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**M i n e r a l s  
C o u n c i l**



**Port Infrastructure in New South Wales  
Submission**

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# **1 INTRODUCTION**

The NSW State Development (Legislative Council Committee) has called for submissions for the review of the Port Infrastructure in New South Wales.

The New South Wales Minerals Council welcomes the opportunity to provide this submission on Port Infrastructure. This submission has been prepared by the NSW Minerals Council (as the primary respondent to this inquiry), in conjunction with the Port Kembla Coal Terminal Ltd (PKCT) and the Port Waratah Coal Services Limited (PWCS), acting as secondary respondents.

## **1.1 NSW Minerals Council**

The New South Wales Minerals Council (NSWMC) is the industry association representing mineral exploration companies and the producers of coal, minerals and extractive (sand and gravel) materials in the State of New South Wales. The NSWMC was established following the merger of the NSW Coal Association and the NSW Chamber of Mines in April 1995. The NSWMC provides a strong and unified voice for the NSW minerals industry.

The NSWMC encourages its members to:

- pursue the highest standards of occupational health and safety and environmental management;
- continue to pursuing world's best practice in operation efficiencies; and
- continue to achieve an environment in which the industry can operate profitably.

The NSWMC always seeks to ensure that any existing and imminent regulation and/or policy meets the basic criteria of effectiveness, efficiency and fairness.

## **1.2 PKCT**

Port Kembla Coal Terminal Limited (PKCT) was formed in 1990 by a consortium of 6 coal companies, which are representative of the Illawarra and Lithgow regions. The current shareholders of PKCT are: Allied Coal Pty Limited; Illawarra Services Pty Limited (BHPBilliton); Centennial Coal Company Limited; Tahmoor Coal Pty Limited; Oakbridge Pty Limited; and Metropolitan Collieries Pty Ltd.

PKCT is a service provider of road (via public and private roads), rail and barge unloading facilities, short-term cargo assembly storage area and shiploading facilities, and is located in the Illawarra region of NSW within the port of Port Kembla.

The facility is owned by the NSW Government and was leased by PKCT in 1990 for twenty years with an option for renewal for a further twenty years (i.e. up to 2030). PKCT receives coal from the Southern Coalfields in the Illawarra and the Western Coalfields near Lithgow.

The facilities at PKCT have a capacity of 16 mtpa, and is currently operating at a shiploading capacity of 9 mtpa.

### 1.3 PWCS

Port Waratah Coal Services Limited (PWCS) came into commercial operation in 1976, with initial operational throughput capacity through the port of Newcastle of 16 mtpa. In 1984 PWCS and Kooragang Coal Loader Limited established a formal commercial agreement which provided for a common loading charge through the port regardless of which terminal handled the coal.

In 1990, PWCS purchased all of the shares in Kooragang Coal Loader Limited, thus making Kooragang Coal Loader Limited a wholly owned subsidiary of PWCS. This restructure resulted in a combined loading capacity of 46 mtpa for both Carrington Coal Terminal and Kooragang Coal Terminal. The PWCS is owned and operated by coal industry companies.

In 1996 the second shiploader at Kooragang Coal Terminal was completed, which enabled the nominal capacity at PWCS to reach 66 mtpa. The State Government approved the further expansion of the Kooragang Coal Terminal in 1997.

Since the completion of Stage 3 of the Kooragang expansion in 2002 at a cost of \$330 million, the shiploading capacity at Kooragang Coal Terminal increased to 64 mtpa, bringing the total shiploading capacity at PWCS to 89 mtpa.

During 2002, approximately 800 vessels were loaded at PWCS, and this number has remained within the 700 – 800 vessels per year range since 1997.

## 2 GLOSSARY & DEFINITIONS

**Demurrage:** The detention of a vessel beyond an allotted cargo load or discharge time for which a penalty fee is charged.

**Hydraulic Interaction:** The resultant effect of wash from a passing vessel on another vessel.

**MTPA** Million Tonnes Per Annum

**NSWMC:** NSW Minerals Council

**PKCT:** Port Kembla Coal Terminal Ltd.

**PWCS:** Port Waratah Coal Services Limited

**RIC** Rail Infrastructure Corporation

### 3 THE NSW COAL INDUSTRY

The NSW mining industry has an annual production value of around \$7 billion, employs over 15,000 people, mainly in rural and regional areas, and contributes over \$900 million per year to government revenues. The mining industry also provides indirect employment, estimated to be in the order of a further 45,000 people, in a large number of support industries, ranging from heavy engineering and equipment manufacturing to the provision of mine supplies and consumable items and specialised advisory, design and management services. The export of Australian mining equipment, technology and services is also significant and is valued at nearly \$2 billion per year nationally.

Coal continues to be the State's largest export earner, by both volume and value, and the industry now earns around \$4 billion per year.

Coal operations are mainly contained in the region enclosed by the Hunter Valley in the north, the Lithgow region in the west and the Illawarra region to the south. Metalliferous and extractive industries are based throughout the State.

The NSW mining industry contributes annually to the State of NSW approximately \$220 million in the form of mining royalties.

The throughput of industry exports at the Port Kembla and Newcastle (by volume) in NSW can be demonstrated by the chart below:

	Mining Industry Contribution	Total Contribution	Percentile of Throughput
Port Kembla	9,174,704 t	22,710,990 t	40.4%
Newcastle	73,287,453 t	76,812,029 t	95.4%
Combined	82,462,157 t	99,523,019 t	82.9%

The mining industry throughput at Port Kembla is via PKCT, and at Newcastle is via PWCS.

The contribution, value and significance of the NSW mining industry is substantial to both the State of NSW and to the people of NSW.

The transportation of coal in the State of NSW is overwhelmingly by rail. Almost without exception, the NSW Government requires each coal mine as part of their individual development application consent conditions, to transport coal from the mine to the ports via the rail network. This is required for both safety and environmental amenity reasons. Hence, the efficiency of the infrastructure "chain" is critical to the industry.

## 4 IMPLICATIONS FOR THE HUNTER REGION

### 4.1 Hunter Rail Network

The Hunter rail network is unusual amongst major bulk haul railways, as it is a mixture of passenger and non-passenger traffic sharing the same tracks. Passenger trains have priority to the track (under s19D(2)(f) of the *Transport Administration Act* 1988 (NSW) and Schedule 4 of the NSW Rail Access Regime), even though they pay only a small fraction of the access charges per trainpath paid by export coal trains. Other non-coal trains also are afforded priority over coal trains.

Currently non-coal traffic, including container traffic and passenger traffic, takes up many trainpaths on the Hunter rail network, significantly reducing the coal-carrying capacity of the network.

The coal industry recognised several years ago that demand on the Hunter rail network was approaching capacity and sought urgent investment action from the Government, acknowledging the need for the industry to make a significant contribution to this cost. In about 1999 RIC began identifying bottlenecks in the network and identifying capital projects aimed at easing or eliminating them. Some projects have been completed including bridge replacements and installation of bi-directional signalling and high-speed turnouts, but significant further investment is still needed to match port and mine capacities. In addition, infrastructure maintenance to safeguard current capacity and ensure safe rail operations has been severely neglected in recent years.

For the past few years, the Hunter rail network has been operating at or close to capacity. This has resulted in the coal haulage operator being unable to keep pace with demand for coal delivery to port. This in turn has contributed to the coal industry incurring substantial demurrage costs and constrained international market expansion opportunities.

A major recent initiative has improved and integrated communications between PWCS, Rail Infrastructure Corporation (RIC), Pacific National and the coal companies. As a result of these initiatives, modest gains have been made through better scheduling and planning. However, the limit has now been reached to any further significant gains through these means.

Due to coal trains sharing the network with non-coal trains, significant constraints are introduced. Issues that constrain the network include:

- non-coal trains travel at different speeds from coal trains, such that a non-coal train may use more than one coal train trainpath;
- less than 80% of theoretical pathways can be utilised; and
- many non-coal trains are timetabled, so they reduce flexibility in timing of coal trains;
  - non-coal trains have higher priority than export coal trains;
  - 40% of loaded coal trains miss their mainline entry time.

The current rail network is operating at maximum carrying capacity, it is already causing a severe impost on the export coal industry as a result of demurrage charges.

The recent negotiations to transfer the infrastructure on the Hunter Valley rail line to the management of ARTC has further delayed essential capacity expansion. It is critical that major investment and maintenance on the line be brought forward urgently, to enable the Hunter Valley coal industry to operate competitively and to expand to benefit both the regional community and the State.

## **4.2 Hunter Road Network**

Currently, there is no bulk coal haulage by road that is destined for PWCS.

## **4.3 Hydraulic Interaction**

Due to the narrow channel at the South Arm of the Hunter River (North of Walsh Point), hydraulic interaction is a continuous factor that affects the efficiency of shiploading at PWCS. Whenever another vessel passes the South Arm of the Hunter River, PWCS is required to cease shiploading until the wash subsides.

Due to the volume of vessels loaded by PWCS each year, it is of critical importance that hydraulic interaction within the channel be kept at a minimum.

The NSWMC and PWCS are concerned that excessive hydraulic interaction as a result of increased channel traffic will increase the already substantial demurrage charges.

Investigations must be undertaken to identify possible action to alleviate the impacts of this constraint upon future shipping operations through the port of Newcastle.

# **5 IMPLICATIONS FOR THE ILLAWARRA REGION**

## **5.1 Illawarra Rail Network**

There are two rail lines that feed into Wollongong, and consequently PKCT: the Illawarra Line (Sydney to Wollongong); and the Moss Vale Line (Moss Vale to Wollongong – this links with Southern Line to Melbourne and Western Sydney).

The Moss Vale line is a single line with passing loops that are too short to accommodate current train sizes, and is currently operating near to or at capacity. This line is used to haul coal from the southern coalfields, as well as other bulk haulage such as limestone for

BlueScope Steel, grain from southwest NSW, interstate steel haulage as well as a passenger commuter line.

The Illawarra line is used for coal from the southern and western coalfields, namely Helensburgh (Metropolitan) and Lithgow (Baal Bone, Clarence, Charbon and Springvale) and occasionally coal from Newcastle. In addition to coal, the line also includes general freight, copper concentrate and, from Nowra/Kiama, quarry products and grain from Manildra.

As with the Hunter rail network, there are curfews for coal transportation along this line. As the majority (by volume) of trains that pass along the Illawarra line are passenger trains, peak periods are allocated to passenger movements that act to exclude or limit coal movements. Passenger priority is upheld during the peak hours of 3:30am – 7:00am and 3:30pm – 7:00pm Monday to Friday, at which times the coal trains are on curfew. Coal trains then have access to the rail network outside these times.

Due to the geographical nature of the Illawarra region, constraints are placed on the carrying capacity and length of the coal trains. These trains are typically 45 wagons in length, and carrying approximately 3,300 tonnes. Consequently, trains that service PKCT are significantly smaller than those that service PWCS.

PKCT receives between 5 and 8 trains of coal per day. Some short hauls allow 4 trains to complete 2 trips per day; otherwise trains cycle to and from PKCT on a 24 hour basis.

Whilst the Illawarra Inner Harbour Loop can accommodate trains of up to 51 wagons in length, there are other constraints and requirements within the rail network that restrict the length of trains.

## **5.2 Illawarra Road Network**

PKCT and the port of Port Kembla is linked to the Southern Freeway via Masters Road (northern side) and Five Islands Road (Southern side). The Southern Freeway is linked to the Sydney Freeway via Mt Ousley Road. All of the major arterial roads have double or triple lanes in each direction, and noise barriers have been erected on roads traversing through residential areas.

Access to Sydney can also be gained via Mt Ousley Road, then Picton Road, then the Hume Highway, which ultimately provides access to Western Sydney.

On average, the travel time from Port Kembla to Western Sydney is less than that of the Port of Sydney to Western Sydney.

Bulk coal haulage via the road network to PKCT is permitted from mines operating close to the port, due to the geographic and infrastructure constraints which would otherwise require much longer train journeys through the Sydney metropolitan system. However, to



moderate impacts upon the local communities, road access to the PKCT is restricted to the hours of 7.00am – 6.00pm, Monday to Saturday. Bulk haulage via the road network is typically along Appin Road, Mt Ousley Road, Southern Freeway, Masters Road and Springhill Road to PKCT.

## **6 RECOMMENDATIONS**

The NSWMC, PWCS and PKCT welcome the future expansion of either or both of the ports in Port Kembla or Newcastle. We also welcome the positive social and economic impacts that any possible future expansion may bring. However, it is the assertion of the NSWMC, PWCS and PKCT that any possible future expansion should only occur in conjunction with the expansion of the current rail networks.

The rail networks in both the Hunter and Illawarra regions are either approaching or at full carrying capacity. It is the concern of the NSWMC, PWCS and PKCT that the current deficiencies of the bulk rail network are limiting industry efficiencies. This prevents the industry from providing a product at a level comparable to world best standards, practice and cost.

Currently, demurrage charges to the coal industry in the Port of Newcastle are at record levels, and are unlikely to be eliminated in the absence of upgrading the current rail network. Demurrage is an unnecessary impost that the industry incurs. Furthermore, the demurrage impost is not reflective or representative of the industry's efficiency levels.

As mentioned previously, the throughput of the industry exports at Port Kembla (40.4%), Newcastle (95.4%) and as a combined ports throughput figure (82.9%) is significant.

Due to this substantial contribution, any future development planning must accommodate the long term needs of the coal industry at Port Kembla and Newcastle.

The coal industry is a major factor in the Hunter and Illawarra economic regions. As such, efficiency levels need to be at world's best standards at all stages of the coal export chain, including rail. Currently this is not the case. The result of which is diminishing of the industry's export abilities through factors outside of the control of the industry. For any industry to remain viable and competitive, this scenario is clearly unworkable and impractical in the long term. Inefficiencies such as this inhibits industry growth and suppresses industry related jobs in the Hunter and Illawarra regions.

### **6.1 Hunter Recommendations**

Currently, waiting queues for bulk cargo vessels at the port of Newcastle are approaching three (3) weeks, which in turn contributes and escalates the demurrage cost of \$100 million. Any expansion to the shipping facilities in Newcastle must firstly address the rail

infrastructure, so that the port can operate at an acceptable level of efficiency, and that waiting times and demurrage costs can be slashed.

The hydraulic interaction problems for shiploading in the channel must be resolved promptly and efficiently.

## **6.2 Illawarra Recommendations**

In order to facilitate any possible future needs of the Illawarra as a result of an expansion of the ports facilities, the following must occur.

Bulk rail access on the Moss Vale and Illawarra lines must be reviewed to consider the current limitations faced by the coal industry and the future needs of both the industry and any future bulk user of the rail network.

Currently the inner harbour loop lines are only used for coal and grain, and future planning must take into consideration the probability of congestion on these lines. Future planning must also take into consideration the probability of congestion at the access/departure point of the Illawarra line and Inner Harbour loop.

Finally, a significant increase of port trade supported by rail in the Illawarra region may require a review of the construction of the Maldon/Dombarton line.