

† This document is a working appraisal of the proponent's cost benefit analysis of the proposal. As the project has developed, more information has been provided, which may supersede or respond to questions arising from earlier assessments. This working appraisal was prepared in February 2010 as an input into the Project Assessment Brief prepared by the Office of the Infrastructure Coordinator.

2009-10 INFRASTRUCTURE PIPELINE: ECONOMIC APPRAISAL WORKING ASSESSMENT

Project: Moorebank Intermodal Terminal Precinct

Proponent: Australian Government

Date economic review conducted: 16 February 2010

BCR summary information by proponent: 2.2 (low growth) – 5.5 (high growth)

1. Depth of supporting information

The submission includes a consultant's report containing a cost benefit analysis. An engineering report was not included. Information on more current cost estimates for certain project elements was provided.

2. Demand

Demand appears to be fairly high level, as the submission assumes that current levels will increase by applying an annual increase in market size and rail market share, or by a target on rail mode share, without a significant amount of supporting information to justify the increases applied (see further description below). In addition, the demand projections are not linked to the specific terminal location relative to freight origins/destinations in NSW or other areas in Australia to understand how the freight may choose to access Moorebank terminal relative to an alternate intermodal terminal. The demand projections are also not linked to price differences (or other differences such as reliability and availability) relative to other modes of transport between the same origins/destinations.

Approach used to estimate demand:

- 1) Demand for (i) port shuttle movements were based on (i) Sydney Port Corporation's high and low TEU growth scenarios and (ii) interstate terminal movements were based on Auslink's 2007 Corridor Strategy.
- 2) To estimate the share of road vs. rail movements, road/rail mode share estimates were applied to the total TEU estimates. For (i) port shuttle movements, this appears to have been broadly based on applying the market share estimate of 40% based on NSW Govt policy, set to increase to 55-70% by 2042. For (ii) interstate terminal movements, the road/rail share was based on high level estimates of % growth pa in market size and market share derived from the AusLink 2007 Corridor Strategy reports (it is not clear what the resulting market share is in percentage terms).
- 3) The demand analysis described above appears to suggest that the new terminal will not increase 'demand' for rail, as the drivers to mode share are external to the terminal. Instead, the Moorebank Intermodal Terminal appears to add capacity to 'accommodate' the underlying demand for rail. As a result, to estimate demand for the new terminal, capacity constraints at existing and new terminals appear to have been applied to total rail TEUs to understand when the new terminal may be required.

Unless the demand could be revised to consider the service aspects impacting on mode share and decisions between intermodal terminals (price, distance, transit time, reliability, availability, etc.), it could assist to understand the impact on economic results if a sensitivity test was performed if the mode share does not increase above the current 17%.

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3. Capital costs/operating costs

Estimates of capital costs are based on quantities approximated from preliminary concept designs and the use of generic unit rates. With the exception of the first stage terminal precinct capex provided in the 'new data', it is not clear if any contingency is included. Also P90 estimates have not been prepared.

In the Base Case, capex is assumed on M4, M5 and M7 (e.g. intersection treatments including traffic management and dedicated lanes). It would assist to understand in more detail why this cost is assumed to be avoided due to the new terminal, as well as to understand the implication on avoiding these costs if some trucks/other users continue to access the terminal/surrounding areas by these intersections and sections of the motorways. While it is not clear the impact on the economic benefits of assuming the developments would proceed in both the base case and project case, in terms of capex, this assumption has a minor impact on the BCR.

Rail and road rail operating and maintenance costs are based on percentage estimates (e.g. 3% of capex), which is high level.

Intermodal terminal operating/maintenance costs are based on a high level assumption that terminal operators make 20% profit margin, which is also high level.

4. Quality of economic assessment methodology

The economic assessment is high level, principally given the high level nature of demand underpinning the results and the conceptual level of the capital and operating costs. The cost benefit analysis (CBA) methodology is broadly based on economic guidelines, however the approach may have resulted in some double counting of benefits as well as some transfers being included, resulting in some overstatement of the BCR.

- 1) Operating surplus for freight customers appears to be estimated on a high level basis. This benefit was based on high level 'freight saving' parameter of 1.8 c/ntk sourced from an ARA report. This parameter is for 'intercapital freight' so is not necessarily relevant for shorter port shuttle movements. A more comprehensive approach could be to estimate 'average' trip transit time/kms travelled and then build up estimates of crew, fuel, annualised capex and depreciation, etc for the trips specifically related to the Base Case then the Project Case. It is also not clear if the road portion of each intermodal trip was incorporated
- 2) Access fees are generally not included in CBA as they are considered a transfer between parties (e.g. ARTC rail network access fees are a benefit to ARTC but a disbenefit to train operators/freight customers). This also has potential to double count with other benefits that aim to understand the benefits freight customers expect from the intermodal terminal, for example operating cost savings
- 3) Externalities included in the CBA were road damage, accidents, road congestion, environmental benefits – which is comprehensive.

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5. Comparability and accuracy of the BCR

The analysis is broadly prepared based on ATC Guidelines, though some issues exist with the methodology, which make the BCR difficult to compare:

- Assuming the current 17% rail mode share, or a mode share between the current and the 40% target used in the CBA, is likely to significantly reduce BCR
- BCR is estimated as (B-opex)/capex, so is likely to be lower if calculated as B/C (slight impact on BCR e.g. reduction from 2.2→2.0 for the low scenario)
- Capex and opex are not P90 and not all cost elements contain a contingency, expected to overstate the BCR
- Operating surplus for freight customers/savings in train vs. truck operating costs may be overstated if it does not include the road leg of each rail/intermodal journey. Broadly, it is difficult to know if this benefit reflects operating cost savings from the new terminal as only a high level interstate parameter was applied to compare road and rail c/ntk.
- Some terminal users may experience reduced reliability, availability and transit time if they have switched from road to rail (depending on underlying differences between the modes), whereas the CBA assumed all users would experience an improvement. (If this benefit was removed, it could reduce the BCR from 2.2→1.9)
- Access fees are generally not included in CBA as they are considered a transfer between parties. If IMT and ARTC revenues were removed, this could reduce the BCR from 2.2→1.8).

POSSIBLE QUESTIONS

- Given Minto intermodal terminal is assumed to be at capacity in 2026 and Ingleburn in 2021, how were these terminals considered to compete alongside the Moorebank terminal in the demand analysis?
- It is not clear how, on page 8, the growth rates of 3.9-6.1% pa are estimated for interstate container movements: considering Table 3.1 suggests market growth is between 2-4% per annum, and rail's market share of that growth will in some cases be 0%.

WORKING NOTES

Capital costs/operating costs

It appears that new cost estimates provided subsequent to the August 2009 consultant's report would result in a higher capital cost of \$611.3m (low growth) and \$691.3m (high growth) scenarios. However, as this is only a change of 2-3% to the capex it is not expected to have a significant impact on the BCR.