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DEPARTMENT OF INFRASTRUCTURE - EAST-WEST LINK NEEDS ASSESSMENT

PHASE 3 REPORT - COMMERCIAL AND FINANCIAL

 **ERNST & YOUNG**

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PROJECT FINANCE ADVISORY

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27 March 2008

Mr John Matthews
East-West Link Needs Assessment
Department of Infrastructure
Level 12
121 Exhibition Street
Melbourne VIC 3000

Dear John

East-West Link Needs Assessment Specialist Services – Commercial & Financial

We refer to the Agreement for Professional Services with the Department of Infrastructure (“DOI”) dated 30 April 2007 and associated letters dated 2 May 2007 (the “Agreement”), through which Ernst & Young Transaction Advisory Services Limited has been engaged to provide advice in relation to proposed arrangements for the provision of commercial and financial advisory services in relation to the East-West Link Needs Assessment (EWLNA) (the “Project”).

The following sets out the basis of our confirmation of work (“Confirmation”) in relation to the scope of work.

Purpose of this Confirmation and restrictions on its use

This Confirmation in relation to the work undertaken in relation to the Project may only be relied upon pursuant to the terms referred to in the Agreement. Any commercial decisions taken by DOI are not within the scope of our duty of care and in making such decisions you should take into account the limitations of the scope of our work and other factors, commercial and otherwise, of which you should be aware of from sources other than our work.

Ernst & Young Transaction Advisory Services Limited disclaims all liability to any party other than DOI for all costs, loss, damage and liability that the third party may suffer or incur arising from or relating to or in any way connected with the provision of the deliverables to the third party without our prior written consent. If others choose to rely in any way on the Confirmation they do so entirely at their own risk.

Our scope

Our scope is set out in the Project Brief which is appended to the Agreement being that the following reports will be provided by the Contractor. The deliverable in that Project Brief to which this report relates is the Phase 3 Commercial and Financial Issues Report.

Confirmation

We confirm that we have provided advice within our scope pursuant to the Agreement in relation to the preparation of the Phase 3 Commercial and Financial Issues Report.

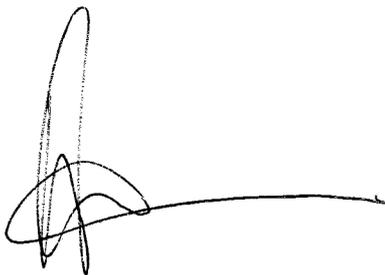
Status

A draft version of the Phase 3 report was provided to the EWLNA study team for review and comment. These comments have been discussed and incorporated as appropriate and the report finalised.

Please contact me on (02) 9248 4245 should you wish to discuss the confirmation of our work or any related matters.

Yours sincerely

Ernst & Young Transaction Advisory Services Limited

A handwritten signature in black ink, consisting of a large, stylized initial 'D' followed by a horizontal line extending to the right.

David Larocca
Director & Representative

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Our report may be relied upon by the East-West Link Study Team for the purpose of internal discussion and planning only pursuant to the terms of our engagement contract with the Department of Infrastructure dated 30 April 2007 and associated letters dated 2 May 2007. We disclaim all responsibility to any other party for any loss or liability that the other party may suffer or incur arising from or relating to or in any way connected with the contents of our report, the provision of our report to the other party or the reliance upon our report by the other party.

Liability limited by a scheme approved under Professional Standards Legislation.

Executive Summary

This Phase 3 commercial and financial report sets out the key commercial and financial issues in relation to the funding and delivery of the road and rail option (the “Project”) that has been currently identified as part of the East-West Link Needs Assessment (EWLNA) study.

The report considers the range of revenue and other options that may be available to meet the financing requirements, considers the potential range of procurement models and estimates the potential quantum of the Project and associated funding task, based on the identified road and rail package.

The report elaborates on certain aspects of the earlier Phase 1 Commercial and Financial Report. Note in accordance with terms of the Agreement, Phase 2 was not required.

This report sets out the various elements of the funding equation that drive the commercial and financial considerations of any EWLNA outcomes.

Revenue Options

A potential menu of revenue options, both direct and indirect, are considered to partially offset government budgetary funding required for the range of projects. The revenue options include:

- Direct charges to project users such as charging tolls on road infrastructure
- Direct charges to network users who indirectly benefit from the project. For example, rail network users may benefit from more frequent train services if inner city heavy rail capacity is expanded
- Special levies on private parties by seeking to capture a portion of the value created by the Project from private parties
- Opportunities for commercial development
- Other Government revenue options include an increase in the State’s share of stamp duty and land tax and the potential implications of continuing to toll existing toll road infrastructure after the expiry of existing concessions and subsequent handback to the State.

Funding Options

Assuming traditional procurement, the two key funding options are AusLink and State debt. A range of revenue offsets (direct and indirect) have been identified that can be used to meet the debt service obligations. However, it is not considered likely that the entire suite of revenue options are available to meet the debt service obligations because of the wider economic implications of levying on the economy and the population.

The potential impact on the Victorian Budget of increasing debt to finance construction of the Project in terms of credit rating and debt targets means that the Government needs to balance the financial position of the State and policy considerations in relation to Project revenue, as well as consider the role of private finance in managing the funding of the Project.

Market Issues

There are a range of market issues that need to be considered for the Project, that have been set out in the market issues section including market activity and the infrastructure pipeline, current trends and how this may impact the staging elements of the Project to ensure an appropriate level of competition.

There has been a number of major federal, state and territory infrastructure plans and projects being announced over the past two years. In addition to these infrastructure plans, significant activity in the toll road sector is likely to impact specific road transport construction demand over the next few years. An important consideration in the structuring and sequencing the Project is the specialist expertise and equipment that may be required as part of a road project such as tunnelling, planning and capacity issues.

As an indication of the scale of the capital funding requirement, based on high level analysis, the gross annual budgetary effect on the assumption of 100% government debt funding for the Project is estimated to be in the order of \$2.0 - \$2.5 billion per annum for capital and interest components in relation to the combined Project (road and rail).

The market activity, infrastructure pipeline and current infrastructure market trends suggest that a successful management of any stages of the EWLNA identified Project going forward requires early market engagement and a careful selection of a delivery model or combination of delivery models that best accommodates the various market issues while providing a value for money outcome through a robust competitive bidding process.

Likely Procurement Approaches

The selection of an optimal delivery model will be influenced by several factors, including Project objectives, risk allocation, funding method(s) selected, requirement of price and time certainty, and size and staging of the Project.

There are a range of potential delivery models that might be appropriate for the delivery of any EWLNA identified outcomes, including:

- Design and Construct (road and rail)
- Alliance Contracting Model (road and rail)
- Availability Payment Model (road and rail)
- Build Own Operate Transfer (BOOT) (road).

This report also compares and contrasts these delivery models in the context of what has been successfully achieved in the market.

Introduction

Scope & Purpose

Ernst & Young has been engaged by the Department of Infrastructure (“DOI”) to provide commercial and financial advice in relation to the East-West Link Needs Assessment (“EWLNA”). The EWLNA study, led by Sir Rod Eddington, seeks to determine the next steps to address the growing demand for personal, commercial and freight transport across Melbourne. The assessment will investigate and make recommendations to the Government on a wide range of options to meet future demand.

The purpose of this Phase 3 commercial and financial report is to set out the key commercial and financial issues in relation to the funding and delivery of the road and rail option (the “Project”) that has been identified as part of the EWLNA study. The key aspects covered include:

- Analysing the potential quantum of the Project and associated funding task, based on identified road and rail package
- Considering the range of revenue and other options that may be available to meet the financing requirements
- Considering the potential range of procurement models that may apply to this Project, having regard to market practice, activity and feedback.

The EWLNA Study Overview states six specific terms of reference that will be inquired into and reported on by Sir Rod Eddington. The commercial and financial analysis may impact each of the six terms of reference, but its primary term of reference is in relation to funding issues, including sequencing of projects according to public and private funding capacity, and the capacity of the construction industry to deliver.

Study Area

The indicative geographic scope of the study will extend from the Western Ring Road at the Deer Park Bypass to the east of Hoddle Street at the Eastern Freeway as shown in the picture below.



Source: EWLNA Study Overview

Project Context

Global Infrastructure as an Asset Class

The EWLNA study team has identified a potential package that seeks to address the needs of the east-west corridor within the study area. The package identified (the “Project”) currently includes a road and rail element that are both predominantly tunnel based. The scope of the Project is discussed in more detail in the Indicative Project Costs section.

Heavy transport infrastructure, such as road and rail, has typically required large scale investment. Examples in Victoria that have transformed transport in Melbourne include the City Loop, CityLink and EastLink, which have been delivered under different procurement and funding models.

The focus on road and rail transport infrastructure is indicative of global infrastructure trends. A recent study undertaken by Ernst & Young, “Investing in Global Infrastructure 2007: An Emerging Asset Class – Global Overview”, showed the level of expected global infrastructure spend until 2030 across a range of infrastructure types that is set out below.

ESTIMATED AVERAGE ANNUAL WORLD INFRASTRUCTURE EXPENDITURE (ADDITIONS AND RENEWAL) FOR SELECTED SECTORS 2000-2030 IN US\$ BILLION AND AS A PERCENTAGE OF WORLD GDP						
Type of Infrastructure	2000 to 2010	Approximate % of World GDP	2010 to 2020	Approximate % of World GDP	2020 to 2030	Approximate % of World GDP
Road	220	0.38	245	0.32	292	0.29
Rail	49	0.09	54	0.07	58	0.06
Telecoms ¹	654	1.14	646	0.85	171	0.17
Electricity ²	127	0.22	180	0.24	241	0.24
Water ³	576	1.01	772	1.01	1037	1.03

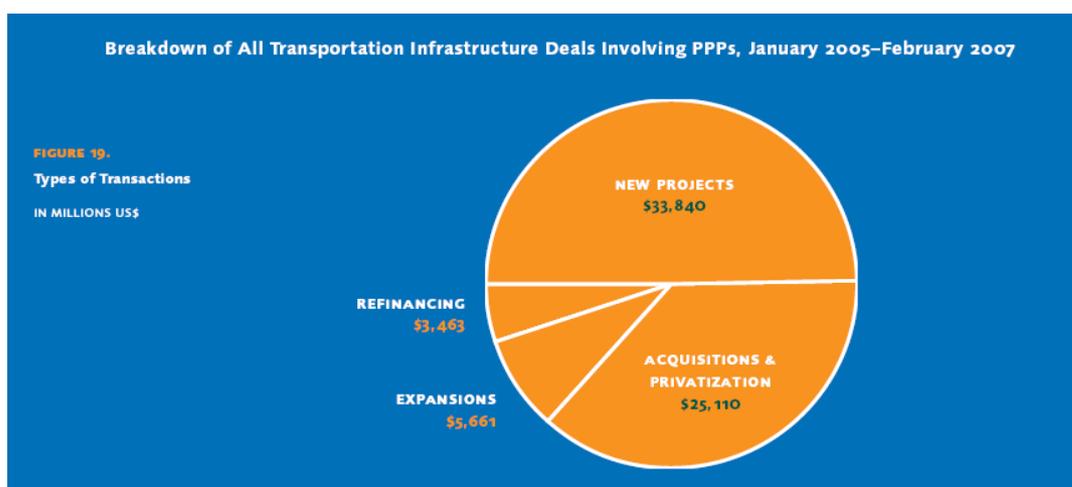
¹ Estimates apply to the years 2005, 2015, and 2025
² Transmission and distribution only
³ Only OECD countries, Russia, China, India, and Brazil are considered here

Source: “Infrastructure 2007”, Ernst & Young

The need for this scale of infrastructure is driven by a range of factors such as:

- Population growth
- Economic growth
- Increased global competition
- Insufficient or poorly planned public investment in infrastructure
- Ageing and deteriorating infrastructure.

Given the challenge of the size of infrastructure investment required in the future, governments globally are increasingly accessing the private investment market to fund infrastructure. This convergence of public need and private capital is a trend that is likely to continue with the costs of development increasing as resources (land, labour, materials) become scarce and/or more expensive over time due to demand and capacity constraints. As an indication of the scale of private sector involvement, the following graph sets out private – public sector transactions in transport over a two year period (2005 – 2007).



Source: “Infrastructure 2007”, Ernst & Young

In the Asia Pacific region, private sector involvement in infrastructure is also a feature of the infrastructure market.

Region	Total Investment (US\$ million)	Percentage Share
East Asia	72,020.8	25.4
Southeast Asia	136,569.4	48.1
South Asia	67,536.3	23.8
Central Asia	7,545.8	2.7
Pacific	336.0	0.1
Total Asia	284,008.3	100.0

Region	Total Investment (US\$ million)	Percentage Share of Total World Investment
Asia	284,008.3	29.5
Europe	174,529.5	18.1
Latin America and the Caribbean	424,196.9	44.1
Middle East and North Africa	42,486.0	4.4
Sub-Saharan Africa	36,617.1	3.8
Total	961,837.8	100.0

Source: Adapted from World Bank, Private Participation in Infrastructure Database, <http://ppi.worldbank.org/explore/ppi_exploreDetail.aspx?mode=group&panel=sector&results=0>

Source: “Investing in Global Infrastructure 2007: An Emerging Asset Class – Asian Overview”, Ernst & Young

Relevance for East-West Link

It is important to consider the Project in the domestic context of a large pipeline of transport projects that are being procured through both traditional public as well as privately financed procurement models. The market issues facing this Project are discussed in more detail under the Market Issues section.

To understand the likely funding task required for the identified Project, it is necessary to understand its indicative size. The size of the Project is currently estimated to be in the region of \$18.0 billion nominal capital cost in 2007 terms, of which the road portion is approximately \$9.5 billion (including arterial road) and the rail portion is approximately \$8.5 billion. The nominal capital cost is expressed in 2007 terms, but actual capital costs will be greater due to escalation over time prior to actual construction. The rail portion is made up of two tunnelled sections and the road project is made up of three sections, which include a high proportion of tunnel construction.

The proposed East-West Link Project construction cost per kilometre is more than North South Bypass Tunnel (a comparable road tunnel project) and Lane Cove Tunnel, reflecting the escalation in construction costs for major civil engineering projects. East-West Link preliminary opening traffic forecasts are less than EastLink. This means East-West Link is likely to require a significant government contribution, irrespective of delivery model.

Revenue Options

Introduction

This section outlines the potential menu of revenue options that could be considered to partially offset government budgetary funding required for the range of projects, which could then allow assessment of the potential net budgetary effect of proceeding with any defined project set. These revenue options have been identified by the East-West Link Study Team.

This section is not intended to recommend policy options for the State, but to raise potential revenue options that the State may consider.

The revenue options are categorised broadly as the following sub-groups:

- **Direct charges to project users** - Direct charges are applied to consumers that actually use and benefit from the Project. Charging tolls on road infrastructure is a common example of a type of direct charge.
- **Direct charges to network users** - Network users benefit from the Project indirectly. For example, rail network users may benefit from more frequent train services if inner city heavy rail capacity is expanded.
- **Special Levies on Private Parties** - This revenue option seeks to capture a portion of the value created by a project from private parties.
- **Commercial Opportunities** – Opportunities for commercial development as part of any project.
- **Other Government revenue options** - This revenue option seeks to capture value created by the range of projects for the State; they include increasing the State share of stamp duty and land tax and the potential implications of continuing to toll existing toll road infrastructure after the expiry of existing concessions and subsequent handback to the State.

We have not been instructed to assess the level of socio-economic impacts and changes to consumer behaviour resulting from these revenue options.

Multi modal revenue options can be implemented to reduce the funding gap. For example, a road based levy such as a registration levy on registered vehicles in Melbourne could be considered to reduce the funding gap for a rail construction only transport solution.

Direct User Charges

Rail Pricing

The large scale and high capital cost of the proposed rail network augmentation requires consideration of revenue options to supplement the traditional government funded approach for rail infrastructure. Given the current rail network ticketing system (which uses a multi-modal zone network ticketing charge rather than a charge per trip), directly levying direct uses of the new rail infrastructure may prove problematic. Furthermore, users of the entire rail network would be likely to benefit from increased capacity of the inner city heavy rail network in terms of more frequent services and the potential for fewer delays.

To assess the impact of direct charges to new rail users, boardings / alightings from current city stations could be used to estimate the benefit that city rail users receive from using the new city stations. Practically, applying a levy to commuters who use the new city stations would be problematic given the close proximity of city stations to each other and the ability for commuters to alight at a free station, then walk to their destination.

Road Pricing / Tolling

The increasing acceptance of road users to pay a toll for use of new road infrastructure in recent years leads to a source of revenue to offset government contributions.

Differential tolling for each road segment is considered, which may be based on road length or driven by potential road user demand.

Further discussion of the impact of staging toll road projects is discussed in the Market Issues section below.

Direct Charges to Network Users Generally

A range of diverse revenue options are considered for this category. Direct charges to network users generally have the potential to provide alternative revenue sources by spreading the cost to acquire revenue from a broader range of network users. Many of these revenue options, if applied under one transport solution, may potentially cause double counting on many consumers. As previously mentioned, this Report does not intend to recommend policy options, but seeks to raise potential revenue options for consideration.

Some revenue options are beneficial not only from revenue generating stand point, but can also achieve the environmental objectives by levying and by deterring road use and potentially providing some modal shift to public transport options.

Direct Charges to Road Network Users

The construction of the proposed road project has the potential to ease traffic congestion across the east west corridor. Motorists who use the existing inner city network, but do not use the new road would be likely to benefit from reduced congestion on existing road networks. It could also be argued that motorists receiving the benefit of reduced congestion caused by the construction of the new road could be tolled to reduce the funding gap for the road. On the other hand, there is a range of arguments against tolling existing road infrastructure and to date has not yet implemented in Australia (other than sections that form part of the new CityLink project).

Direct Charges to Rail Network Users

Commuters across the entire rail network are likely to benefit from the expansion of inner city heavy rail infrastructure. Benefits may result in reduced travel time, less delays and more frequent services. The rail ticketing pricing system could be adjusted to include a levy revenue source to reduce the funding gap for rail infrastructure construction. Potential options include levying network users who enter the Zone 1 inner suburban network, or the entire Melbourne metropolitan network (incorporating Zone 1 and Zone 2).

Levy on V/Line Passengers

Trains travelling to Melbourne on Victoria's country rail network, V/Line, utilise the same below rail infrastructure and stations as the Metropolitan network. The benefit of reduced delays to V/Line

trains that enter the Melbourne metropolitan network could potentially provide grounds to levy V/Line services to and from Melbourne.

Cordon Congestion Charge

Many of the world's most congested cities have considered and implemented a cordon congestion charge to provide a disincentive for road users to enter a prescribe inner city area. London implemented its cordon congestion charge in February 2003. In February 2007, London doubled the size of its congestion charge zone after the initial four year program reduced traffic by 10 to 15 percent, reduced vehicle delays by 20 to 30 pr cent and tempered pollution levels¹. A cordon congestion charge could be applied to vehicles entering a specified central Melbourne area to generate revenue for new transport infrastructure.

Fuel Levy

This option involves implementing an additional fuel levy applied to the cost of petrol to retail consumers. A fuel levy would further encourage a shift towards public transport options and align with environmental impact concerns. There a number of key limitations of a fuel levy, namely:

- Levy structuring is administered by at a Federal level
- Road users have historically been relatively inelastic to a change in price of fuel. Consumer behaviour has not markedly changed despite recent fuel price rises, but having said that there has been increased patronage across the public transport which could be partially attributed to increase in fuel prices.

Registration Levy

An annual levy on all registered vehicles in the Melbourne Metropolitan area or Victoria-wide is a potential revenue option that could be relatively straight forward to implement. A registration levy is also arguably consistent with environmental objectives by potentially providing some modal shift from road to public transport options by providing disincentives to road users and reducing the number of vehicles on Victorian roads. The concept of the existing annual registration fee is to charge road network users for the development and maintenance of road infrastructure. A proposed registration levy for a major infrastructure investment would align with the concept of the existing registration charge.

CBD Parking Levy

Private car parks in the Melbourne CBD are currently levied \$800 per car space per year. An additional levy would be passed on to car park users through higher prices, thus providing a disincentive to road users to drive to the CBD. This revenue option may reduce CBD congestion and provide a further revenue source.

Road Freight Charge

Congestion on suburban roads surrounding the ports is a key focus for the study. A charge on road freight, potentially based on trucks leaving the port was considered in the broad canvas of revenue options. Alternatively, a toll charged on trucks entering residential streets around the port could be considered as a revenue option that also addresses the social amenity issues.

¹ "Infrastructure 2007: A Global Perspective", Urban Land Institute and Ernst & Young, 2007, page 45

Special Levies on Property Owners

This revenue option seeks to levy property owners that are beneficiaries of increased value as a result of the projects and capture a portion of that value. Many of these revenue options, if applied under one transport solution, would cause double counting to many consumers. For example, a levy on all municipalities who benefit from public transport may be “double charged” for the same infrastructure if they also are levied by new developments in the western suburbs.

The following revenue options were identified as possibly benefiting from increased value from the range of projects.

City of Melbourne Rates Levy

Particularly for the rail option, an improved public transport network in the inner city has the potential to increase property prices. This option has been segmented by residential and non-residential. Non-residential land owners are likely to benefit from improved access to the city for its employees and customers.

Municipal Levy

A number of city councils in the Melbourne metropolitan area are supported by a comprehensive public transport system. By improving the public transport service, the municipalities’ residents are likely to benefit from the improved service. The levy could be applied to the municipalities’ existing rates base and may encourage existing road users to shift to public transport as they would already be partially paying for public transport through the charge. Determining which municipalities are included or excluded from the levy may be difficult.

Levy on new developments in the Western suburbs

It is likely that improved transport infrastructure could have the effect of increasing property prices for existing land owners in areas that are currently public transport deficient. Currently transport infrastructure in the western suburbs is underdeveloped. In theory, the Government could capture some of the benefit of rising land values caused by the range of projects to help pay for the infrastructure. In practice, such a levy would be challenging to implement. Determining the value of the increase in land prices attributable to the new development would be problematic and subjective. Selecting the area to levy would be complicated. A levy on new industrial and housing estates could be one potential practical revenue option.

Levy on new developments in the Inner City

Similar to the levy on new developments in the western suburbs, the levy on new developments in the inner city is likely to have comparable benefits and drawbacks. Inner city property owners are likely to benefit from improved inner city rail infrastructure, causing increasing property prices for existing land owners.

Commercial Opportunities

Value for the range of projects can be obtained by taking advantage of commercial opportunities created or enhanced by project development such as additional property development. A recent example of a Melbourne commercial opportunity created by a rail infrastructure project is the retail developments in the Southern Cross Station precinct. Similar commercial opportunities could be investigated at the newly constructed rail network stations.

Other Government Revenue Options

Tolling of Existing Toll roads after Handback to Government

Melbourne's two toll roads, CityLink and EastLink are structured under concession arrangements whereby upon expiry of the concessions, the toll roads revert back to the Government at no cost. A potential revenue option would be to continue to toll these roads after handback and use the revenue to service the debt repayment. The CityLink concession is to expire on 30 June 2034, while the EastLink concession will expire on 30 September 2043.

The impact of these events would considerably reduce the need for other revenue sources to service the debt beyond these dates if this revenue option were selected.

Alternatively, the State could consider extending the concession agreements with ConnectEast and Transurban for a fee prior to the proposed concession expiry date, thus accessing cash flow from these revenue sources earlier.

Stamp Duty Additional Levy

This potential revenue option seeks to practically capture some of the benefit of rising land values caused by the improvement in Melbourne's road and rail infrastructure to help pay for the projects. By applying an additional levy to stamp duty, the Government is able to capture a proportion of the value attributable to the increase in land values when the property is sold. However, determining the value of the increase in land prices attributable to the new infrastructure development and assessing the level of the levy require a potentially complicated mechanism to measure and collect the revenue.

Land Tax Additional Levy

The Land Tax Additional Levy is similar to the Stamp Duty Additional Levy above. However, it applies to land owners who are charged land tax on their investment properties.

Summary

This section outlines the potential menu of revenue options, both direct and indirect, that could be considered to partially offset government budgetary funding required for the Project.

It is not considered likely that the entire suite of revenue options are available to meet the debt service obligations because of the wider economic implications of levying on the economy and the population. However the level of government budgetary funding required can be partially reduced by integrating a suite of direct and indirect revenue options.

Funding Options

Introduction

The previous section built up the potential menu of revenue options and the likely additional revenue, both direct and indirect that could be raised and allocated to the Project. This section reviews the likely funding shortfall and assesses the possible funding sources that could be applied.

Estimating the Funding Gap

Recent experience of large scale toll road developments shows that revenue is not always sufficient to produce a viable private project without government contribution. For example, the North South Bypass involves a contribution of approximately \$500 million from the Brisbane City Council. Coupled with this, it is a commonly observed feature of rail projects in Australia that they are not self-sustaining and they are in fact a “social” investment in many respects where benefits may manifest in a non-financial way. Rail projects have historically required some form of government funding in particular given the relative utilisation, distance and patronage in Australian metropolitan areas. Given that the Project is a combination of both road and rail, the analysis produced has focused on the “funding gap” being the difference between the costs of the project and the revenue generated to assess the potential sources of gap funding.

In order to assess the magnitude of the gap we have, in the first instance, assessed various revenue options that could be used to reduce the size of the funding gap; these are discussed in more detail in the previous section. These revenue options include a range of direct and indirect user charges and other revenue charges. It should be noted that these options have wider economic implications and therefore are unlikely to all be used simultaneously and can only be assessed by looking at their financial impact coupled with the economic impact for the State of Victoria.

As an indication of the scale of the capital funding requirement, based on high level analysis, the gross annual budgetary effect on the assumption of 100% government debt funding for the Project is estimated to be in the order of \$2.0 - \$2.5 billion per annum for capital and interest components in relation to the combined Project (road and rail).

The other key observation is that, assuming a package of revenue options that may be representative of what the State might implement, the profile of the funding shortfall is substantially greater during the first 10 – 20 years of the Project, especially as the concessions for CityLink and EastLink are progressively handed back and toll revenue is potentially available to service this Project’s financing and revenues grow in nominal terms compared to the debt service level.

Sources of Gap Funding

The various sources of gap funding include:

- AusLink funding (for road/port links) – background information on AusLink is set out in Appendix 1
- State Government funding, including increased borrowings

- Other Government related funding options
- Other sources of external finance, eg. private sector funding.

Federal Government Funding – AusLink

In the Federal Government's 2007-08 Budget, it announced that it will invest an additional \$22.3 billion on Australia's land transport system from 2009-10 to 2013-14. The new funding will be available under AusLink 2, the second stage of the AusLink program.

Administered Programme	AusLink 2 2009-10 to 2013-14 \$ million
AusLink Investment Programme	16,783.0
AusLink Black Spot Programme	297.5
AusLink Strategic Regional Programme	300.0
AusLink Roads to Recovery Programme	1,750.0
Total AusLink Administered	19,130.5
Supplementary funding for SA local roads	29.5
Untied Local Road Grants	3,130.4
TOTAL LAND TRANSPORT INFRASTRUCTURE FUNDING	22,290.5

In respect of road transport options, the AusLink process requires consideration of a privately financed model, which is likely to include user tolling, to be assessed for any project in excess of \$500 million. In addition, for any project for which private funding is to be sought in parallel with AusLink funding, there are detailed requirements in respect of the procurement approach and the timing of AusLink payments. These requirements generally mean that the Federal Government is unlikely to provide periodic funding under a shadow toll or availability payment model.

Our experience of the AusLink evaluation process is that it is reasonably consistent with the current state government approaches used in assessing major transport projects. Clearly, the most efficient process is for the Victorian and Federal Government to co-operate on a joint evaluation process for any proposed EWLNA projects seeking funding from AusLink. This type of process is likely to have a higher administrative overhead than a standard Victorian Government assessment.

With respect to the road portion of the Project under consideration, the current AusLink requirement to consider privately funded options will likely have the most impact on the procurement process. The analysis on current market capacity linked to the overall large size of the total road project indicates that a staging approach, similar to the Brisbane City Council TransApex program may optimise the competitive process, whatever the procurement option. In optimising the amount and minimising the time required to achieve AusLink funding for the EWLNA sub-projects it is

necessary to consider the potential for toll based private finance. The AusLink process is likely to be optimised around projects which have a high toll based revenue potential.

The section of road servicing the port has the potential to attract AusLink funding. Given the metropolitan nature of this project, any available AusLink funding is likely to only cover up to fifty per cent of the cost with the remainder being funded by the State. To match AusLink funds the State would be required to contribute a one-off upfront amount to be contributed to the road portion for the Project.

State Government Funding

As part of *Meeting Our Transport Challenges*, the State announced in May 2006 an investment plan of \$10.5 billion over 10 years to improve transport infrastructure and services. The most recent State budget (May 2007) is forecasting surpluses in the order of an average of \$424 million over the following three years. The State also projected infrastructure investment over 2008 – 2011 of over \$10 billion allocated to a range of sectors, including transport.

Assessment and delivery of major infrastructure in Victoria is guided by the *Gateway Initiative* and *Partnerships Victoria*. As part of the Business Case process, market interest is generally tested and procurement under both traditional and *Partnerships Victoria* models are considered; the Project (and its elements) is above the minimum guidance *Partnerships Victoria* thresholds for consideration (ie. greater than \$100 million). In the scenario where the project is greater than \$500m, the AusLink process is likely to tie in with any *Partnerships Victoria* procurement options analysis.

In the scenario where there is insufficient revenue directly generated by the Project to fund it (eg. toll revenue, ticketing), State Government funding is likely to be required irrespective of whether the Project is delivered by traditional or private sector procurement such as a public private partnership (“PPP”). Under the Project contemplated here, there is likely to be insufficient revenue, especially since the option has a substantial tunnel component that makes it relatively expensive and therefore less economic vis a vis potential traffic flows and patronage. Hence, the need to consider a range of other revenue options to meet the potential funding gap.

Other factors that should be considered include:

- Any State balance sheet targets such as the State general government sector net debt target at or below 3% of Gross State Product (“GSP”). This target does not include public non-financial corporations and public financial corporations net debt.
- That the State currently has a AAA credit rating from both Standard & Poors and Moody’s, which is predicated on a strong balance sheet with low debt levels, prudent financial management, sound economic base, solid growth prospects and strong liquidity position.

Other Government Related Funding Options

There are other government related funding options which may also form part of addressing any funding gap.

One of these options could include a form of non-compulsory social taxation such as a State-run lottery to raise funds. However, this form of fund raising may have a net impact on other revenue raised by the government from other forms of lottery and gaming as well as possible negative social effects and would need a more thorough socio-economic analysis.

In the past, the Federal Government has used fiscal measures to encourage investment in infrastructure with varying degrees of success (eg. tax benefits associated with investments funding infrastructure). Another example of this type of tax-driven investment includes the municipal bond concept in the US that is often used to fund capital projects, which attracts a lower level of return because of their tax exempt status. Given the recent change of government in Canberra, it is not possible to assess whether such approaches are likely to be trialled. Furthermore, notwithstanding any such funding options, the main aspect that needs to be dealt with is that if there is debt issued it still needs to be serviced, so although another source of funds, is still likely to require revenue and/or State funding to meet the repayments.

Other Sources of External Finance

As mentioned previously, private sector finance may be available in the first instance to meet part of the funding requirement, if appropriate. Under a private finance type arrangement, the State Government may be able to seek upfront private sector funding, but given the cost of the Project, the private sector is likely to require some kind of service payment or subsidy to build and operate the infrastructure. However, to optimise the use of private finance, the elements of the Project that are likely to potentially represent value for money are those with the greatest potential for revenue generation that can minimise any contribution that the State may be required to make.

Private sector finance can come in the form a range of ownership models such as:

- Design, Construct and Maintain
- Alliance Contracting
- Build Own Operate Transfer
- Availability payment models.

There are discussed in more detail in the later section, Likely Procurement Approaches.

Other Funding Considerations

There are a range of other funding considerations that may assist in meeting the funding gap over time and financing transaction costs including:

- Sculpting the repayment profile of any State debt requirements to include an interest free period
- Alternative funding arrangements that involve some form of credit guarantee finance (as in the UK) or supported debt arrangements (being considered in Queensland). Under a credit guarantee arrangement, the government would provide debt (funded by government borrowing through say the Treasury Corporation of Victoria) and private sector financiers/insurers guarantee repayment of the debt
- Examining the spectrum of government entity arrangements that range from non-recourse through to full recourse vehicles with varying degrees of indemnity levels that may reduce transaction costs. However, these may not all represent value for money in relation to the risk profile for the State (eg. non-recourse basis may not be truly non-recourse where residual political risks remain with the State).

Depending upon the final structure of any State delivery vehicle (eg. statutory authority, corporation, etc.) as well as any private sector arrangements, it is also important to consider the taxation implications of any funding and procurement options, eg. grant funding being treated as income, depreciation treatment, etc.

Implications for the Victorian Budget

Based on high level analysis, assuming the current Project package and its related revenue assumptions, the gross budgetary subsidy required to meet 100% debt finance (assumed) is in the order of \$2.0 billion to \$2.5 billion from full operations start in 2020, assuming both road and rail are operational.

The 2007-08 Victorian State Budget Update indicates that the net debt of the general government sector is anticipated to increase from \$2.7 billion (actual 2007 financial year) to \$8.2 billion by 2011 in the forward estimates. By 2011, \$8.2 billion net debt represents approximately 2.7% of GSP.

Since construction of this Project is likely to commence towards the end of the forward estimate period (2011), the net debt to GSP target of 3% is almost already reached, which does not include any allowance for any EWLNA project(s).

Given the current profile of the forward estimates, this may inform both the vehicle and form(s) of procurement that may be preferred in terms of the overall affordability of the Project. Some of the key considerations include:

- Credit rating impact of increased borrowings needs to be considered in more detail as the capital cost (nominal terms) by the time Project construction were to commence given a current Building Products Index assumption of 6% will be significantly greater than \$18.0 billion in 2007 nominal terms due to escalation over time prior to actual construction. If the Project were to be 100% State debt funded, net debt would increase substantially
- The mix of revenue options that may be implemented to meet the funding gap should consider other financial measures that the State wishes to maintain during the forward period, such as the 3% net debt to GSP target

Having regard to the considerations above, private sector financing probably has a role to play in allowing the State to manage any increase to borrowing levels over time.

The key ramification of undertaking this Project is that the State needs to assess the balance of various factors on the financial position of the State including:

- Borrowing targets and credit rating impacts
- Staging versus one project procurement, including flow on consequences of increased nominal construction costs over time from staged or deferred projects
- Policy mix in relation to the range of potential revenue options that may be applied to offset any borrowing requirement
- Use of private sector finance as a tool to manage the call on State funds

- Non-financial impacts of undertaking the Project and its elements, which is the subject of separate analysis.

Delivery Considerations

Irrespective of whether this Project is to be undertaken in one procurement or a staged procurement, the likely scale of the task also raises delivery considerations from the State perspective in how to best manage such any procurement, such as whether a separate State delivery vehicle required to be established. The key considerations include:

- Resources to project and contract manage any arrangements, especially if there is a staged program
- The manner by which the State may borrow, including consideration of the appropriate type of vehicle
- Potential for future commercial structuring and management of project risks into the future.

Summary

Assuming traditional procurement, the two key funding options are AusLink and State debt. A range of revenue offsets (direct and indirect) have been identified that can be used to meet the debt service obligations. However, it is not considered likely that the entire suite of revenue options are available to meet the debt service obligations because of the wider economic implications of levying on the economy and the population. Therefore, implementing a representative range of revenue options is still expected to produce a funding gap, especially in the first 10 – 20 years of the Project that needs to be considered.

The potential impact on the Victorian Budget of increasing debt to finance construction of the Project in terms of credit rating and debt targets means that the State needs to balance the financial position of the State and policy considerations in relation to project revenue, as well as consider the role of private finance in managing the funding of the Project.

Market Issues

Overview

When assessing funding and delivery options for the Project, it is important to consider market activity, current trends and how this may impact the question of staging elements of the Project to ensure an appropriate level of competition is achieved.

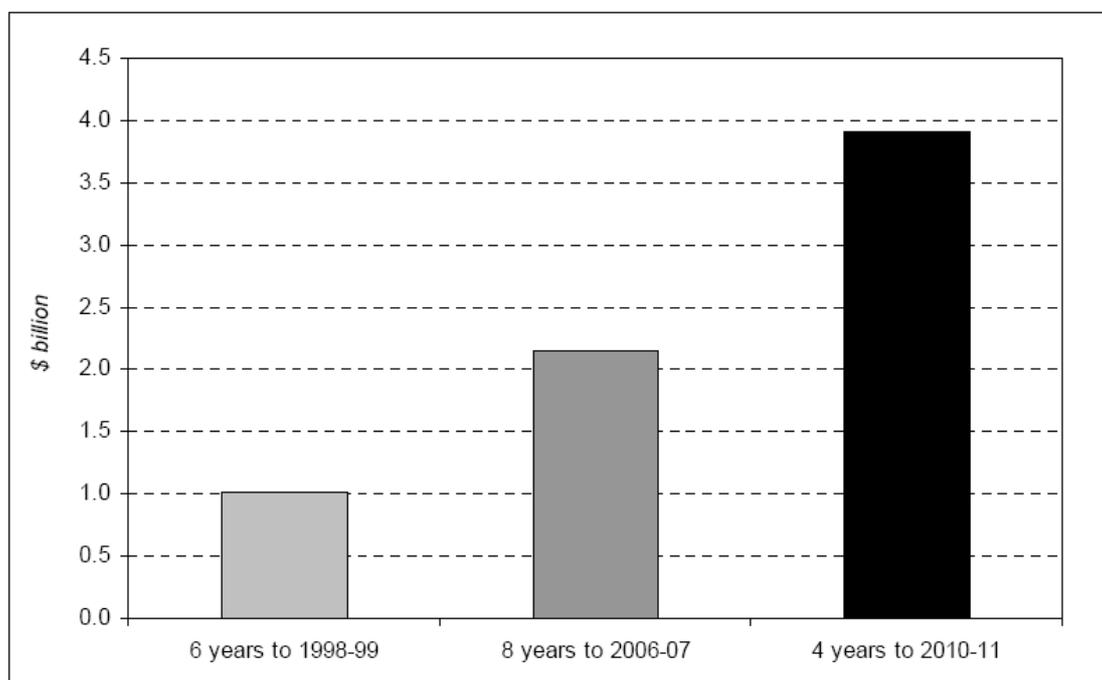
Current Infrastructure Pipeline

Government Infrastructure Plans

There has been a number of major federal, state and territory infrastructure plans and projects being announced over the past two years. The following discussion focuses on the three eastern seaboard states - Victoria, New South Wales and Queensland - but we also note that there are major infrastructure programs in other states such as South Australia and Western Australia and in the federal arena (eg. AusLink and AusLink 2, further study on the North-South rail link between Melbourne and Brisbane).

In Victoria, as mentioned previously, the government set out in the most recent State Budget that infrastructure spending is set to increase over 2008 – 2012. The State has also recently announced major investment in water infrastructure over the next four years including a \$3.1 billion desalination plant to be completed by 2011.

General government net infrastructure investment^(a)



Source: Department of Treasury and Finance

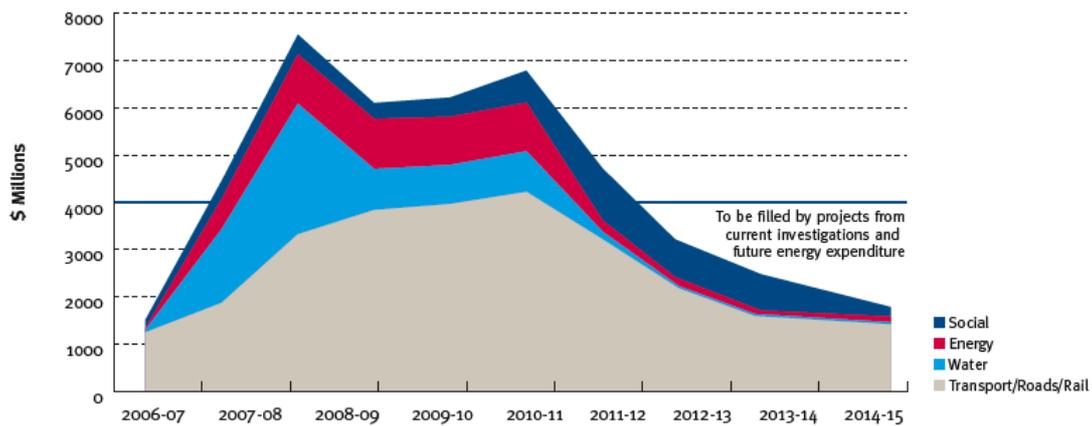
Note:

(a) Average annual spend for each period.

Source: Victorian Budget Update Overview, December 2007, page 4

In Queensland, the government released the South East Queensland Infrastructure Plan and Program (SEQIPP) in June 2005 that sets out a 20 year major infrastructure development program from 2006 - 2026. The May 2007 update of the SEQIPP identified \$82 billion of infrastructure spend to 2026. The more immediate pipeline of activity over 2007 – 2015 is set out in the graph below.

Figure 1: SEQ Infrastructure Plan activity 2007–2015

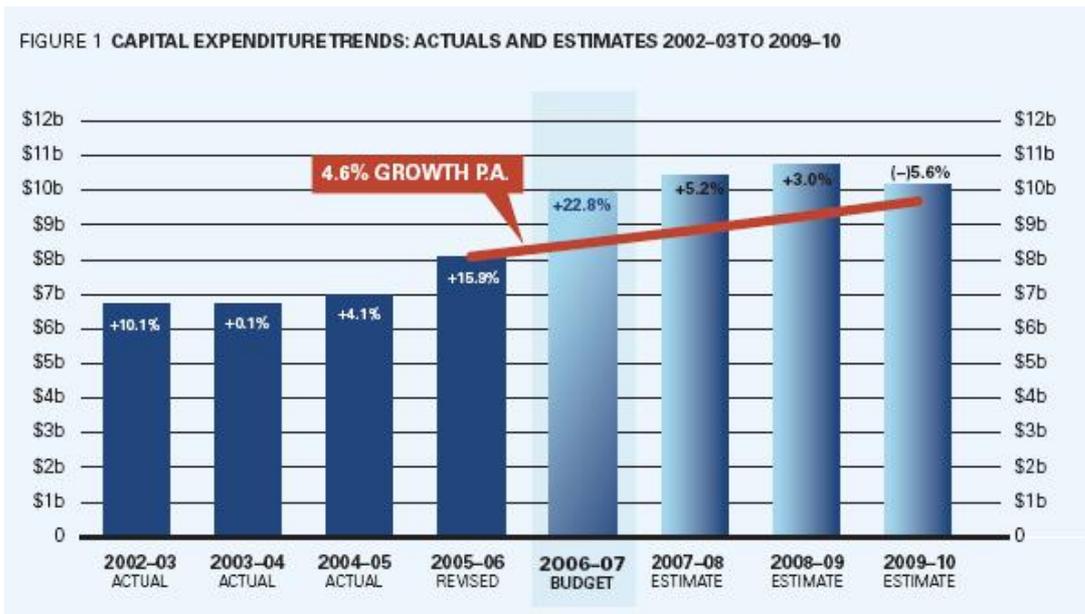


Source: SEQIPP 2007-2026, May 2007, page 14

In the roads sector, the Queensland Government and Brisbane City Council have adopted a very deliberate strategy of presenting a pipeline of projects to the market to maximise competition. This strategy has resulted in:

- the \$3 billion North-South Bypass Tunnel attracting 3 strong consortia;
- the \$3 billion Airport Link / Northern Busway project attracting 4 strong consortia; and
- significant market interest in the next major project, the \$2 billion Northern Link tunnel project.

In New South Wales, the State Infrastructure Strategy (SIS) was released in May 2006. Spending over the ten year period set out in the SIS is expected to be over \$110 billion, with an average of \$10 billion per annum. Approximately \$41.3 billion of spending has been earmarked for the first four years of the SIS.



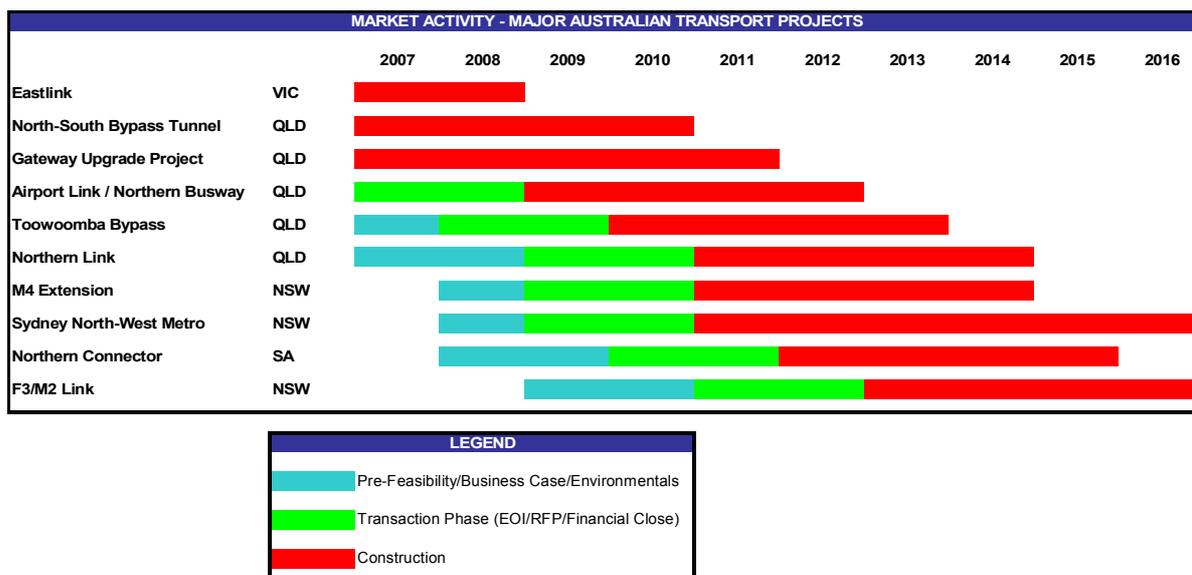
Source: SIS 2006-07 to 2015-16, page 4

As set out in the Victorian, New South Wales and Queensland budgets and plans, infrastructure spending over the next few years for these three states alone is in the region of \$70 billion +. This infrastructure spend is spread across different sectors such as health, education, transport, ports, utilities and so forth. However, this is likely to result in significant demand as mentioned previously.

Major Transport Projects

Aside from the various state infrastructure plans, there is also significant activity in the toll road sector which is likely to impact specific road transport construction demand over the next few years. Given the specialist expertise and equipment that may be required as part of a road project such as tunnelling, planning and capacity issues are an important consideration in the structuring and sequencing of any potential project(s) resulting from the EWLNA study.

The figure below shows an unprecedented competition for bidding and delivery resources for upcoming major transport projects in Australia. It is worth noting that most of these projects involve greater than \$2 billion in construction works:



Source: Prepared by Ernst & Young based on various state plans and project information

Impact of the Cross City Tunnel

It is important to consider whether the Cross City Tunnel (CCT) situation has had a material impact on potential private sector interest in toll road projects.

The CCT is the first of 11 PPP toll road contracts signed in Australia to go into receivership. It was recently sold to a Leighton/ABN Amro led consortium for \$700 million. The main problems experienced by the CCT can be summarised as follows:

- Inaccurate projection of traffic volume. Cross City Motorway (the private sector entity established to build, own, finance and operate the CCT) grossly over estimated the traffic that would use the project. Publicly available data shows that at the time of writing, actual traffic was about 30% of forecast.
- Management of the changes to the surface roads. The concept of ‘traffic funnelling’ emerged, where it was alleged that the proposed surface works at various sites such as William Street were designed (and contractually committed by the NSW Government) to encourage traffic into the CCT. Importantly, however, these proposed changes to the road network were well documented in the environmental impact statement undertaken before CCT reached financial close.
- The ‘up-front payment versus toll’ debate. The tender process involved companies bidding an up-front payment to the NSW Government, based on a toll level set by the Roads and Traffic Authority (RTA). The NSW Government was criticised for adopting this structure. Many suggested that structuring a tender process focussed on an outcome of the lowest possible toll would result in a more appropriate outcome.
- Limited contract disclosure. While the NSW Government has traditionally published contract summaries it was heavily criticised for not releasing full details of the contracts, leading to a change of policy in this regard.

Whilst CCT has experienced a number of issues, and both public and private sector stakeholders have been criticised heavily, it is important to focus on the following facts:

- The private sector investors in CCT have publicly stated that they have written down 100% of their equity investment. Total equity in CCT exceeds \$400 million.
- The NSW tax payer has incurred no cost. In other words, the risk allocation that is core to a PPP transaction has successfully held. Revenue risk has been fully borne by the private sector.
- CCT has remained open for traffic and continued to operate within the contract requirements.
- To date, private investors, contractors and financiers have not been discouraged by the CCT experience. They continue to bid on opportunities. NSBT yielded competitive bids, the Airport Link / Northern Busway Project yielded four strong consortia, the Lane Cove Tunnel has traded its equity, a number of toll road PPPs in NSW and Victoria have refinanced on improved terms and, most importantly, the CCT sale process yielded a strong list of private sector bidders and was recently sold for \$700 million to a Leighton/ABN Amro led consortium. All of this has occurred in the 'post CCT' environment.
- Improvements in contract disclosure, the procurement process and the commercial terms of the PPP contract have been adopted as standard on more recent procurements such as NSBT and Eastlink.
- A number of important recommendations have been made by the various NSW Government inquiries into CCT². These have been incorporated into the procurement processes for NSBT and Airport Link / Northern Busway. Examples include no network restrictions as part of the PPP contract and full contract disclosure. The State should ensure that these recommendations are also fed into process as appropriate.

In summary, there are lessons learnt from CCT which were adopted by NSBT, EastLink and Airport Link, and should be taken on board in the event the Project progresses to procurement. However, the empirical evidence is that the CCT experience has not affected private sector appetite in toll road projects.

Bidding Market

The Australian construction market is currently experiencing significant demand due to the number of large infrastructure projects both in the market and planned in the next few years.

The key issue associated with the construction market is the increasingly limited number of companies that are capable of delivering large civil engineering projects. The general market view is single projects involving more than \$5 billion in construction work will significantly reduce competition. This is because:

- Projects of this size are likely to place financial strain on the largest Australian construction contractors. This means they will need to form "super consortia" that will result in low levels of competition.

² "The Cross City Tunnel and Public Private Partnerships" Second Report – May 2006, Parliament of New South Wales, and "Review of Future Provision of Motorways in NSW", December 2005, Infrastructure Implementation Group, Premiers Department

- In a PPP context, the financing requirement is becoming significant. The market view is that total funding requirements in excess of \$5-\$6 billion will limit competition.
- Bid costs associated with projects of this size are estimated to exceed \$30 million, again limiting the companies with the capacity to make these investments.

Whilst there are limitations in the Australian market, the strong pipeline of opportunities is starting to generate a level of attention from some key European players. Some recent indicators of this interest include:

- Bouygues has established a local office in Sydney and is competing on major infrastructure projects around Australia. The company was recently awarded the Hale Street Bridge contract in Brisbane.
- Laing O'Rourke, through their acquisition of Barclay Mowlem, now has an Australian presence.
- The Spanish contractor Grupo ACS submitted an expression of interest for the Airport Link / Northern Busway Project in Queensland.
- The maturity of a strong secondary market with disposal and consolidation in key ownership stakes in the existing concessions. Transurban has been particularly active in the market with equity interests in the M2 and M7 and has recently purchased the Sydney Roads Group, which adds ownership of the M4, M5 and Eastern Distributor to their Australian portfolio.

EWLNA therefore present an opportunity for the Victorian Government to demonstrate a pipeline of projects to the market, thereby maximising the opportunity for appropriate levels of competition. This should be combined with an active market engagement process as the projects develop. Key elements of this process are:

- Ensuring the project is developed and presented to the market in a manner that is attractive and that includes risk allocations that the market is able to accept (seeking unrealistic risk transfer is likely to inflate cost and lead to suboptimal value for money outcomes).
- Engagement of the market in an informed discussion so as to identify the hurdles to maximising competition. This will include a range of market sounding and roadshow exercises to contractors, operators, equity investors and financiers.
- Providing certainty to the market as to the expectations of the Victorian Government and consistency of process.
- Presenting to industry a process and documentation with which industry is familiar and builds upon projects completed to date.
- Adopting competitive and probity measures to minimise the effect of the common ownership of a number of the key construction contractors.
- Development and delivery of a procurement strategy that appreciates the cost and time required to develop a bid of this nature but ensures that council has the best opportunity for gaining a value for money outcome. This may include the use of split bidding and other strategies to maintain effective competition.

Staging Considerations

The size of the Project as a whole is likely to be larger than other transport projects seen in the Australian market in recent times, which suggests that potential sequencing and staging of the road and rail portions would be beneficial in terms of funding and capacity in the market.

A staged project has several benefits discussed below:

- It provides a known pipeline of projects of a size that the market has capacity and appetite to deliver
- Having sub-projects will be more attractive to the market as early market discussions suggest that projects beyond c. \$5 billion are becoming less achievable for constructors and financiers to manage
- A staged program can also allow the State to better manage any potential call on funds over a period of time
- There is precedent in the market for successful projects being delivered in a staged approach for example the Brisbane City Council's TransApex initiative involves a program of large scale projects such as North South Bypass Tunnel (NSBT) (\$3 billion), Airport Link (\$4 - \$5 billion), Hale Street Link, Northern Link and potentially a Brisbane east west link when complete is likely to total in excess of \$18.0 billion (2007 dollars).
- Increased competition for projects.

There are also some potential advantages to delivering the Project as one large project such as:

- Economies of scale can be generated through a project of this size
- Delivering the project as a whole could lead to an earlier delivery of the Project since there would be an agreed timeline for full delivery. Staging the sub-projects could significantly extend the timeframe to delivery
- A single project would avoid having multiple owners/operators of the PPP and therefore avoiding interface issues
- Building the four road sections together would lead to full connectivity across the network rather than delaying the benefits to users through staging the process
- There would be a reduced escalation cost on construction which given the current upward trend of BPI (capital construction escalation) could be quite significant.

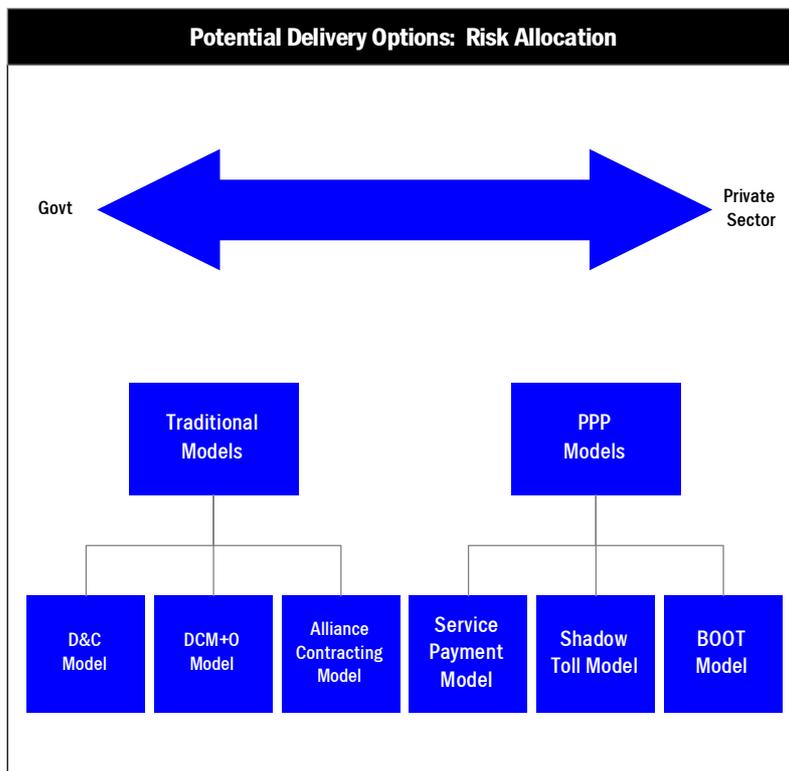
Likely Procurement Approaches

Introduction

This section considers a range of potential project delivery options for the six sub-projects discussed above and looks at these delivery models in the context of what has been successfully achieved in the market.

Note that a detailed procurement assessment, including value for money assessment, has not been undertaken at this stage. Detailed procurement analysis will be completed as part of a detailed business case.

The diagram below shows the full suite of delivery options but only the few successful models for road and/or rail projects are discussed with their advantages and disadvantages for the EWLNA Project.

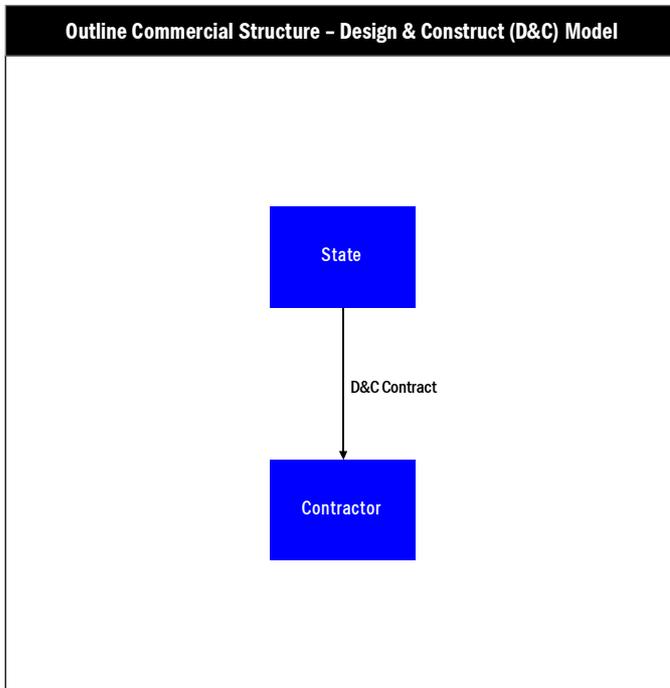


The following delivery models have been discussed in full:

- Design and Construct (road and rail)
- Alliance Contracting Model (road and rail)
- Availability Payment Model (road and rail)
- BOOT (road).

Traditional Approaches

Design and Construct (D&C)



Key Features

Under the D&C delivery model, the procurement process begins with the State developing a performance and quality requirement specification. A single contract is then established for the preparation of detailed design followed by construction of the project. It should be noted that following construction, the State may be responsible for the on going maintenance and operations.

A D&C contract usually involves bidders bidding a fixed time, fixed sum price. This can include a defects liability period (generally up to 2 years) to ensure the performance of the asset and to demonstrate the key operating variables following completion. Under this model, the State is responsible for all future operating, demand and maintenance issues.

Generally, D&C contracts are suitable for works where the public sector wishes to avoid more complex contractual interface issues. Other key features include:

- The D&C method is more likely to be driven by the contractor's capacity to accept risks in delivering civil works, rather than the long-term term operation and sustainability of the asset, which can impact on the asset's whole of life costs
- The D&C model is best suited to the achievement of minimum capital cost, because the delivery team is focussed on the facility capital price as the major component of the tender sum. However, this downward pressure on capital cost can drive up the operation and maintenance cost of the project. It is therefore suited to projects which have a relatively high capital cost compared to operation and maintenance costs.

Application to this project

The D&C model has been the basic structure used for a large proportion of Government infrastructure projects. The risk allocation and commercial structures are well understood by both the public and private sectors. Given an appropriate staging plan D&C approaches could be used for both rail and road sub-projects. There is at least one recent major road project that used this procurement approach being the Logan motorway / Ipswich Motorway Interchange in Queensland.

The advantages and disadvantages of using this model are:

Advantages

- State can develop a performance and quality requirement specification
- The majority of the design and construction risk is transferred to the private sector
- State retains control of the project
- State maintains access to toll/patronage revenue upside and downside
- There is an established contractual structure during the D&C phase.

Disadvantages

- Whilst there is some capacity for innovation the contractor is usually somewhat constrained by the preliminary design , which it must largely comply with
- State is responsible for funding capital costs, which are likely to be significant based on initial estimates
- There is limited opportunity for risk transfer to the private sector
- Long term performance risk following the defects liability period remains with State
- There is limited opportunity for whole-of-life cost benefits due to de-linking of the operating and maintenance stage from the Design, Construct and Commissioning stages
- The de-linking of these phases can also result in additional interface risk due to the number of sub-contracts which need to be managed by State
- There are limited incentives for innovation in design due to lack of revenue risk transfer.
- The State is bound by adversarial contracts to the private sector

Precedent

While the D&C Model can be applicable for both road and rail, governments have moved away from using it on recent projects due to adversarial contracts with private sector and the lack of private sector interest in the model. However, the D&C model has been used previously to procure both road and rail projects in Australia. The following are case studies on the Geelong Ring Road and the Epping to Chatswood rail line.

Case Study**Case Study: Geelong Ring Road (Victoria)**

The Geelong Ring Road is funded by a combination of State and Federal resources with the project split into 3 separate contracts for delivery. This project involves the construction of 23 kilometres of freeway-standard motorway dramatically reducing travel time through the Geelong area. The first 2 contracts of the project have

been awarded and construction commenced in February 2006.

Total funding committed to date for the 3 contracts is approximately \$380 million, \$186 million from the Federal AusLink Investment Program and \$194 million from the Victorian Government.

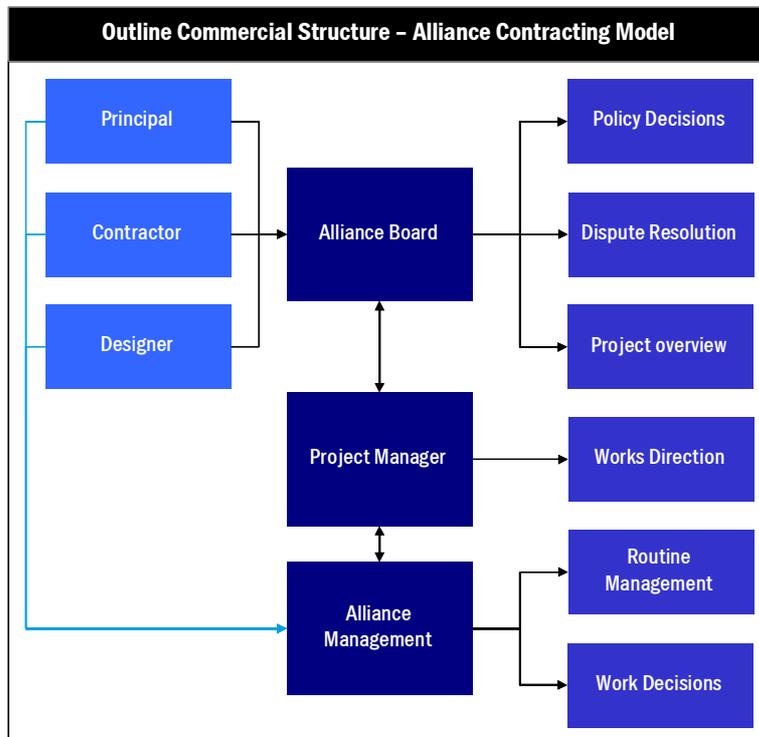
Design & Construct contracts were awarded to Abigroup Contractors Pty Ltd and Cut and Fill Pty Ltd respectively. The project is expected to service a relatively low level of traffic with 15,000 vehicles per day forecast to use the road. It involves an element of duplication of existing bridges and roads, another factor that may have driven the selection of a D&C delivery model.

Case Study – Epping to Chatswood Rail Line (New South Wales)

The Epping to Chatswood Rail Line will be a new 12.5km twin tunnel underground rail line connecting Epping to Chatswood through North Ryde and Macquarie Park. The Transport Infrastructure Corporation (TIDC) expects the line to be operational in 2009 and forecasts 12,000 new rail passengers a day with a 7.1 million new trips added to CityRail's capacity.

TIDC has awarded the contract on a Design and Construction (D&C) basis to the Thiess and Hochtief Joint Venture with Alstom being the exclusive subcontractor for the systems elements. The D&C contract includes the design and construction of the twin tunnels, dives, cut and cover structures and the excavation and concrete structures for three new stations. The total value of the D&C contract is \$860 million while the value of the entire project is c. \$2.3 billion. To date the project is the largest publicly funded infrastructure project undertaken in NSW.

Alliance Contracting Model



Key Features

Under this delivery model, the State would appoint a contractor as an alliance partner to the project. The partners would then develop the design and target cost jointly, working together to deliver the project to that budget. The contract would be structured so that the contractor receives payment for activities plus agreed overheads and profit.

Generally an Alliance Contract model works well in an environment where State has significant value to add during the design and construction phase, where the field of potential bidders is small or the project is especially complex or has large unknown risks that cannot be transferred to the private sector at value for money. An alliance can be implemented through a competitive alliance, or a simplified alliance process. Under a competitive alliance, two bidders prepare a Target Outturn Cost (TOC) and then a decision is made on the preferred proponent. Under the simplified alliance, the preferred proponent is decided after the Request for Proposals (RFP) stage and then a TOC is developed with the preferred proponent. The simplified alliance process is typically completed in 10 weeks from issue of the RFP documents to selection of the preferred proponent, while the multiple TOC process can take longer as the TOC for each proponent is developed to assist in the selection of a preferred alliance partner.

Other features of an alliance model include:

- Partners collectively assume responsibility for delivering the project
- Sharing in upside or downside results depending on how the actual project outcomes compare with the pre-agreed targets
- The partners operate on an ‘open book’ compensation model whereby State may pay the private sector:
 - Project costs and project-specific overheads reimbursed at cost based on audited actual costs;
 - A fee to cover corporate overheads and ‘normal’ profit
 - An equitable share of the ‘pain’ or ‘gain’ depending on how actual outcomes compare with the pre-agreed targets. Typically the downside risk to the Contractor is capped at the profit margin.

Advantages

- State will maintain flexibility to amend project specifications if required
- There is an increased interface with other parties to the project through the alliance structure
- State retains control of the project and maintains access to toll/patronage revenue upside and downside

Disadvantages

- State takes ownership of a number of risks and opportunities associated with the delivery of the project
- State is responsible for funding capital costs, which are likely to be significant based on initial estimates
- There is limited whole-of-life cost benefits due to short-term nature of the operating and maintenance contract

- There is limited opportunity for risk transfer to private parties
- There is limited incentive for innovation from the private sector due to budget restrictions and lack of revenue risk transfer
- “Group think” can take over where solutions are not adequately challenged
- The State takes a disproportionate share of the risk. The contractor’s risk is typically capped at the project’s profit margin.
- If the alliance is not set up properly, the TOC can be too high

Application to this Project

Alliance delivery models are generally suited to projects where the scope and timing is not well defined, where construction is likely to be affected by external third party stakeholders and where there are large unknowns / risk that cannot be efficiently transferred. Where speed is required and this needs to be a level of overlap between design, development and construction. If the components of the Project are structured on well defined specification and timetable requirements an alliance model is not likely to produce an optimal outcome for government.

Although this delivery model is not likely to be applicable to the East-West Link procurement, it has been used under different circumstances to procure roads, most notably in Queensland but also in Victoria with the Middleborough Road grade separation and Tullamarine - Calder Interchange. It has also been used for rail, for example the Sydney to Melbourne Track upgrade.

Precedent

While there has been considerable precedent for this model for procurement of road infrastructure projects in Australia, they have tended to be relatively small especially when compared with other major toll roads. The following examples include Hale Street and the Sydney to Melbourne Track upgrade.

Case Study

Case Study - Hale Street

The Hale Street Link forms part of the *TransApex* plan for Brisbane providing an additional river crossing in Brisbane. Hale Street Link is a 60 kilometres per hour four lane tolled cross-river bridge between Milton and South Brisbane. The Link will provide additional public transport, pedestrian and cycle opportunities and support future residential development and urban renewal in the West End/Woolloongabba local area precinct.

Council approved the project in November 2006 after the feasibility studies and public viewing of the draft IAS (Impact Assessment Study) were completed. An Alliance Contract model was selected for this project.

The alliance comprises of the following companies:

- Seymour Whyte Holdings
- Bouygues Travaux Publics
- Macmahon Holdings
- Hyder Consulting

Council found the alliance model provided it with a structure to appropriately manage the risks of the project. The alliance model was chosen because the Council wanted to commence construction quickly and the relative small scale of the project meant that an availability payment or BOOT model was not suitable. Council signed the Alliance Design and Construct contract in June 2007. Hale Street Link Alliance and members of Council's Hale Street Link project team are now working together on the detailed design phase of the project with a final design to be completed by early December 2007.

Case Study

Case Study - Sydney – Melbourne Track Upgrade

The Main South Line from Sydney – Melbourne will be upgraded at a cost of \$560 million as part of the Australian Rail Track Corporation Ltd's (ARTC) North – South rail network upgrade strategy. A review of the network by ARTC revealed a range of issues that affect the competitiveness and market share of rail in the freight haul and distribution sector.

The ARTC found that an Alliance model would best serve its interests and the South Improvement Alliance was formed to plan, design and deliver improvements to the Sydney – Melbourne line.

The Alliance agreement was signed in October 2005 and included the following prime alliance partners:

- John Holland
- MVM Rail
- O'Donnell Griffin
-

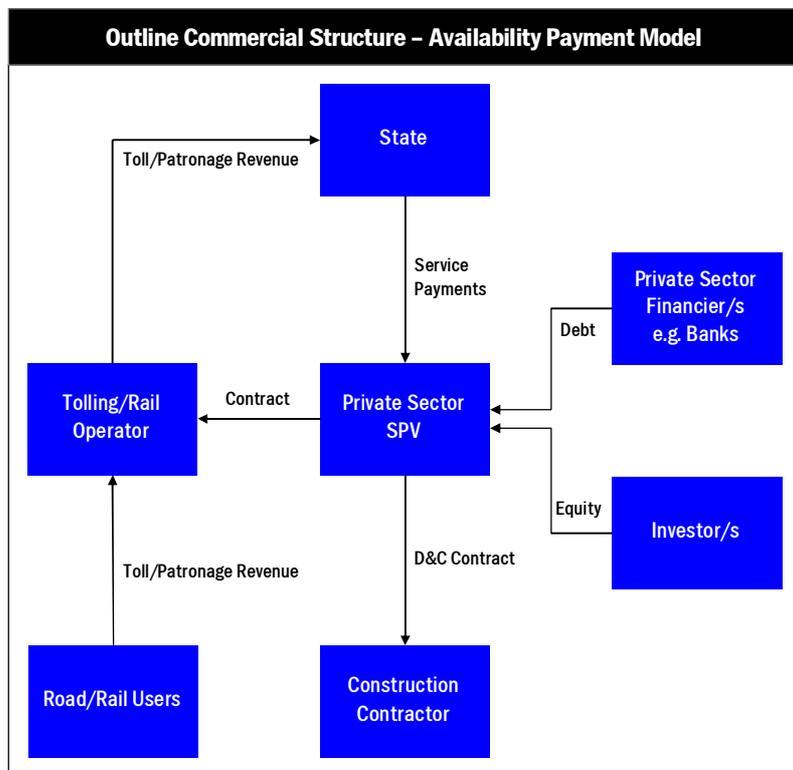
The South Improvement Alliance also included the following sub alliance partners who provided specialist services to the prime alliance partners:

- Kellogg Brown and Root
- GHD Pty Ltd
- CW – DC
-

A total 220km of new line will be constructed as part of the project and following completion in 2008 - 2009 the ARTC expects rail freight times between Sydney and Melbourne to decrease by up to two and a half hours and the freight capacity increased.

Privately Funded Approaches

Availability Payment Model



Key Features

This model is commonly used in social infrastructure projects (e.g. the Royal Children’s Hospital in Victoria, NSW Schools and Queensland’s Southbank TAFE), although it has been used for economic infrastructure projects, such as toll roads, particularly in the UK. Despite it not being used to procure roads in Australia to date it has been used to procure rail projects such as the NSW government rolling stock PPP.

The State retains demand risk and the private sector accepts asset availability risk. The private sector receives a service or availability payment from the State for making the asset available for the service to be delivered. This payment can be linked to the State’s objectives for the Project, such as safety or congestion etc.

This model involves the transfer of the majority of design, construction, commissioning, operation, maintenance and funding risks to the private sector. The State retains patronage risk and the private sector is paid on the basis of the rail being available for service delivery. This means that proponents’ bids (technical, financial and commercial) revolve mainly around pricing a whole-life solution to deliver the output specification.

It is important to note that for this payment model to be effective, the concession needs to include a reasonable level of services (such as track availability, safety, maintenance etc) so that a whole of life approach to the project may be taken.

The asset is transferred back to the State at the end of the concession period in an agreed condition, requiring the private sector to take a whole-of-life approach to its operation strategy.

Application to this Project

An availability payment model is best suited to the rail component of the Project. History has shown that the appetite of the market to accept patronage risk on rail projects has been low and the transfer of demand risk has been best suited towards toll roads. Whilst this model is not the norm for road projects, a variation of the availability model was used for the Norwegian road program where the motorists pay real tolls to use the road but the payment to the concessionaire is de-linked from real traffic or toll risk.

Advantages

- Private sector is responsible for funding the capital costs, thus State is not required to fund the upfront capital costs, easing affordability constraints in the early years. The State's contribution would be in the shape of annual service payments over the operating life of the asset.
- Risks related to design, construction, commissioning, maintenance, operations and funding are transferred to the private sector.
- The annual service payment is capped, thus offering certainty to the State over its funding requirement.
- The private sector is provided an incentive to deliver the project on time as it will not generate revenue until such time as the asset becomes available for use.
- The model can be combine toll revenue with availability based payments.

Disadvantages

- Patronage risk is retained by the State. That is, the rail operator collects the user charges and transfers receipts to the State, which restricts the incentive for the operator to innovate.

Precedent

This model has been widely used throughout the UK and Continental Europe, but not in Australia. One recent example is the E39 (Lyngdal- Flekkefjord) toll road in Norway.

Case Study

Case Study: E39 (Lyngdal- Flekkefjord) Toll Road, Norway

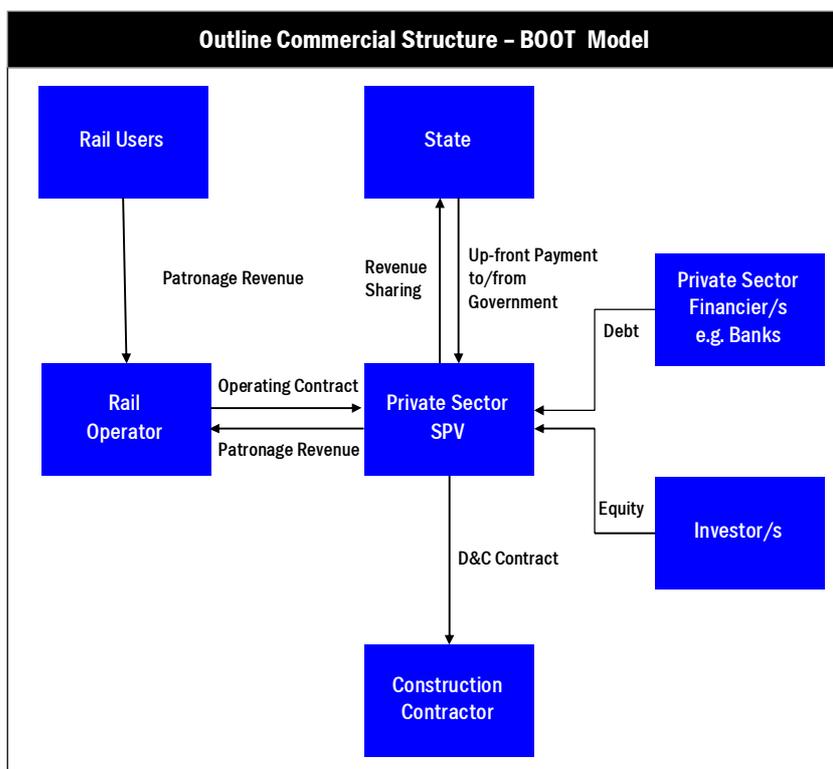
This was the second of two PPP transactions to involve the arterial E39 motorway. This €125 million project involved the design, construction, finance and operation of a new section of the motorway. It included 17.5km of new highway, a 7.5km tunnel and several bridges. The operation and maintenance of the entire 38km stretch was also part of the project. The consortium selected for the project was led by Allfarveg AS, who was granted a 20-25 year concession for the project.

This project formed one of three pilot PPP projects in Norway and all were subject to the same payment mechanism.

The private sector receives an annual unitary payment for the provision of services under the concession, with the actual level dependent on performance against a set of criteria. The criteria are established by the Directorate's goals of good accessibility, high performance and a high level of traffic safety. Toll revenue remains under public sector control due to the location of the roads in remote areas and is collected by a not-for-profit government company.

The unitary payment is based on four separate elements: availability, performance, safety and traffic levels.

Build, Own Operate and Transfer (BOOT) Model



Key Features

The BOOT model has been used for most toll road PPP procurements both in Australia and internationally where the private sector builds, owns and operates the asset then transfers it to the government at the end of the concession period. The model involves the transfer of the majority of construction, operation, maintenance and patronage risks to the private sector. This means that bids (technical, financial and commercial) revolve mainly around the private sector taking a view on future traffic and determining the extent to which tolling revenues meet the project costs and deliver investor returns. If revenues are insufficient then an upfront payment is needed, or alternatively payments can be made by bidders if revenues are more than sufficient to cover their requirements.

The State's contribution will depend on the level of construction or operating costs and revenue estimated for the project i.e. where anticipated toll revenue is less than the project costs, the government will be required to make a subsidy payment. Given the size of the potential subsidy required for East-West Link, the subsidy could be provided as an up-front payment and/or payments over time to the private sector.

The private sector is granted a long-term (usually between 30-50 years) concession for the construction, ownership, operation, maintenance and financing of the asset. To recoup the private sector costs of construction and deliver a return on investment, a real toll is levied on road users and collected by the private sector.

The process of setting the toll categories and levels is negotiated between the public and private sectors. Consistent with its policy, the State may set a limit on toll levels that the private sector can charge.

Given that the private sector is unable to generate returns until the asset becomes operational, there is significant incentive for the delivery of the project in a timely manner. The D&C contractor is typically offered early completion bonuses to provide an incentive to complete.

Advantages

- Private sector is responsible for funding the capital costs, thus easing State affordability constraints in the early years. The State's contribution would be in the shape of a payment for works on construction completion. The State contribution under the BOOT model is likely to be less than the construction costs as it represents the difference between the costs and revenues generated from the project over the asset life.
- There has been extensive use of this delivery model in Australia and therefore there is an active and sophisticated market for this type of project.
- Significant transfer of risks to the private sector.
- Transfer of revenue risks provides incentive for bidders to provide innovative design solutions to maximise efficient traffic usage.
- Upside toll revenues are shared with the public sector as are any gains from refinancing. The level of upside share is negotiated as part of the bid process.

Disadvantages

- The public sector has less flexibility, particularly the ability to amend toll levels.
- There may be a payment required from the State depending on the costs and revenue associated with the project.

Application for this Project

This delivery model is directly suited to the road sections of East-West Link. It has been used successfully on a number of road projects within Australia and is well known to the market. Each section of the road should be considered separately as the section near the port may be treated differently since the funding requirement could be reduced if Auslink funding is available.

Precedent

This model is the most common delivery model for toll road procurement in Australia. Its use has extended to North America, Continental Europe and Ireland. Most recently, it has also been used in Australia on the NSBT Project, the first piece of the Brisbane *TransApex* strategy.

Case Study

Case Study: North South Bypass Tunnel

A \$2 billion project, NSBT will use the BOOT delivery model and involve the construction of 6.8km toll road tunnel providing a vital link in Brisbane's road network, allowing motorists to bypass the CBD. Parties to the project include the procuring authority, Brisbane City Council and the winning consortium vehicle, RiverCity Motorway (RiverCity). The RiverCity SPV, awarded the concession for a 45 year period, was led by Leighton Contractors, Baulderstone Hornibrook, Bilfinger Berger and ABN AMRO. RiverCity went to Initial Public Offering in 2006.

Key risks to the project include traffic, construction, operations and financing. Many of the risks have been transferred to the private sector and investors in RiverCity. Construction has commenced with RiverCity committing to the delivery of the project by 2010.

NSBT will be a tolled road with revenue from operating the tunnel to service operating and financing costs, with

the balance returned to investors. The payment mechanism also allows for the Council to share in any upside traffic performances and refinancing gains.

Appendix 1 – AusLink Background

The Federal Government recognised that it has an important role to play in sponsoring significant state based transport projects with the release of the 2004 AusLink white paper. This document spelt out the general requirements that projects need to meet to be considered for funding, and requested market feedback on the key priorities. The Federal Governments position was that a project appropriate for funding under a targeted program was one that:

- Improves national and interregional connectivity for people, communities, regions and industry
- Improves national, interregional and international logistics
- Enhances national, interregional and international trade
- Enhances health, safety and security
- Is consistent with the obligation to current and future generations to sustain the environment
- Is consistent with viable, long-term economic and social outcomes
- Is linked effectively to the broader transport network.

Guidelines were developed for the assessment of projects that involved an initial strategic review which assessed:

- Is the project consistent with the AusLink national objectives and the strategic directions of the National Land Transport Plan?
- Are the project objectives consistent with objectives established for the relevant corridor?
- Are there major risks or constraints on the project which raise serious doubts about its feasibility?
- Is the project sufficiently well-defined and is sufficient information available to enable assessment?
- To what extent is the project dependent on, or likely to be affected by, other projects or investments?
- Are there alternative solutions that should be considered?
- Is the project too small to warrant detailed assessment? In such cases, a rapid benefit-cost analysis will suffice.

If a project passes this analysis, a detailed cost/benefit study is performed in concert with the relevant state government(s). This process sets the level and timing of AusLink funding.