



Australian Government

Department of Transport and Regional Services

BACKGROUND BRIEFING – 10 KEY POINTS

ABOUT THE NORTH-SOUTH RAIL CORRIDOR STUDY

1. *What were the aims of the study?*

The study:

- estimated future rail freight demand by sector for the Melbourne-Sydney-Brisbane corridor;
- identified deficiencies in the existing rail corridors to meet that forecast demand (when and where);
- tested the viability of possible options to rectify the deficiencies, including timeframes;
- estimated likely costs including estimates of any shortfalls in the commercial viability of the options; and
- estimated economic and other benefits/costs of rail options including environmental issues, regional benefits/costs.

In setting up the Study, the Department of Transport and Regional Services was very clear that the Study was not to determine the preferred route, nor announce investment in any particular project but rather to provide, for the first time ever, robust information on current and future demand, corridor options and costs. The Study did not provide a business case or consider ownership issues around future investment.

2. *What were the key findings?*

The findings can be summarised in accordance with the key aims of the study as follows:

Market Assessment

The total road and rail freight movements within the corridor between the state capitals account for 22 million tonnes (10% of the total freight flow). The major freight flows are in fact bulk freight (mainly coal) going across the corridor in the Hunter Valley.

Of the inter-capital city freight an estimated 47% is on the Melbourne-Sydney corridor, 32% is on the Sydney-Brisbane corridor and 21% on the Melbourne-Brisbane sub-corridor. This relativity is likely to broadly remain over the next 25 years.

Rail is most competitive on the Melbourne and Brisbane corridor with an estimated 30% of market share. The longer the distance, the more effectively rail can compete with road freight.

On the other two corridors market shares are estimated to be 9% between Melbourne and Sydney (mostly Tasmanian freight), and around 11% between Sydney and Brisbane.

The most important characteristics determining choice of transport mode are price and reliability and it is the latter that is significantly impacting on rail's competitiveness with current on-time reliability of rail around 40-45% in the corridor compared with road 95-98%.

The greatest current hindrance to rail achieving good reliability on the corridor is the Sydney metropolitan network. Rail freight has the added disadvantage of the pick-up and delivery costs at each end of the journey and has less flexibility than road freight services especially for time sensitive freight.

Future Demand

The total freight flows in most markets within the Corridor are likely to double over the next 25 years, reflecting economic growth and doubling of freight in the major east coast urban centres.

Rail has strong prospects of picking up freight growth and market share in the overnight, availability and reliability sensitive freight market on the Melbourne to Brisbane corridor.

This will be facilitated by the Australian Government infrastructure investment, through the Australian Rail Track Corporation and AusLink, track and signalling upgrades to 2009 and other factors potentially helping rail (eg fuel prices and labour costs). The Study forecasts that the rail share of the Melbourne-Brisbane market is estimated to increase from around 30% to 63% (on an upgraded coastal sub-corridor) by 2029, with slightly higher results (67%) for an inland rail corridor.

On shorter capital city routes, the effect of improved infrastructure and services is less dramatic: a forecast increase in rail market share from 9% to 18% on the Melbourne-Sydney route and from 11% to 22% on the Sydney-Brisbane route. However, these are important increases given the size of these two freight markets.

The present ARTC rail track and signalling improvement program should increase rail reliability significantly and further coastal and inland upgrades would take reliability to levels comparable with road but this requires major capital investment.

Importantly, the study found that the estimated growth in rail freight is such that the existing coastal route (including ARTC/AusLink upgrades) will again become capacity constrained at around 2019, especially if there is no inland route.

Route Options

For the purposes of analysing alternative route options for the entire Melbourne-Brisbane corridor, four broad sub-corridors (see attached maps) were developed to ensure the study considered the range of project options across the entire study area as follows:

- Far Western Sub-Corridor – via Junee, Parkes, Narromine, Coonamble, Burren Junction, Moree, North Star, Goondiwindi, and Toowoomba.
- Central Inland Sub-Corridor – via Junee, Parkes, Dubbo, Werris Creek, Armidale, Tenterfield and Warwick.
- Coastal Sub-Corridor – follows the existing coastal route.
- Hybrid Sub-Corridor – combines elements of inland options to Muswellbrook, Maitland then follows the coastal route.

All of these routes could be linked to Melbourne either via Albury or Shepparton.

The Study was not designed to select a specific sub-corridor but it does give a clear insight into the costs of developing each of the sub-corridors and potential transit times.

The Study has highlighted the importance of Sydney as a constraint for freight movements on the coastal sub-corridor.

The Australian Rail Track Corporation (ARTC) is addressing the congestion issues south of Sydney through its plans to construct the Southern Sydney freight line as a freight-only track to the Chullora terminal. However this leaves a major issue still to be addressed in relation to the effective movement of rail freight to and from the north of Sydney.

The Study also highlighted the scope for further significant improvements in potential transit times and possible additional bulk freight demand particularly from a far western sub-corridor.

Commercial/ Financial Analysis

The analysis strongly supports the current five year ARTC investment program as having successfully targeted projects that will produce significant benefits for the Melbourne –Sydney –Brisbane corridor in terms of improving rail reliability and transit time.

The Study indicates that a significant further upgrading of the north-south rail corridor would come at a substantial cost.

This is not a surprising outcome given some of the major engineering and other track works required along the corridors to overcome natural barriers and, in some cases, other land use encroachment along both inland and coastal options.

For example, the Far Western sub-corridor requires a further capital investment of an estimated \$3.1 to \$3.6 billion to achieve a transit time of just less than 21 hours from Melbourne to Brisbane, while projects of over \$10 billion can be identified to undertake a further major upgrade on the Coastal sub-corridor. Both the Central Inland and Hybrid sub-corridors would also have large capital works requirements (around \$8 billion and \$6 billion respectively) to achieve better transit times (although both are higher transit times than what can be achieved on the Far Western and Coastal sub-corridors). (See table at end of this document).

All sub-corridors were analysed from three financial and economic perspectives: - government budgetary, commercial feasibility (private sector) and wider economic cost/benefit (which includes some externalities).

The sub-corridors were looked at from three different funding perspectives:

- Minimum transit time with an unconstrained budget;
- A targeted investment program of \$3 billion; and
- A budget of around \$1.5 billion that provides an operable route.

The results on a Net Present Value basis are negative for all rail options.

The results indicate that while there will be an increase in additional freight (especially on the Melbourne - Brisbane route), to undertake a further significant corridor upgrade requires substantial capital cost that would not be fully offset by the increased freight revenue.

The Study also looked at possible future projects on the corridors based on the targeted expenditure levels, including those that would provide the most performance benefits. This analysis of possible projects will provide a useful source of information to help inform any further investment on the corridor.

These findings will need to be carefully considered by Governments and industry in terms of future planning and investment decisions on the corridor.

Environmental Issues

The study has identified a number of environmental issues that would need to be considered in the future development of the corridor. This is particularly the case for the Coastal sub-corridor in relation to potentially threatened species.

Any future development would of course be subject to the appropriate environmental assessment processes and the Study has provided a broad overview of potential environmental limitations sub-corridor options.

3. How will the findings of the study be used?

Interstate and regional rail operators, rail track managers and the freight industry will find the Study provides useful forward projections of the freight market.

Good planning information and analysis will also assist, as appropriate, the Australian Government and State infrastructure planners who are tasked with long term transport planning for the north-south rail corridor.

The North South Rail Corridor Study will specifically be used to help inform the Sydney-Melbourne, Sydney-Brisbane and Melbourne-Brisbane AusLink corridor strategies being finalised in 2006/07 in partnership between the Australian and relevant state governments.

4. The idea of an inland rail route has been around for many years and various interested parties have looked at options and feasibility. Did this study simply duplicate previous work?

This study examined the key questions associated with the future demand for, and options associated with the north-south rail corridor. Where appropriate, it took into account but did not duplicate earlier work. The Study examined a variety of route options, including possible enhancements to the coastal line and various inland route options.

The range of issues addressed in this study was very extensive, for example: market needs and options, the future requirements of rail against future road competition, demand studies, future capacity constraints, route options, infrastructure works, engineering, environmental, urban and regional planning issues, connections to ports, intermodal terminals, regional hubs and feeder lines, financial and economic analysis.

The Study makes no recommendations regarding the development of an inland rail but has identified a potential sub-corridor, potential demand, financial issues, environmental issues and infrastructure costs that would be associated with an inland rail.

5. Who was consulted throughout the study?

The Department of Transport and Regional Services oversighted the study and received a significant number of submissions on the dedicated web-link set up for that purpose. The rail industry (track owners and rail operators) was consulted throughout the Study and consistent with the AusLink national transport planning approach, state government representatives of NSW, Queensland and Victoria were also involved.

The Study Team consulted a variety of freight and logistics companies, rail proponents including Australia Transport Energy Corridor, rail customers (current and potential) and interested parties in metropolitan and regional areas along the North South Corridor.

There was a high level of cooperation from all state and industry participants who provided data, statistics and information throughout the course of the Study. This sharing of information enabled the Study Team to undertake a robust and detailed analysis.

The Study Team also appreciated the contributions from the many other groups and individuals who have an ongoing interest in the rail corridor.

6. Did the study consider track ownership issues?

No, the study did not consider future track ownership arrangements.

Currently the interstate rail corridor between Melbourne and Brisbane is managed by the ARTC and Queensland Rail.

7. Did the Study take into consideration other infrastructure issues, such as ports and intermodal terminals?

Yes, for each route option identified, the implications for connections to ports at Melbourne, Sydney and Brisbane, as well as intermodal terminals and regional hubs were examined.

The Study has reaffirmed the importance of intermodal terminals and future challenges in this regard in Sydney and Brisbane.

8. When is the Government considering its next major investment in the North-South rail corridor?

Building on the current five year ARTC and AusLink program of works being undertaken on the corridor to 2009, this Study has identified a range of projects that could increase performance on the corridor.

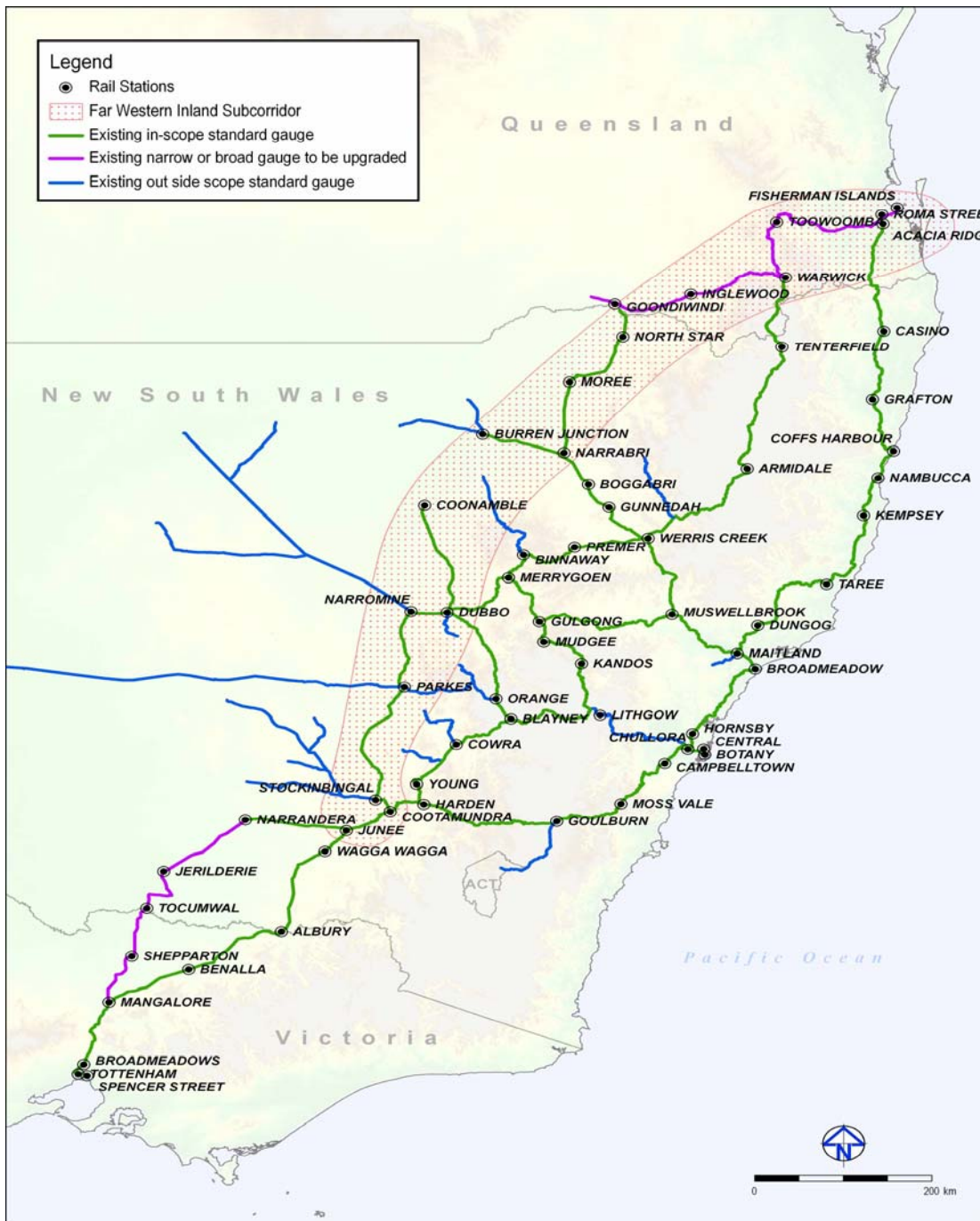
Future investment on the corridor will need to be considered carefully against competing transport priorities and is a matter for further consideration by Government and industry.

9. Who funded and conducted the study?

The Australian Government funded the study under its AusLink investment programme. The Department of Transport and Regional Services contracted Ernst & Young to project manage and lead a team of consultants including Hyder Consulting, ACIL Tasman and Worley Parsons.

10. Is the study publicly available?

The Study can be accessed on the Department of Transport and Regional Services web site (www.dotars.gov.au).



FAR WESTERN SUB-CORRIDOR



CENTRAL INLAND SUB-CORRIDOR



COASTAL SUB-CORRIDOR



HYBRID SUB-CORRIDOR

CONSTRUCTION COST AND TRANSIT TIME

| | Far West via Shep | Far West via Alb | Central Inland via Shep | Central Inland via Alb | Coastal via Shep | Coastal via Alb | Hybrid via Shep | Hybrid via Alb |
|------------------------------|-------------------------|------------------------|----------------------------------|------------------------------|------------------------|-----------------------|-----------------------|----------------------|
| Cost to Build (\$billion) | \$3.6bn | \$3.1bn | \$8.5bn | \$8.0bn | \$10.7bn | \$10.2bn | \$6.8bn | \$6.3bn |
| Transit Time (hours) | 21.3 hrs | 20.6 hrs | 24.5 hrs | 23.7 hrs | 22.4 hrs | 21.6 hrs | 26.4 hrs | 25.7 hrs |