

*Second supplementary submission to the House of Representatives
Standing Committee on Transport and Regional Services Inquiry into the Integration of
regional rail and road freight transport and their interface with ports*

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1. INTRODUCTION

Further to the Committee's Hearing held at Wollongong on 1 February, additional comment to my earlier submissions (numbers 116 and 133) now follows. The topics are the St Mary's-Glenlee railway proposal, the Wentworth Route, the Maldon Port Kembla Railway, curfews on trucking, and, B-Doubles and road pricing.

2. ST MARY'S – GLENLEE

An internal State Rail study in the 1980s describes a 39km route with a ruling grade of 1 in 80. In summary:

Take off point is between Werrington and St Mary's station
Traverse the South Creek Flood Plain
Cross the Kingsway, Great Western Highway and the F4
Follows Mamre Road
Cross Warragamba Prospect Water Pipes Lane
Overbridge Elizabeth Drive at 14km
Overbridge Hume Highway at 31km
Underbridge Camden Road
Bridge Narellan Creek at 36km
Join Glenlee Rail siding at 37km
Join Main Southern Line at 39km

At that time, land use along the route was mainly rural. Due to the easy terrain, the earthworks would be limited. The then estimated land acquisition cost was \$14 million and the total cost estimate in 1980 was \$68 million. This included electrification and land purchase.

The St Mary's Glenlee proposal along with completing Maldon Port Kembla was investigated during the mid 1990s for Wollongong City Council by Kinhill Engineers with funding provided by the Federal Department of Local Government. The consultants were less than positive for early completion of either projects, but did recommend, inter alia, requiring of road coal freight vehicles to pay their full external costs and **use of planning instruments** to maintain the St Marys Glenlee and Maldon Dombarton rail corridors.

Note that coal trains from Lithgow or the Western line proceeding to the Main Southern Line can do so through a triangle with a flyover at Granville completed in 1997. This saves an extra distance of 6 km via Regents Park. Using this triangle, the distance from Granville through Maldon Dombarton is 109km, as against 101 km via Enfield and Sutherland. However, the route through Enfield is increasingly congested, subject to curfews, and loaded coal trains bound for Port Kembla have to climb the steep Como bank to Sutherland.

3. THE WENTWORTH ROUTE

In summary, one option is to replace 54.3km of track with 'steam age' alignment from near Menangle (at the 68 km post) to the northern portal of the Aylmerton tunnel (at 122.3 km) with 36 km of track built to modern engineering standards. This would have a ruling curvature of 1500 metres, albeit with a 1 in 50 grade that could be eased to 1 in 60 by rejoining the old track near the 108 km post near Yanderra.

Indeed, the Wentworth deviation could be built in two sections. The first would be a 25 km section bypassing 40 km of steam age alignment where trains turn left or right the equivalent of 8.5 circles over 22 km of track with tight radius curves less than 800m. The second section would be about 11 km to replace an old 14 km section where trains turn 4 circles on 8.4 km of tight radius curves.

The main benefit for completion of 35 km of new track is saving an average of 17 minutes transit line and modest fuel savings for heavy super freighters. Other advantages include improved clearances as per Table 1, and improved reliability of train operations. In this regard, the second advantage was emphatically made by Mr Bob Scheuber, CEO of Queensland Rail at AusRail Plus 24 November 2005. To quote, from notes made at the time: The success of Queensland's Main Line Upgrade that included extensive track straightening was "...not only more efficiency of train movements but it dramatically reduced derailments with 100km/h trains with an increase in reliability."

TABLE 1 RESTRICTIVE CLEARANCES - MENANGLE - AYLMERTON

| Distance from Sydney (to nearest km) | Location | Type of structure | Vertical clearance (metres) |
|---|--------------------|--------------------------|------------------------------------|
| 85 | Mathews Lane | OB | 4.88 |
| 85 | Prince street | OB | 5.15 |
| 86 | | FB | 4.86 |
| 88 | Picton | Tunnel | 4.82 |
| 89 | Connellan Crescent | OB | 4.71 |
| 91 | Old Picton Road | OB | 4.53 |
| 92 | Redbank Tunnel | Tunnel | 4.88 |
| 94 | Thirlmere Way | OB | 4.88 |
| 96 | Couridjah | OB | 4.57 |
| 101 | Old South | OB | 4.55 |
| 103 | Bargo | FB | 5.39 |
| 103 | Bargo | OB | 4.79 |
| 106 | Bargo | OB | 4.62 |
| 109 | F5 Freeway | OB | 5.64 |
| 109 | Old Hume Highway | OB | 4.54 |
| 111 | | OB | 4.57 |
| 121 | Yerrinbool | Tunnel | 4.91 |

Reference: Table VII.1 page 284 *A Potential Extension of Intermodal Rail Services* Inter-State Commission 1987 re advice from State Rail Authority of NSW structures with inadequate clearance. The Aylmerton Tunnel at 122 km has a 4.89 metre overhead clearance.

The 25 km section of the Wentworth route (Menangle to Yanderra) would tie in well with the Maldon Port Kembla Railway, and share about 2 km of common alignment near Wilton (some 10 to 12km from Menangle) between the Hume Highway and Truck Road 88. Its reservation is long overdue.

It is noted that the Wentworth Route is one of three major deviations proposals noted in the 2001 ARTC Track Audit for the Main South line. The other two are between Goulburn and Yass, and between Bowning and near Cootamundra. To complete all three deviations would require less construction than undertaken in track straightening undertaken between Brisbane and Townsville between 1986 and 1996.

4. THE MALDON PORT KEMBLA RAILWAY AND RELATED PROPOSALS

As outlined in the main submission (No 116) of this writer, the Maldon Port Kembla Railway was half completed during the 1980s.

4.1 Civil works required for completion

Based mainly on a State Rail Brochure released in the mid 1980s, the work remaining to complete this railway is as follows:

Avon Tunnel

- Single track tunnel of horse shoe section with 8.0 m nominal diameter.
- The tunnel will be 4020 metres long at a ruling grade of 1 in 30.
- Estimated cost (c 1983 - the 1988 contract was for \$20m+) of works \$35 million.

Cordeaux River Rail Bridge

- Concrete arch bridge with springing points 132.0 metres apart. The overall length of bridge is 243.8 metres including approach spans.
- Construction of access roads is completed (1983). Estimated cost of works \$4.5m.

Nepean River Rail Bridge

- Prestressed concrete box girderbridge of balanced cantilever construction. The main bridge is 189.6 m long and comprises three spans the longest being 90.0 m.
- Estimated cost of overall bridge works \$6 million (approach viaducts completed by 1985).

F5 Freeway Overbridge

- Bridge for single rail passing 12 metres beneath the four lane freeway.
- Estimated cost of works \$1.5 million.

Condell Park Road and Janderra Lane Overbridges

- Two bridges each 21.5 metres long and 5 m wide carrying the road over the railway. Estimated cost for both bridges \$450,000.

Trunk Road 95 Overbridge

- Bridge of 26 metres span and 23 m wide carrying 4 traffic lanes over the railway.
- Estimated cost of works (1983) \$750,000.

Earthworks

Only the section from the Water Board Boundary to Maldon is needed, located about 128km to 133.2km; a little over 5km. Note that the earthworks for No 2 Portal Avon Tunnel to Cordeaux River and then to the Water Board Boundary (about 103km to 123km, then 128km) were completed in the mid 1980s. The cost in 1985 was about \$9 million (three contracts). Earthworks at Maldon Triangle/Siding have also been done.

Trackwork

New single track (with three passing loops at Avon, Cordeaux and Wilton) is needed from Dombarton (98.3km) to Maldon (133.2km) about 35km in all. Note that a major section in the water catchment is already ballasted.

4.2 Signalling and Communications, and possible electrification

To the above works would have to be added signalling and communications plus the cost of any electrification. It is understood that CTC signalling was installed between Coniston and Moss Vale during the mid 1980s.

By the mid 1980s, after a study, State Rail had decided to electrify at 25,000 volts AC, as opposed to the older 1500 volts DC system currently in use in Sydney and Melbourne. The study found that the cost in 1985, excluding locomotives, was \$21.5 million for the 25,000 volt AC system and \$40.3 million for the 1500 volt DC system.

Although 25,000 volts AC electrification should have been used in the extensions in the early 1980s of electrification to Newcastle and Port Kembla by State Rail with dual voltage rolling stock and locomotives, it was passed over in favour of 1500 volts DC. Moreover, the attempted use of 1500 volts for heavy haulage of coal to Port Kembla proved to be a costly and failed experiment. Despite this, it may be possible to use 1500 volt DC locomotives for banking or pusher locomotives to assist diesel electric locomotives on any heavily loaded uphill trains on the sections from Unanderra to Dombarton and then the 4km Avon Tunnel with its steep 1 in 30 grades.

4.3 Costing

The main item is the tunnel. Note that the contract issued in 1987-88 to build the tunnel was for about \$20m, and that No 1 portal was built then. A rough estimate to complete the tunnel is in the order of \$50m.

The bridges noted above total \$15m, and based on the three contracts above the remaining earthworks would have then been about \$2m. The Roads and Traffic Authority road price construction and maintenance indices (their 1996 and 2005 Annual Reports) increased from 1985-86 to 2004-05 by 1.86. One would expect the bridges and remaining earthworks to have at least doubled, with \$35m as a ball park figure.

For track work, based on advice for a recently completed project in a different Australian State to NSW, the cost of sleepers, rails and ballast was about \$0.5 million per km (including crossing loops). On this basis, and with 35 km of track to lay, the current cost is approaching \$20 million.

The sum for the civil works including track work is \$105 million, and so in the order of \$100 million. Thus, even with signalling and communications, the estimate provided to the Committee during the hearings on 1 February in the order of \$200 million was too high. The total is now revised to be between \$100 and \$150 million. It would be helpful if more up to date and expert estimates could be provided.

4.4 Benefits

In considering completion of the Maldon Port Kembla Rail link, the following factors are relevant:

The growing rail congestion in Sydney metropolitan region, with freight train curfews.

The planned expansion of Port Kembla.

It could be used for passenger trains.

The slight risk of potential failure of the Waterfall -Thirroul line.

The somewhat slighter risk of potential failure of the Moss Vale - Robertson line.

The rail project is half completed.

Easier paths for coal and other freight trains.

It would tie in well with the Wentworth Route, or parts thereof.

Re coal trains - the Maldon Dombarton Rail Link would provide significant distance savings for Tahmoor Coal to Port Kembla with a rail distance of 72km. This compares with 118km via Moss Vale, or 175km via Enfield.

As above coal trains from Lithgow on the Western line proceeding through Enfield is congested, subject to curfews, and loaded coal trains bound for Port Kembla have to climb the steep Como bank to Sutherland with a distance of 101km from Granville to Port Kembla. With completion of Maldon - Dombarton, by use of the triangle with the flyover at Granville the distance from Granville to Port Kembla is 109 km. Such movements would be further facilitated by construction by 2009 and now under way of the South Sydney Freight Project by the Australian Rail Track Corporation at a cost of \$192 million.

The estimated distance from Granville to Port Kembla after construction of both the Maldon - Dombarton railway and the Wentworth Route (both sharing 2 km of common track near Wilton and bypassing Maldon at 82.5 km) is about 102 km.

5. TRUCKING CURFEWS

Reference was made to trucking curfews that restrict delivery of road hauled coal to the Port Kembla Coal Terminal (PKCT). The restrictions have operated, since the opening of the present facility in 1982, under a NSW State Environmental Planning Policy (SEPP) No 7, and they preclude night time coal trucking to the PKCT from 6.00pm to 7.00am and also on Sundays and Public Holidays. The main reason for the retention of the curfew appears to be that of amenity for those living in Mt Ousley and other suburbs. There is also a valid concern that if the hours of curfew were relaxed, the same trucks would work longer hours, with the potential for the total tonnages of road hauled coal to the PKCT to increase. The present level of road hauled coal at about 3.5 million tonnes per annum (mtpa), although lower than some previous years, is appreciably more than the 2 mtpa than

formed part of the Development Consent for the PKCT (ex coal loader) that was granted by Wollongong City Council in 1979 with the concurrence of the NSW Government.

It is of note that in or near the Melbourne suburb of Footscray, a street parallel and just west of Bunbury Road is subject to trucking hour curfews. To quote from the notice:

NIGHT & WEEKEND
TRUCK CURFEW
FRANCIS STREET
8 PM - 6 AM MON - SAT
1 PM SAT - 6 AM MON

The lifting of the limit of 2 million tonnes per annum was a result of SEPP No 7. Until road hauled coal tonnages fall to meet this limit, it is suggested that it is reasonable for the curfew in its present hours and days to remain in place.

6. B-DOUBLES AND ROAD PRICING

In 1997, there were 2604 B-Doubles (National Transport Commission (NTC) 2005 Third heavy vehicle road pricing determination Technical Report Table 14, page 29). The same table notes Australian Bureau of Statistics (ABS) Survey of motor vehicle usage (SMVU) data for 2003 showing a total 7345 B-Doubles.

This is a large increase in B-Double numbers over 6 years. In addition, the ABS SMVU for 12 months to 31 Oct 2004 shows a B-Double freight task of 38244 million tonne km (mtkm) averaging 4.475 mtkm implying some 8545 B-Doubles.

It is of note that in 1991, Federal Parliament set an annual charge of \$11,000 per year for B-Doubles registered under the Federal Interstate Registration Scheme. At that time, the charges were even higher in NSW. However, the National Road Transport Commission (NRTC) in 1992 in their first determination of charges for heavy vehicles set an annual charge of only \$5500 (which came into effect in NSW on 1 July 1996).

It is currently \$7565 for a 9-axle B Double. As noted by the NTC 2005 Third heavy vehicle road pricing determination draft regulatory impact statement (page 33), B Doubles were subsidized and the subsidy in the second determination of charges for heavy vehicles " ...amounted to \$8400 per 9-axle B Double. The proposed subsidy in the Third Determination is still significant, but smaller, at \$5400."

The third National Transport Commission determination of charges for heavy vehicles, if approved by Ministers, will provide a significant subsidy to the operation of B-Doubles. The proposed annual charge is \$8400 as of July 2006 and \$10,410 as of July 2007. Pending the introduction of these new charges, and using the NTC 2003 numbers, **the subsidy provided to all B- double operations is well over \$60 million per annum.**

The growth of the number of B-Doubles, and their ongoing subsidies, is a matter that may concern the Committee. It is recognized that on 10 February CoAG approved a detailed review of economic costs of freight infrastructure and efficient approaches to transport pricing. However, getting a better balance between access pricing for road and

rail freight is likely to take some years. In the meantime, it would appear prudent for government to provide extra funds to maintain branch lines and improve mainlines.