

2014-2015 Assessment Brief

Recommended rating:	Threshold
Current rating on the Infrastructure Priority List:	New submission
Initiative Name:	Perth Freight Link
Geography:	Perth, Western Australia
Proponent:	Main Roads Western Australia
Project description:	
<p>The Perth Freight Link project seeks to remove the ‘missing link’ to Fremantle Port by the provision of a high standard road freight link which includes the extension of Roe Highway west of the Kwinana Freeway to become the principal east-west freight link and a high standard freight connection between Roe Highway and Fremantle Port via Stock Road, Leach Highway and Stirling Highway.</p> <p>Project objectives include:</p> <ul style="list-style-type: none"> • Overarching goal is to facilitate the transport of freight along the metropolitan east-west freight corridor between the city’s key strategic industrial areas; • Improve road safety and reduce freight’s impact on the community through greater segregation of freight and passenger vehicle movements along urban arterial roads; • Enhance state productivity by improving access to Fremantle Port and Perth’s key strategic industrial areas to meet current and future growth in freight traffic; and • Improve the return on investment for government through better infrastructure utilisation. <p>Problems the project seeks to address are:</p> <ul style="list-style-type: none"> • Growth in freight traffic on mixed use routes is adversely affecting public safety and social amenity in Perth’s southern suburbs; • Sub optimal access to Fremantle port and key strategic industrial areas is leading to reduced freight efficiency; and • Fiscally constrained government resources are limiting the ability to address the freight and productivity issues. <p>Project solution:</p> <p>The solution proposes a 5.2 km extension of the Roe Highway from its current terminus at Kwinana Freeway to Stock Road in Coolbellup. This new road will be a four lane dual carriageway link with a number of interchange connections. The project will also include capacity upgrades to Stock Road, Leach Highway and Stirling Highway, which will consist of intersection improvements and widening to remove traffic lights and enable free flowing heavy vehicle movements. This will provide a 4.3 km freeway along Stock Road from Roe Highway Extension to Leach Highway and a new 3.9 km grade-separated four-lane arterial road from Stock Road to Stirling Highway north of Marmion Street.</p>	
Capital Cost of Initiative by Proponent (\$ millions, nominal, undiscounted):	\$1.742 billion (p90)
Contribution sought by Proponent including requests for project development funding (\$ millions, nominal, undiscounted):	Commonwealth Government Capital Contribution \$925.0
Other funding (source/amount/cash flow) (\$ millions, nominal, undiscounted):	State Government Capital Contribution \$275.5 Private Sector Capital Contribution \$374.5 million (initially financed by State

High level development and implementation program (month/year):	Government)
	Construction commencement – 1 st November 2015
	Construction completion – 30 th June 2019
BCR stated by proponent:	Project opening – 1 st July 2019
	2.5:1 (P90 capital costs, 7% discount rate)

Strategic alignment summary

Alignment with Infrastructure Australia’s Strategic Priorities:

The project aligns with Infrastructure Australia’s strategic priorities to ‘increase productivity’, ‘expand productive capacity’ and ‘build on Australia’s global competitive advantages’ through delivering a more efficient freight network.

The Perth Freight Link project links to an important international gateway at Fremantle Port. The project will also improve the connectivity and access between Perth’s key industrial and activity centres and improve on-road safety and community amenity.

Alignment with State Strategic Priorities:

The Business Case outlines strong links between the Perth Freight Link Project and State priorities, policies and initiatives listed below. At the time of assessment (May 2015), the Perth Freight Link project is not directly mentioned in any of these State plans and policies:

- State Planning Strategy 2050 and Metropolitan Region Scheme;
- Directions 2031 and Beyond;
- Murdoch Specialised Activity Centre Structure;
- Draft Moving People Network Plan;
- WA Regional Freight Transport Network Plan;
- Draft Perth Freight Transport Network Plan;
- Draft State Port Strategic Plan; and
- Fremantle Port Inner Harbour Port Development Plan.

Problem assessment summary

The Business Case clearly outlined the problem and the problem is well understood. The Business Case identifies five root causes of the problem:

- location of Fremantle Port Inner Harbour;
- high levels of economic growth in Western Australia;
- population growth in Perth and southern suburbs;
- expansion of trade through Fremantle Port Inner Harbour; and
- constraints on increasing truck productivity within the existing road network.

There is currently heavy congestion and significant delays to freight journeys with Level of Service below D for many sections of the route. Impacts of this include inefficient freight movements which limits productivity and economic growth, higher than average crash rates involving heavy vehicles and dis-amenity for the nearby community.

The Business Case uses quantitative data to assess the problem including historical and projected growth in freight movements at Fremantle Port Inner Harbour, historical growth in heavy vehicle traffic

volumes at key locations in the project area, percentage of heavy vehicle crashes along key freight corridors, intersection overall Level of Service, maximum peak period queue lengths, reliability of travel speeds and modelled future traffic volumes. For example, within the PM peak, travel time variability means that more than 80% of trips have travel times greater than 20% more or less than the average for the PM peak.

The problems are expected to persist and worsen into the future driven by economic and population growth and subsequent growth in licensed motorised vehicles and expansion of trade.

Solution assessment summary

The solution proposes a 5.2 km extension of the Roe Highway from its current terminus at Kwinana Freeway to Stock Road in Coolbellup. This new road will be a four lane dual carriageway link with a number of interchange connections. The projects will also include capacity upgrades to Stock Road, Leach Highway and Stirling Highway, which will consist of intersection improvements and widening to remove traffic lights and enable free flowing heavy vehicle movements. This will provide a 4.3 km freeway along Stock Road from Roe Highway Extension to Leach Highway and a new 3.9 km grade-separated four-lane arterial road from Stock Road to Stirling Highway north to Marmion Street.

The preferred option was selected from 12 shortlisted options. All 12 shortlisted options were assessed against selection criteria and assigned an achievability rating. Based on this qualitative assessment, the preferred option was selected from a list of 4 high rated options.

The options considered included pricing and efficiency using existing road infrastructure, investment or subsidisation of rail and a number of road investment options. The options did not include consideration of the Outer Harbour at Cockburn Sound South of Perth. Accommodating freight at the Outer Harbour was considered to be part of the likely future for all options — the assessment included the extent to which the option was also beneficial for freight directed to the Outer Harbour.

A rapid BCR was completed for the preferred option only, assessed against the Base Case. A rapid BCR was not completed for additional options to determine if the preferred option provided the greatest net benefits.

Infrastructure Australia notes that there are other significant options for addressing freight accessibility issues in Perth, including the expansion of the Outer Harbour at Cockburn Sound South of Perth and a previous project submitted to Infrastructure Australia (Leach Highway/High Street upgrade, at a cost of \$100 million) that is currently at Threshold on the Priority List. Infrastructure Australia is satisfied that:

- the proposed solution is preferable to the much lower cost solution currently on the Priority List, as it generates a net benefit of \$2.4 billion compared to \$50 million for the proposal currently on the Priority List; and
- the proposed solution continues to have economic merit if the Outer Harbour is developed, with modelling undertaken by the proponent showing significantly higher benefits in 2031 than in 2021, even though there is a greater share of freight directed to the Outer Harbour.

Infrastructure Australia notes that the options identification and assessment for this project could have been improved by undertaking quantitative modelling of traffic and economic impacts for multiple short listed options. The multi-criteria assessment used has significant weaknesses. In particular, criteria weights used allocate 80% of the weight to benefits and only 20% to costs. This is likely to bias assessment against low cost options and in favour of higher cost options. Further, the assessment of options has had limited reliance on objective quantitative evidence.

Economic appraisal summary

The stated BCR for the project by the proponent is 2.5:1. The costs estimated for this stated BCR exclude costs associated with the heavy vehicle tolling system thereby underestimating capital costs but included a CPI adjustment for the real capital cost estimates thereby overestimating capital costs.

Including these offsetting cost impacts, consistent with Infrastructure Australia and National Transport Guidelines, this would result in the BCR remaining at 2.5:1.

The stage of the project indicates that there are significant risks around estimated costs. There are also risks to benefits depending on the timing and extent of transition to the Outer Harbour, south of Perth. While these risks are likely material for gains for heavy vehicles, they are likely of an order of magnitude smaller for the overall benefits of the project. This is because only a small part of benefits (9%) accrue to heavy commercial vehicles.

The transport modeling that underpins the economic appraisal of the project does not allow for inducement of additional traffic as a result of lower costs of travel.

After accounting for these factors, Infrastructure Australia still has a high degree of confidence that the BCR is greater than 1.0:1 for the project.

Deliverability summary

The project is still at early phases, so much of the work relating to deliverability has yet to be completed, including the detailed design, so risk assessments as well as other material, such as construction timelines are preliminary. Once the tender process for the road construction is completed, anticipated to be by the end of 2015, the proponent will be able to provide more detail.

The process for progressing the project is an Expressions of Interest phase which closed in March 2015 and will be followed by requests for proposals in May 2015.

Major risks for the project include costs, environmental approvals and community support. The most contentious component of the project from an environmental and community perspective is likely to be the extension of Roe Highway across the Beeliar Regional Park, which encompasses two significant chains of wetlands. In 2013, the WA Environmental Protection Authority recommended conditional approval to previous plans for this extension. In making this recommendation, it received 3,283 submissions, of which 2,834 included pro forma text from the Conservation Council of WA. Approval from the Minister for Environment for this extension has not yet been granted and may be subject to appeal. Other sections of the project have not gone through the environmental approvals process at this stage.

The project is to be financed by a set contribution by the Federal and State Governments, with the remainder of the funding being made up of short to medium term State Government borrowing which will be repaid by a heavy vehicle user charge applied across the project area and on parts of Perth's freight network (from Fremantle to Muchea). This charge will only apply to heavy vehicles, but Infrastructure Australia believes that the proponent could investigate broadening the charge to other road users. The proponent will construct the project and the heavy vehicle charging infrastructure and then hold or sell the future revenue stream. Analysis shows that this maximises the expected value of the revenue stream, although this approach results in the State Government taking on considerable greenfield traffic risk. The proponent should provide further detail, or present a sensitivity analysis so this risk can be evaluated. Infrastructure Australia supports the use of user charging as a funding source for the project.

Overall Assessment

Infrastructure Australia considers that the proponent has provided good evidence that access to port gateways in Perth is a nationally significant problem. In addition, Infrastructure Australia has a high level of confidence that the proposed solution will deliver net economic benefits.

Infrastructure Australia Priority List Decision

Infrastructure Australia assesses the project be included on the Infrastructure Priority List at Threshold.

This brief was approved by the IA Board in May 2015.

Following IA's regular process of discussing the detailed project brief with the relevant jurisdiction prior to publication, further information and feedback was provided by the State.

The project description on pages 1 and 3 of the Brief has been amended to clarify that the 3.9 km referred to in the brief is for the entire road segment from Stock Road to Stirling Highway, not just the new road segment works being undertaken. The BCR has been amended to 2.5:1 from 2.2:1 as a result of the capital cost originally presented to Infrastructure Australia in the CBA and reflected in the brief being clarified by the State.