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Maldon to Dombarton Rail Link Feasibility Study
Nation Building Infrastructure Investment Division
Department of Infrastructure and Transport
GPO Box 594
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Maldon to Dombarton Rail Link Feasibility Study Submission

Centennial Coal is pleased to have the opportunity to contribute to the Maldon Dombarton Railway Feasibility Study through the submission of this paper for your consideration.

Background

Centennial Coal employs the Port Kembla Coal Terminal (PKCT) for the shipment of export coal. This coal originates in the Western Coalfield from the mines of Airly, Angus Place, Charbon, Clarence, Springvale and Ivanhoe North located in the Lithgow region. Rail is used exclusively for the transport of the product utilising 5 to 6 trains per day from load points at Airly, Charbon, Clarence and Lidsdale Siding. Train arrivals at PKCT from all mines have typically totaled 8-10 trains per day.

The growth in the international coal market will see continued pressure placed upon PKCT and the supply chain of which it is a critical element. The Department of Industry and Investment may be able to confirm the extent of further coal resources in the Western Coalfield that are available for export through PKCT in the study period (CY2010 to CY2030).

Supply Chain Demand

Centennial Coal's current throughput requires 5 to 6 trains per day and forecast demand figures indicate that this number could increase to 10 trains per day by 2014 to maintain current commitments. The PKCT facility also services BHP Billiton, Xstrata Coal, Peabody Coal and Gujarat NRE Coking Coal. The total forecast demand to 2014 on the supply chain is an increase in tonnages from the current 14 Mtpa to 22.5 Mtpa approximately with the average trains per day increasing to 14 from all mines using rail transport.

Centennial Coal traffic uses the Illawarra Line for access to and from PKCT.

The Port Kembla Coal Chain Master Strategic Planning Group is made up of the stakeholders in the coal supply chain. It is developing a strategic plan designed to meet the overall needs of the coal supply chain. The stakeholders include the rail access providers ARTC and RailCorp. The group has quantified the maximum capacity of the Illawarra Line as 25 train paths per day. Current operations require a total of 19 freight trains per day and the PKCT strategic plan when quantifying the capacity of the Illawarra Line assumes 100% utilisation of the maximum capacity of 25 train paths by 2019. One hundred percent utilisation of train paths is historically not achievable. Thus the true reliable capacity needs to be clarified to be able to complete an estimate of the useful life of the corridor before capacity has to be increased to cope with demand.



Western Coalfield Rail Access Options

The Maldon Dombarton Line would provide Centennial Coal and other PKCT users with an alternate access route by rail from Sydney. It is important to note that for all route options available from the Western Coalfields to Port Kembla, the RailCorp embargo on operations inside their commuter peak periods cannot be avoided.

There are three routes available to access providers between PKCT and Load Points west of Sydney.

These are as follows;

1. Illawarra Line:

Current access is predominantly provided via the Main Western railway line to Lidcombe thence the Metropolitan Freight Network (MFN) to Tempe and the Illawarra and South Coast railway to Port Kembla.

This route is the current and long-standing favoured option by RailCorp and their clients for access to the Illawarra. Primary constraints on this route are the Hurstville to Sutherland dual-track section of the railway, which contains the ruling gradient between Como and Jannali, and the limited options available for passing trains.

2. Unanderra to Moss Vale Line via the "Y" Link:

Access is provided to this railway from the Western Coalfields via the RailCorp Main Western Line and Granville, using the Y link to provide direct access to the Macarthur Line and thence onto the ARTC network south of Macarthur.

It is not used by RailCorp as the principal route because of the difficulty for freight traffic to reliably negotiate the RailCorp choke points at Liverpool and Campbelltown. These locations are very busy throughout the day with City Rail station activities including train terminations and platform operations which require extensive mainline access. The line section is also under pressure operationally providing access for intermodal trains and the Sydney Port Shuttle from the intermodal container terminal at Minto.

This route has the added drawback of being approximately 100km longer than the Illawarra option.

3 Unanderra to Moss Vale Line via the Metropolitan Freight Network (MFN):

Via the Main Western Line and the MFN to Sefton and thence via Sefton to Cabramatta, through Liverpool to Campbelltown on the RailCorp network and the ARTC network starting at Macarthur.

This route is not routinely used by RailCorp for the same reasons as stated above for route 2.

RailCorp advises that upon completion of the Southern Sydney Freight Line (SSFL) the Western Coalfield trains would access the Main Western Line from Lithgow to Lidcombe and onto the MFN thence to the Southern Sydney Freight Line (SSFL) at Sefton Park Junction. This will provide dedicated freight access to Maldon and the proposed Maldon Dombarton Railway.

However the capability of the SSFL to manage the coal task at the time of construction and into the future is not clear. The ARTC are the owner and operator of the SSFL which will be highly utilised in providing access for intermodal freight and with the advent of the proposed Moorebank container facility will be under pressure to provide the services required of it in support of the Sydney Ports Corporation supply chain.



If this is the case then Centennial Coal and other users will, in all likelihood, continue to use the South Coast - Illawarra Line to move their coal to Port Kembla.

Other Supply Chain Considerations

There are significant, specific limitations on the current rail supply chain that might be addressed by either construction of additional infrastructure or an improved operational performance level. These are outlined below:

- I. track access from Unanderra/Dombarton to the port of Port Kembla;
- II. the port/rail interface;
- III. securing additional freight paths; and
- IV. increasing trailing tonnage on trains.

Each of the above rail-based issues represents a limiting factor to one extent or another on the capacity of the rail to meet its obligations in fulfilling the needs of the supply chain.

The issues surrounding the benefits to be gained in throughput by improved supply chain operating performance and efficiencies have not been addressed in this paper.

Each of the above factors is expanded upon below;

- I. Track access from Unanderra/Dombarton to the port of Port Kembla

The existing rail access between Unanderra and PKCT includes a complex rail junction that shares track with the CityRail South Coast and Port Kembla services. It is also required to manage the through freight and port traffic from the south coast. A significant amount of work has been completed by RailCorp that has to some extent quantified this problem. At this stage it is not known to what extent any work has been completed in the examination of any infrastructure based solution to the problem. This issue may well amount to the limiting factor in the consideration of the overall capacity of the network including the effectiveness of the proposed Maldon Dombarton Railway Line.

- II. The port/rail interface

Currently the Port Rail interface at Port Kembla is being asked to accept 45 wagon trains with the outcome being periodic congestion in the arrival facility. This increases the risk of queued trains in the RailCorp/ARTC networks. This in turn reduces the probability of a loaded train being immediately available to be unloaded at the port. Current staging points in the Illawarra Sydney network are Enfield, Waterfall, Coal Cliff and Thirroul.

- III. Securing additional freight paths

It is understood from work completed by the Port Kembla Coal Chain Master Strategic Planning Group that 25 freight paths are available on the Illawarra Line and if these were to be 100% utilised capacity would marginally exceed future demand. It is highly unlikely that 100% utilisation of all freight paths will be achieved given the current punctuality performance of the freight network. Typical expectations of corridor utilisation are based on available path utilisation of 70%. The punctuality of rail operations would need to improve very significantly on current and historic performance of freight services in NSW, if this figure were to be improved upon.

Additional train paths can be produced through the addition of infrastructure that would essentially improve the opportunity of freight trains to move within the CityRail timetable without causing



disruptions to the passenger services. Additional infrastructure will also provide a greater degree of separation of passenger and freight trains.

IV. Increasing trailing tonnage on trains

Any evaluation of the possibility of increasing the tonnage of trains (and so the overall length of trains), would also need to consider the impacts on the infrastructure and the operating plans of the ARTC and RailCorp. Longer trains with existing crossing loop lengths may compromise existing train pathing with the effect of reducing overall capacity of the line section.

Rail Route Options

In evaluating the most effective route to adopt in providing rail capacity between the western coal mines and other potential and existing customers of the Port Kembla facilities, the above outlined options would need to be investigated in detail.

In each case all of the existing line sections listed, (the Illawarra Line, Unanderra to Moss Vale Line via the "Y" link and the Unanderra to Moss Vale Line via the SSFL), have quantifiable limits to their capacities.

Successful use of the proposed Maldon Dombarton Line by Centennial Coal services and other south bound trains is dependent upon the quality of access on the yet to be completed Southern Sydney Freight Line and the Main Southern railway line between Sefton and Macarthur.

To date the availability of train paths for western coalfield traffic on the ARTC owned SSFL has not been made clear. Any limitation in this regard needs to be examined to ensure that this traffic will not be asked to share the CityRail corridor and in so doing be subject to the current CityRail restrictions on operations. It is also reasonable to assume that intermodal freight trains will be given priority on this line section over all other traffic.

The Illawarra Line is currently managing 19 trains per day for all traffic. This will increase to 23 paths in the short term; the stated available capacity is 25 train paths. A 92% utilisation of available train path capacity is historically outside the capacity of freight operations to reliably achieve.

The extent to which the evaluation of infrastructure based options have been examined in regard to the extension of the life of the Illawarra Line is not known, it is understood however that options examined to date include provision of a third track up the steep grade between Como and Jannali. This and other scopes of work is likely to be considerable however these need to be examined in detail to ensure that the future of freight access between the western coal fields to the Port Kembla facility is appropriately assessed.

RailCorp Proposals

The NSW Government has released its transport plan for Sydney. This plan outlines the construction of new railways in Sydney including an extensive program of works on the Main Western Line, the redevelopment of Liverpool Station and the construction of the South Western Railway Line between Glenfield and Leppington.

The transport plan will introduce significant change in the current City Rail train timetable which in turn may affect freight access options across the network. The implications of these changes need to be considered in any train planning completed in the supply chain study.



Conclusion

The limit of the useful operating life of the existing rail access to Port Kembla is becoming clearer as the current work being carried out by the Port Kembla Coal Chain Master Strategic Planning Group progresses.

The advent of the feasibility study into the Maldon Dombarton Railway is an important and timely study that should complement the above work.

Consideration of the overall supply chain needs and the role that the Maldon Dombarton Railway will play needs to be included in the scope of the study. It is also clear from the work completed to date that the supply chain will be under significant stress in the short term from traffic emanating from the South, West and North approaches to the port of Port Kembla.

The construction of the proposed railway without understanding the effectiveness of the project in regard to the Western Coalfield needs may have the effect of compromising other strategies that may have more widespread benefits.

Yours sincerely

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