28%	0.34%
31 Dec 26	0.39%	0.39%	0.39%	N.A.

Annual Growth Rate				
Year ending	Eastbound	Westbound	Sir John Young Crescent	Average
31 Dec 04	1.11%	1.32%	0.81%	1.12%
31 Dec 06	1.10%	1.32%	0.78%	1.11%
31 Dec 11	1.10%	0.92%	0.63%	0.82%
31 Dec 16	0.72%	0.72%	0.55%	0.68%
31 Dec 21	0.72%	0.72%	0.55%	0.68%
31 Dec 26	0.72%	0.72%	0.55%	0.68%

Source: "Cross City Tunnel Parliamentary Notice",
<http://www.lee.greens.org.au/campaigns/crosscity.htm> (accessed 7 October 2006).

EXHIBIT 8: RTA ESTIMATES OF THE LIKELY ECONOMIC PERFORMANCE OF THE CROSS CITY TUNNEL

Taking account of initial and recurring capital costs, operation and maintenance costs, road user benefits (savings in vehicle operating costs, travel time savings and savings in accident costs) and pedestrian benefits, but not counting environmental externalities.

Discount rate	Present value of initial and recurring capital costs and maintenance costs	Present value of road user and pedestrian benefits	Net present value	Benefits:cost ratio		Net present value/capital cost
				$\frac{\text{Benefits O\&M}}{\text{D\&C}}$	$\frac{\text{Benefits D\&C}}{\text{+O\&M}}$	
4%	AU\$693 m	AU\$2,754 m	AU\$2,061 m	5.0	4.2	4.0
7%	AU\$576 m	AU\$1,689 m	AU\$1,114 m	3.4	3.0	2.4
10%	AU\$495 m	AU\$1,102 m	AU\$607 m	2.4	2.3	1.4

Source: RTA (June 2003) “Cross City Tunnel Summary of Contracts”.

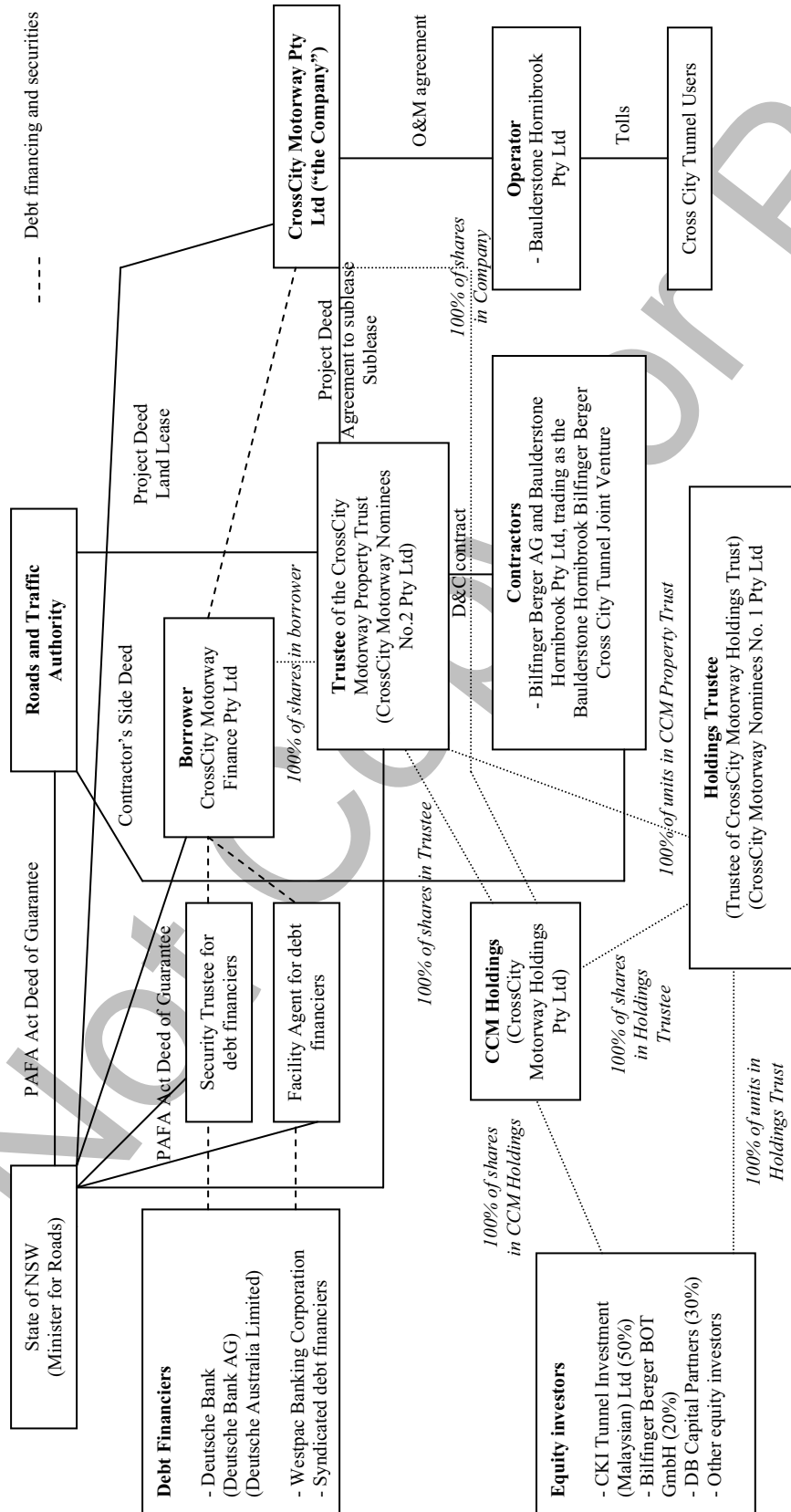
EXHIBIT 9: THE RTA’S SHARE OF ANY UNEXPECTEDLY HIGH REVENUES

(Generally over six-month periods, from tolls and administrative charges, including additional charges for “casual” tunnel users without electronic tolling vehicle transponders)

Actual revenue, as a percentage of forecast revenue	RTA’s share of this portion of the actual revenue (to be paid by the trustee as part of its rent under the Land Lease)
Up to 110%	0%
110–120%	10%
120–130%	20%
130–140%	30%
140–150%	40%
More than 150%	50%

Source: RTA (June 2003) “Cross City Tunnel Summary of Contracts”.

EXHIBIT 10: OVERVIEW OF THE STRUCTURE OF THE CCT



Source: RTA (June 2003) "Cross City Tunnel Summary of Contracts".

EXHIBIT 11: PROJECTED CONSOLIDATED BALANCE SHEET (2003–2008)

Figures in AU\$ millions

Six months ending	1	2	3	4	5	6	7	8	9	10	11	12
Period number	30/6/03	31/12/03	30/6/04	31/12/04	30/6/05	31/12/05	30/6/06	31/12/06	30/7/07	31/12/07	30/6/08	31/12/08
Assets												
Current Assets	-	-	-	-	-	-	-	-	-	-	-	-
Cash on Deposit	-	-	-	-	-	-	12,528	-	-	-	-	-
Cash Balance in Equity Account	-	-	-	-	-	68	319	245	196	163	160	166
Accounts Receivable	-	-	-	-	-	-	25,169	25,169	-	-	-	-
Cash Balances in Ramp Up Reserve Account	-	-	-	-	-	-	-	-	-	-	-	-
Cash Balances in Major Maintenance Reserve Account	-	-	-	-	-	-	-	-	-	-	-	-
Cash Balances in Lockup Account	-	-	-	-	-	-	-	-	-	-	-	-
Cash Balance in Equity Holding Account	-	-	-	-	-	-	-	-	-	-	-	-
Cash in Debt Drawdown Account	-	-	-	-	-	-	-	-	-	-	-	-
Prepayment of Tax	-	-	-	-	-	-	-	-	-	-	-	-
Total Current Assets	-	-	-	-	-	68	38,016	25,413	196	163	160	166
Non-Current Assets												
Future Income Tax Benefit	1,338	2,869	7,602	12,623	18,895	33,902	36,260	37,829	39,373	40,965	41,903	42,842
Carrying Value of Fixed Assets	243,166	362,627	493,665	653,250	738,500	758,583	785,022	763,212	740,370	717,527	696,805	676,050
RTA Payment/Tender Process Allowance	95,392	93,925	92,457	90,989	89,522	88,054	85,587	85,119	83,652	82,184	80,716	79,249
Total Non-Current Assets	339,896	459,421	593,724	756,862	846,917	880,539	906,869	886,160	863,395	840,676	819,424	798,141
Total Assets	339,896	459,421	593,724	756,862	846,917	880,607	944,885	911,574	863,591	840,839	819,584	798,308
Liabilities												
Current Liabilities	-	-	-	-	-	380	1,269	1,105	926	939	907	904
Accounts Payable	-	-	-	-	-	-	-	-	-	-	-	-
Provision for Income Tax	-	-	-	-	-	-	-	-	-	-	-	-
Total Current Liabilities	-	-	-	-	-	380	1,269	1,105	926	939	907	904

Source: "Cross City Tunnel Parliamentary Notice", <http://www.lee.greens.org.au/campaigns/crosscity.htm> (accessed 7 October 2006).

EXHIBIT 12: PROJECTED CONSOLIDATED PROFIT AND LOSS STATEMENT (2003–2008)

Figures in AU\$ millions

Six months ending	30/6/03	31/12/03	31/6/04	31/12/04	30/6/05	31/12/05	30/6/06	31/12/06	30/6/07	31/12/07	30/6/08	31/12/08
Period number	1	2	3	4	5	6	7	8	9	10	11	12
Revenue												
Toll Revenue												
Eastbound Revenue	-	-	-	-	-	2,956	19,106	20,603	21,327	21,924	22,239	22,835
Westbound Revenue	-	-	-	-	-	3,007	19,246	20,656	21,700	22,638	23,301	24,278
Sir John Crescent: Revenue	-	-	-	-	-	1,048	6,656	6,788	7,009	7,207	7,314	7,607
Total Revenue	-	-	-	-	-	7,011	45,008	48,046	50,036	51,770	52,854	54,720
Sensitivity Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Other Operating Revenue	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Revenue	-	-	-	-	-	7,011	45,008	48,046	50,036	51,770	52,854	54,720
Operating and Maintenance Expenses												
Variable Operating Expenses												
Eastbound Operating Expenses	-	-	-	-	-	94	689	815	842	846	815	795
Westbound Operating Expenses	-	-	-	-	-	95	692	813	853	870	851	844
Sir John Young Crescent Operating Expenses	-	-	-	-	-	66	481	563	588	597	582	574
Casual User Variable Administration Fee	-	-	-	-	-	895	3,290	1,778	930	571	556	570
Total Variable Operating Expenses	-	-	-	-	-	1,150	5,152	3,970	3,213	2,884	2,804	2,784
Fixed Operating Expenses												
CCM Costs	-	-	-	-	-	1,498	4,576	3,547	2,811	2,927	2,721	2,695
Finance and Administration	-	-	-	-	-	762	2,059	2,123	1,576	1,847	1,642	1,653
Revenue Collection	-	-	-	-	-	39	120	123	124	126	128	130
Operations and Routine Maintenance	-	-	-	-	-	835	2,550	2,596	2,588	2,632	2,677	2,720
Other	-	-	-	-	-	-	-	-	-	-	-	-
Contingency	-	-	-	-	-	82	236	242	214	230	222	225
Operator Margin	-	-	-	-	-	258	745	762	675	725	700	709
Agency Fee	-	-	-	-	-	-	-	29	29	29	125	66
Security Trustee Fees	-	-	-	-	-	-	-	17	17	18	18	18

Tranche C - Bond Facility LC	-	-	-	-	-	-	35	38	6	-	-
Total Operating and Maintenance Expenses	-	-	-	4,624	15,437	13,444	11,285	11,424	11,037	11,001	-
EBITDA	-	-	-	-	2,387	29,571	38,750	40,346	41,817	43,719	-
Depreciation/Amortisation	1,468	1,468	1,468	23,722	23,727	24,314	24,314	24,314	22,227	22,227	-
EBIT	(1,468)	(1,468)	(1,468)	(21,335)	5,844	10,288	14,436	16,032	19,590	21,492	-
Repairs and Maintenance - Expense	-	-	-	-	-	-	-	-	-	-	-
Income Tax Expense/Benefit on Operation	-	-	-	(1,258)	6,895	8,430	9,674	10,144	11,238	11,792	-
Bank Base Case Adjustment	-	-	-	-	-	-	-	-	-	-	-
Net Operating Profit Less Adjusted Taxes (NOPLAT)	(1,468)	(1,468)	(1,468)	(20,077)	(1,052)	1,858	4,761	5,888	8,351	9,700	-
Loss on Write Off of Assets	-	-	-	-	-	-	-	-	-	-	-
Distribution to RTA	-	-	-	-	-	-	-	-	-	-	-
Net Interest Expense	-	-	-	-	-	-	-	-	-	-	-
Interest Income	-	-	-	-	-	613	884	297	194	230	-
Other Interest Income	-	-	-	-	-	613	884	297	194	230	-
Total Interest Income	-	-	-	-	-	613	884	297	194	230	-
Interest Expenses	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Senior Debt	-	877	2,101	3,828	5,624	7,380	21,831	21,267	19,572	19,572	-
Interest Expense - RPU	-	-	-	-	-	-	3,451	3,453	3,451	3,451	-
Interest Expense - Shareholder Loans	-	-	-	-	-	-	-	-	-	-	-
Interest Expense - Bonds	-	-	-	-	-	-	-	-	-	-	-
Line Fee Expense	-	-	-	-	-	-	17	18	18	18	-
Refinance Fee Expense	-	-	-	-	-	-	-	-	-	-	-
Total Interest Expenses	-	877	2,101	3,828	5,624	7,380	25,293	24,738	23,041	23,041	-
Total Net Interest Expenses	-	877	2,101	3,828	5,624	7,380	24,680	24,441	22,847	22,811	-
Tax Shield on Net Interest Expenses	1,448	2,704	3,969	5,351	6,684	7,504	10,275	12,012	12,453	13,007	-
Net Profit after Tax (NPAT)	(20)	359	401	55	(408)	(19,952)	5,205	(6,540)	(2,042)	(104)	-

Source: "Cross City Tunnel Parliamentary Notice", <http://www.lee.greens.org.au/campaigns/crosscity.htm> (accessed 7 October 2006).

EXHIBIT 13: ASSUMPTIONS USED FOR THE FINANCIAL PROJECTIONS

Base Case Financial Model Assumptions book	value	Description
Assumptions		
1. Transaction Parameters		
1.1 Analysis date	18 December 2002	Current model run date
1.2 Financial close	19 December 2002	Fulfillment of all CPs in loan documentation
1.3 Concession life	33	Years post financial close
1.4 Financial year end	30 June	Financial year end for Cross City Motorway SPV
1.5 Modeled entity	Op.co and trust	Entities which are modeled
1.6 Borrowing entity	trust	Entity that raises debt
2. Economic assumptions		
<u>General CPI assumptions</u>		
Last ABS published CPI	138.5	CPI index in last published ABS data
Date of last published CPI	30 September 2002	Date of last published ABS data
CPI in project deed base period	121.3	CPI index in the project deed base period
Project deed base period	30 September 1998	Base period specified in project deed
Long term national CPI forecast	2.50%	Long term national CPI forecast - assumed to be an effective rate
<u>O&M Escalation</u>		
Construction	CPI%	AWE%
31 December 2006	16%	As per the O&M contract
31 December 2007	27%	As per the O&M contract
31 December 2008	41%	As per the O&M contract
31 December 2009	47%	As per the O&M contract
Thereafter	50%	As per the O&M contract
	50%	As per the O&M contract

<u>Replacement expenditure escalation</u>		
Average weekly earnings, trend, persons, total earnings, NSW	50%	Steady state proportion
All mechanical services - Sydney	50%	Steady state proportion
Blended rate	2.45%	Calculated rate based on the above proportions and rates
<u>Repairs and refurbishment expenditure escalation</u>		
Average weekly earnings, trend, persons, total earnings, NSW	33%	Steady state proportion
All mechanical services - Sydney	67%	Steady state proportion
Blended rate	1.92%	Calculated rate based on the above proportions and rates
<u>Back office admin fee escalation</u>		
Average weekly earnings, trend, persons, total earnings, NSW	79%	Steady state proportion
All mechanical services - Sydney	7.50%	Steady state proportion
Blended rate	13.50%	Steady state proportion
	3.57%	Calculated rate based on the above proportions and rates
3. Interest rate assumptions		
Swap rate during construction	5.32%	Monthly rate used for swapped portion of base rate used during construction
Swap rate for first band of hedging post completion	5.99%	Semi annual rate used for swapped portion of base rate used during first hedging period
First hedge band - months	42	Month for first swap post completion
Ongoing swap rate - five year swap rate	5.29%	Semi annual on going hedge rate
Seven year swap rate - RPU	5.51%	Case assumed for RPU
Floating rate - during construction	5.03%	Three year monthly rate used for non-swapped interest rate during construction
Floating rate - post construction	5.08%	Three year semi annual rate used for non-swapped interest rate post construction
<u>Hedging</u>		
% hedged during construction	95%	Hedging profile

% hedged in first band
% hedged in ongoing basis

75% Hedging profile
50% Hedging profile

Cost of swaps - pre-refinance

Liquidity

Premium on swap cost due to liquidity risk, before refinance

Basis

Premium on swap cost due to basis risk, before refinance

Credit

Premium on swap cost due to credit risk before refinance

Cost of swaps - post refinance

Liquidity

Premium on swap cost due to liquidity risk, post refinance

Basis

Premium on swap cost due to basis risk, post refinance

Credit

Premium on swap cost due to credit risk, post refinance

30 day BBSW

4.87% 30 day deposit rate

4. Construction parameters

Stage One construction

Stage One construction start

January 2003 First month of construction

Stage One construction period

34 Stage One construction period

Stage One completion

31 October 2005 Stage One completion date

Stage One D&C contract - trust - including contingency

453,830 Allocation of D&C price for Stage One construction - construction

Stage One D&C contract - op co - including contingency

119,771 Allocation of D&C price for Stage One construction - plant and equipment

Stage Two construction

Stage Two construction start

1 November 2005 First month of Stage Two completion

Stage Two construction period

8 Months of Stage Two completion

Stage Two completion

30 November 2005 Stage Two completion date

Stage Two D&C contract - trust - including contingency

34,511 Allocation of D&C price for Stage Two construction - construction

Stage Two D&C contract - op co - including contingency

0 Allocation of D&C price for Stage Two construction - plant and equipment

Total construction period	42	From financial close to completion
Stage One construction cost - including contingency	573,601	Summary of above costs
Stage Two construction cost - including contingency	34,511	Summary of above costs
Total construction cost - including contingency	608,112	Summary of above costs
Construction contingency allowed for	17,000	Contingency allowed by equity contributors
Construction contingency drawn	4,000	Amount of construction contingency assumed drawn
GST on D&C contract	10%	Draw down on a pro rata basis according to the D&C contract
Acquisition cost of tags	0	GST is payable on D&C contract. Payments are lagged 90 days and are recovered in subsequent periods
SETA Equity contribution	1,200	Commissioning tags provided by D&C contractor. Post this time provided through back office
		One-off equity contribution to SETA. Contributed 30 June 2005
5. Tolling assumptions		
Theoretical toll factor in modeled first period		Theoretical first operating period toll escalation amount as per project deed formula
Toll free months from Stage One completion	1	Number of months of legal toll free use
Differential tolling	yes	
Tolls		
Passenger		
Eastbound	2.5	Base tolls as per project deed, inclusive of GST
Westbound	2.5	Base tolls as per project deed, inclusive of GST
Sir John Young Crescent	1.1	Base tolls as per project deed, inclusive of GST
Commercial		
Eastbound	5	Base tolls as per project deed, inclusive of GST
Westbound	5	Base tolls as per project deed, inclusive of GST
Sir John Young Crescent	2.2	Base tolls as per project deed, inclusive of GST

Penalty fee charged to violators					
First round		10		Penalty fee charged to violators (in addition to toll) following round 1 notice	
Second round		20		Penalty fee charged to violators (in addition to toll) following round 2 notice	
Third round - police infringement notice		115		Penalty fee charged to violators (in addition to toll) following police infringement notice	
Penalty fee CCM receives from violators					
First round		5		Dollar receipt to CCM (in addition to toll) following round 1 notice	
Second round		5		Dollar receipt to CCM (in addition to toll) following round 2 notice	
Third round		5		Dollar receipt to CCM (in addition to toll) following police infringement notice	
6. Operating and maintenance cost					
Variable opex charge				Cost per tag variable charge	
	31 December 2005	0.12			
	30 June 2006	0.12			
	31 December 2006	0.12			
	30 June 2007	0.12			
	31 Dec 2007	0.11			
	30 June 2008	0.11			
	31 December 2008	0.1			
	30 June 2009	0.1			
	31 December 2009	0.1			
	30 June 2010	0.1			
	31 December 2010	0.1			
	30 June 2011	0.1			
Upfront insurance cost		25,500		Upfront insurance premia	
7. Working capital days					
Accounts receivable		60		Days assumed for collection of 1st round penalty	

First round penalty	90	Days assumed for collection of 2nd round penalty
Second round penalty	120	Days assumed for collection of 3rd round penalty
Third round penalty		
Accounts payable		
Operating and maintenance expenses	30	Days assumed for payment of accounts payables
8. Key financial ratios		
Minimum CLCR for a 33 year period	2.1	Concession life cover ratio
Period One minimum senior ICR	1.4	Debt sized off the minimum ICR in Period One
Period Two minimum senior ICR	1.5	Debt sized off the minimum ICR in Period Two
Period Three minimum senior ICR	1.6	Debt sized off the minimum ICR in Period Three
Minimum total ICR sizing test for RPU	1.45	Min total ICR for which RPUs are sized off
Date of minimum target for RPU sizing	31-Dec-07	Year of min total ICR for RPU sizing (3rd ratio date)
First ratio date	31-Dec-05	The first June or December 12 months post Stage One completion
9. Senior bank debt assumptions		
Tranche A - equity bridge	253238	Peak facility size
Facility size		Senior bank debt supported by guarantees or LCs provided by equity, refinanced by equity
Type of facility		Injection on completion, drawdown prior to tranche B - project facility
Term (months)	42	Construction period
Facility available	1 January 2003	
Bullet	100%	Amount of principal outstanding at completion
Credit margin	0.45%	Margin charged prior to completion
Construction	n.a.	Margin charged post completion (not applicable for this tranche)
Operations		Drawdown on the tranche A facility until tranche A facility limit is reached and then
Funding of interest during construction		Drawdown on tranche B - project facility
Upfront fee	3.40%	Arranging/underwriting fee payable on financial close
Commitment fee (% of margin p.a.)	40%	Fee payable on undrawn facility balance prior to completion

Cost of LCs (%)			Fee payable to provider of LC by equity, if applicable
Facility drawdowns			Commence when the construction account is reduced to zero
Tranche B - project facility			
Facility use	580000	Peak facility size	
Type of facility	bullet	Senior bank project deed facility	
Term (years)	7	Term post financial close	
Interest only period (years)	7	Number of interest only years post finance close	
Margin during construction			
If rated BBB	1.50%	Margin over bank bills/swaps charged prior to completion if project rated BBB	
If rated BBB-	1.50%	Margin over bank bills/swaps charged prior to completion if project rated BBB-	
If unrated	1.50%	Margin over bank bills/swaps charged prior to completion if project unrated	
Margin during operations			
If rated BBB	1%	Margin over bank bills/swaps charged post completion if project rated BBB	
If rated BBB-	1.25%	Margin over bank bills/swaps charged post completion if project rated BBB-	
Assumed margins		Margin grid over bank bills/swaps charged post completion if project unrated	
30 June 2006	1.60%	Margin and period for which margin is applicable for	
30 June 2007	1.60%	Margin and period for which margin is applicable for	
30 June 2008	1%	Margin and period for which margin is applicable for	
Until first refinance	1%	Margin and period for which margin is applicable for	
Margin post 1st refinancing	1%	Margin applied to senior debt post first refinancing	
Commitment fees	40%	Commitment fee payable on undrawn balances (% of margin)	
Upfront fee	2%	Arranging/underwriting fee payable on financial close	
Assumed rating	BBB	Assumed BBB at year 3, post Stage One completion	

Number of refinancings	4	The number of times the facility is rolled don the above terms
Upfront fee payable on refinance	1%	Upfront fee payable for refinance
Refinance debt term	5	
Amortisation profile	credit fancier	Basis for principal amortised in each period
Amortisation term	11	Term over which the facility is amortised after the last refinancing
Tranche C - bond facility - standby facility		
Tranche C - bond facility amount - construction	25000	Tranche c - bond facility amount during construction
Tranche C - bond facility amount - first 13 months of operations	5000	Tranche c - bond facility amount for 13 months post Stage Two completion
LC fee	1.50%	LC fee payable to tranche c - bond facility
10. RPU		
Amount	72613	Facility size
Underwriting fee		Arranging/underwriting fee payable by equity underwriters out of equity
Base rate for coupon	3%	underwriting fees at financial close
Facility term	5.50%	Seven year swap rate
Bullet	perpetual	Specified term of RPU
Margin-construction	yes	Repayment assumption for RPU
Margin- operations	n.a.	Margin during construction
Refinance fee	4%	Margin during operation
	1%	Refinance fee
Tax rate	30%	Corporate tax rate for the CCM

Source: "Cross City Tunnel Parliamentary Notice", <http://www.lee.greens.org.au/campaigns/crosscity.htm> (accessed 7 October 2006).