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**Rail Freight Transport in
NSW**

by

Holly Park

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by

Holly Park

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SUMMARY

The freight task in NSW has grown rapidly over the last decade and will continue to grow, fuelled by population and economic growth and coal exports. The majority of freight in NSW is transported by road. This is due in part to the historical inequity in the funding of road and rail infrastructure, but is also related to the superior efficiency and flexibility offered by road transport.

The NSW Government has committed to significantly increase the amount of freight transported by rail. There are a number of grounds for this. The volume of Sydney freight movements is expected to more than double between 2005-2025, and freight on the Sydney-Brisbane corridor is expected to almost triple over a similar period. An increase in freight transport by rail will help limit the increase in road freight transport, with associated road congestion and road safety benefits. There are also significant climate change and air pollution benefits of transporting freight by rail. The greenhouse and other air pollutant emissions from rail freight transport are substantially less than the emissions from road transport for an equivalent amount of freight.

Whilst the environmental benefits of transporting freight by rail are significant and widely recognised, there are also associated environmental impacts. The environmental impacts are largely localised and include: operational rail noise; noise from construction and maintenance activities; and air pollution. A range of measures have been implemented, or are being developed, to address the noise and air pollution impacts of the freight rail network. However, it is very much still a work in progress.

In recent years, there has been a strong focus on improving the efficiency of rail freight transport in NSW. Numerous rail infrastructure projects are proposed or currently being constructed. The majority of these projects are being undertaken by the Australian Rail Track Corporation, a federal government owned corporation responsible for managing the interstate and Hunter Valley freight rail networks in NSW. Key projects include the Southern Sydney Freight Line, the Hunter Valley Investment Strategy and the North-South Improvement Strategy.

Disused rail lines have also been the focus of much attention in NSW recently, with the introduction of the Transport Administration Amendment (Rail Trails) Bill. The Bill would permit the Government to dispose of rail corridors or rail corridor infrastructure without requiring an Act of Parliament. The purpose of the Bill is to allow community groups to establish rail trails for cycling and walking in disused rail corridors. The Rail Trail organisation in Australia has commended the Bill for bringing NSW into line with other Australian States and permitting the development of rail trails. However, the Government's admission that the Bill would allow rail corridor land to be sold for other purposes has generated criticism.

Amidst discussion of turning disused rail corridors into recreational rail trails, farmers and regional communities across NSW have been lobbying to have disused regional rail lines reopened to freight transport. The Federal Government's recently released NSW Grain Freight Review has made a series of recommendations concerning regional freight rail lines used for grain transport. The recommendations support the retention and maintenance of the majority of regional rail lines considered in the Review.

1.0 INTRODUCTION

1.1 The Freight Task

The freight task in NSW has grown rapidly over the past decade and will continue to grow, fuelled by economic and population growth and coal exports. Approximately 220 000 tonnes of freight are transported across NSW daily, utilising the State's 200 000 kilometres of road and 12 000 kilometres of rail track.¹

There are two components to the freight task: bulk freight (predominantly minerals and agricultural products such as coal, grain and fertiliser) and non-bulk or containerised freight (which includes general merchandise, food, cars and livestock). Bulk freight comprises 84% of the total freight task.

The majority of freight in NSW is transported to or from the greater metropolitan area of Wollongong-Sydney-Newcastle. The State's four largest ports are located within this region: Port Botany (Sydney); Sydney Harbour; Newcastle Port; and Port Kembla (Wollongong).

The Freight Ports

Port Botany deals predominantly in containerised freight, handling 95% of NSW containerised freight trade.² The majority of Sydney's freight throughput, approximately 70%, is based at Port Botany. The volume of freight passing through Port Botany is forecast to increase at a rate of 5% per year with the freight task forecast to more than double between 2005 - 2025.³ However, the global financial crisis is having an impact on these projections, with only a small increase in container trade recorded for the 2008-09 financial year.⁴ Figure 1 over page demonstrates the growth in freight volumes between 1997-2007.

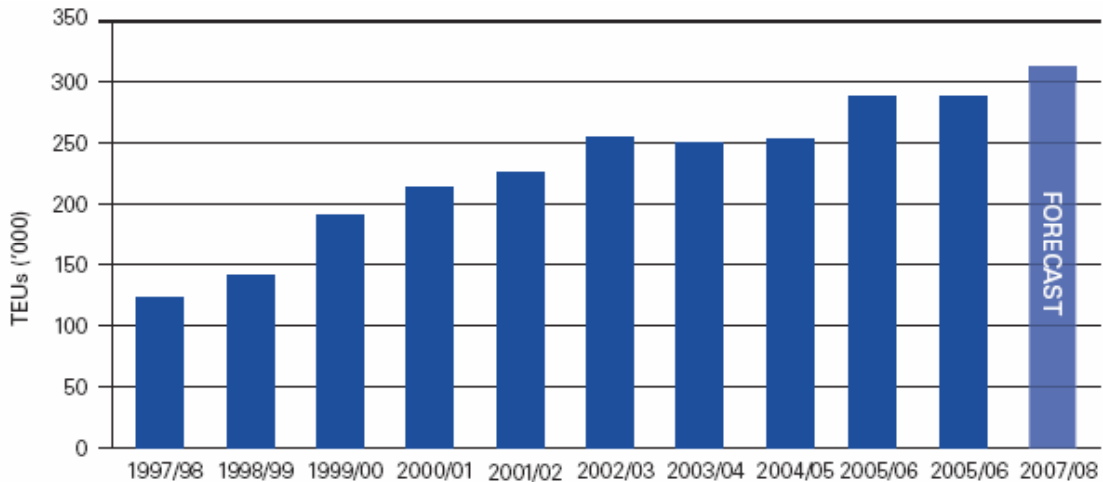
Sydney Harbour trades mainly in bulk liquids and bulk cargo, with vehicle imports recently transferred to Port Kembla. Whilst the Government's stated intention is that Sydney Harbour remains a working port, it is apparent that there is an increased focus on alternative uses, evidenced through the Barangaroo development and the Bays Precinct consultation process.

¹ NSW Government, *Submission to the Inquiry by the House of Representatives Standing Committee on Transport and Regional Services into the Integration of Regional Transport Links and their Interface with Ports*, June 2005.

² NSW Independent Pricing and Regulatory Tribunal (IPART), *Reforming Port Botany's links with inland transport*, March 2008.

³ Australian Bureau of Transport and Regional Economics (BTRE), *Container and Ship Movements Through Australian Ports 2004-05 to 2024-25*, June 2006: [BTRE Report](#).

⁴ Sydney Port Corporation website: http://www.sydneyports.com.au/trade_services/trade_information accessed 14/10/2009.

Figure 1 – Port Botany Freight Volumes⁵

Newcastle Port is predominantly a coal export port with 94% of the Port's throughput comprising coal from the Hunter Valley and Gunnedah coal basins.⁶ Newcastle is the world's largest coal export port,⁷ exporting over 90 million tonnes of coal in 2008-09.⁸ The volume of freight passing through Newcastle Port is expected to continue to grow. The Hunter Coal Port Plan, which was agreed upon in September this year, aims to double the capacity of the Port by 2016.

Port Kembla trades a range of cargo, almost half of which is coal from the surrounding region, with the remainder including iron ore, grain and steel products.⁹ The Port is currently undergoing an expansion that will increase its container, bulk goods and vehicle handling capacity.¹⁰

⁵ Sydney Ports Corporation, *Port Freight Logistics Plan*, June 2008: [Freight Logistics Plan](#).

⁶ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

⁷ NSW Government, *Submission to the Inquiry by the House of Representatives Standing Committee on Transport and Regional Services into the Integration of Regional Transport Links and their Interface with Ports*, June 2005. Newcastle Port topped Queensland's Hay Point as the largest coal export port in December 2008, J Tripodi MP *Media Release* 'Record Trade Result for Newcastle' 20/1/2009.

⁸ 'Trade Statistics', Newcastle Port Corporation website: <http://www.newportcorp.com/site/index.cfm?display=111694> accessed 28/10/2009.

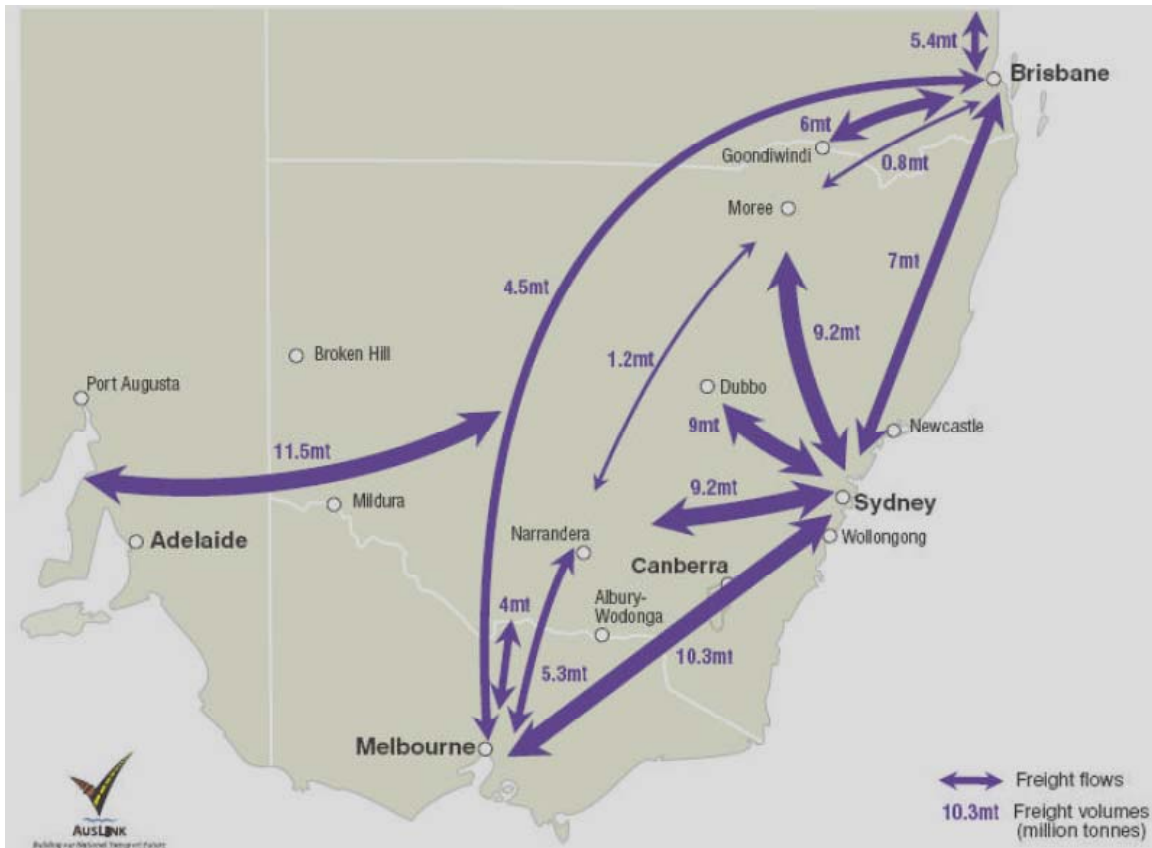
⁹ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

¹⁰ Port Kembla Port Corporation website <http://www.kemblaport.com.au/> accessed 14/10/2009.

Freight Flows

Figure 2 illustrates the pattern of freight transport in NSW. There is substantial freight transport between capital cities, but there is also substantial freight transport between Sydney and regional centres in NSW.

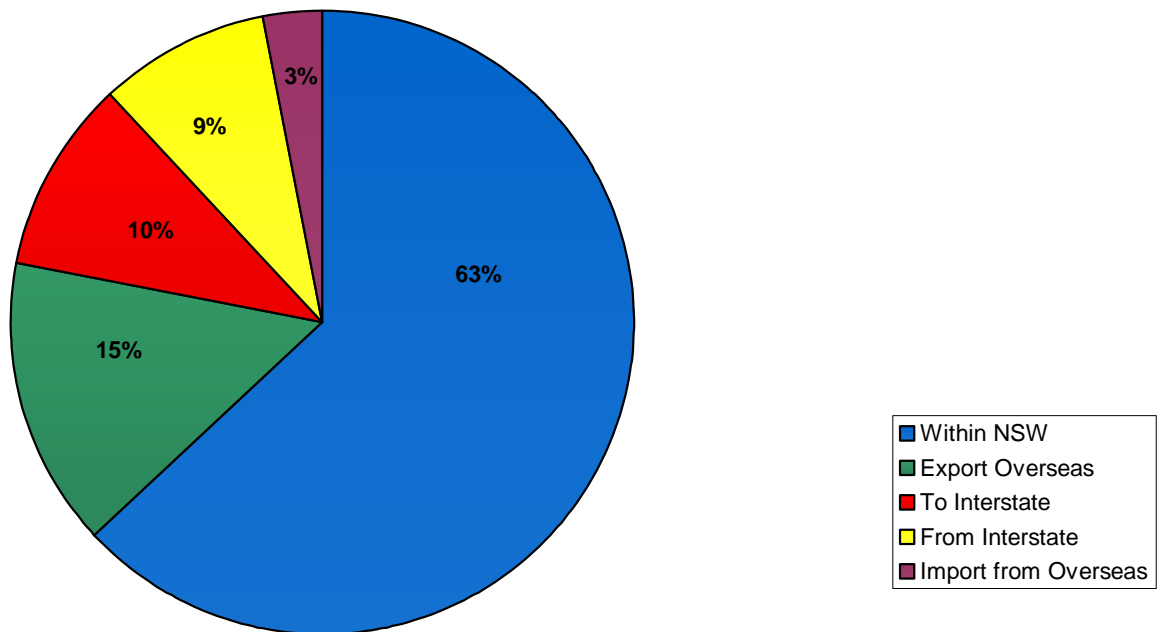
Figure 2 - Freight flows in NSW¹¹



¹¹ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

As displayed in Figure 3, the movement of goods within NSW makes up the majority of the State's freight task. The next largest component of the freight task is the export of goods overseas. This is closely followed by transporting goods to and from interstate, which both equate for roughly 10% of the freight task. The smallest component of the NSW freight task is the import of goods from overseas.

Figure 3 - NSW Total freight Task by Source/Destination (tonnes)¹²



1.2 Key Industry Players

There are a number of parties responsible for the provision and operation of rail infrastructure and the operation of trains in NSW:

RailCorp

[RailCorp](#) is a NSW statutory authority that owns and manages the metropolitan rail network in NSW. RailCorp operates passenger train services (CityRail and CountryLink) and provides network access to freight train operators in the metropolitan area.

¹² Data sourced from: Freight and Logistics Council of NSW, *Innovation in the NSW Freight Logistics Industry*, January 2008 [Innovation Report](#).

Australian Rail Track Corporation (ARTC)

[ARTC](#) is a Commonwealth government owned corporation. ARTC manages the National Interstate Rail Network and is responsible for ensuring efficient rail freight transport across Australia. ARTC manages the Hunter Valley and Interstate freight rail network in NSW under lease from the NSW Government and provides network access to freight train operators on these lines. ARTC is currently undertaking numerous projects across NSW to improve the efficiency of the freight rail network, including the Southern Sydney Freight Line. Once the Southern Sydney Freight line is operational, it is proposed that ARTC will also take control of the metropolitan freight network.

Transport Infrastructure Development Corporation (TIDC)

[TIDC](#) is a NSW government owned corporation responsible for developing and delivering major transport infrastructure projects in NSW. TIDC is currently constructing the Clearways Programs, stage one of the South West Rail Link and the commuter car park program.

Freight Train Operators

Freight trains in NSW are privately operated, with the NSW Government no longer operating locomotives. The state owned Freight Rail Corporation and National Rail Corporation were privatised in 2002.¹³ The major freight train operator in NSW is Pacific National. Interail Australia, Australian Western Railroad, Queensland Rail and Patrick Port Link are also significant freight operators.¹⁴

2.0 MODAL SHARE OF THE FREIGHT TRANSPORT TASK

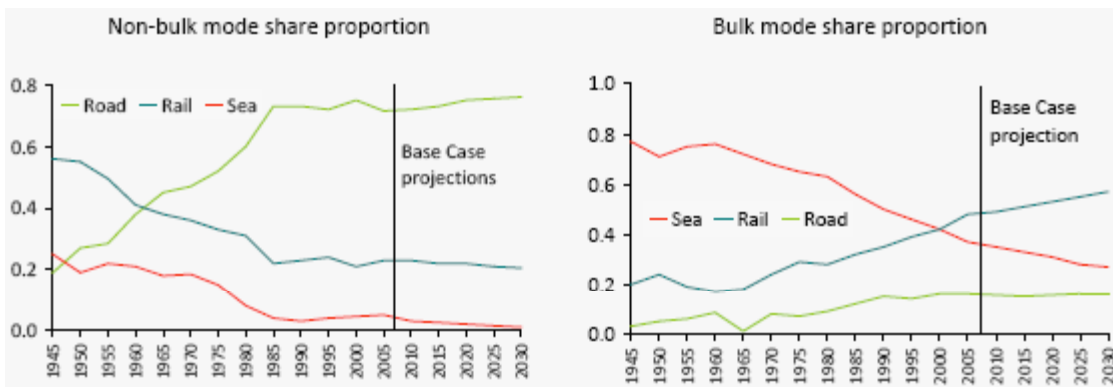
As Figure 4 demonstrates, since 1945 the rail share of non-bulk freight in Australia has fallen from 56% to 22%, with a further small decline projected to 2030. Over the same period, rail's share of bulk freight has increased from 20% to nearly 50%. This is largely due to the development of dedicated freight rail lines to take commodities to port and because rail is significantly cheaper than road in this market. However, in recent years there has been an increase in competition from road in relation to grain transport.¹⁵

¹³ NSW Government, *Submission to the Inquiry by the House of Representatives Standing Committee on Transport and Regional Services into the Integration of Regional Transport Links and their Interface with Ports*, June 2005.

¹⁴ NSW Independent Transport Safety and Reliability Regulator, *Rail Industry Safety Report 2007-08*, 2008.

¹⁵ Cooperative Research Centre for Rail Innovation *Transforming Rail: A Key Element in Australia's Low Pollution Future*, 2008: [CRC Report](#).

Figure 4 – Modal Share of bulk and non-bulk freight in Australia¹⁶



In NSW, the majority of freight is transported by road. In 2006-07, twice as much freight was transported by road than rail.¹⁷ 89% of freight between Sydney and Melbourne, and 76% of freight between Sydney and Brisbane is carried by road.¹⁸

The vast majority of Sydney's freight, 86%, is also transported by road with this figure increasing relative to rail.¹⁹ In 2006-07, 1.62 million containers passed through Port Botany, 81% of which were transported by road.²⁰ Notwithstanding the target to increase the share of Port Botany freight transported by rail from the current 19% to 40%, container freight on inner city roads will still double by 2021. Container movements are projected to increase from 900,000 containers/year in 2003 to 1.8 million containers/year in 2021 due to growth in the overall freight task (see Figure 5 over page).²¹ Major freight links in the Sydney metropolitan area are marked on the map over page (Figure 6).

¹⁶ Cooperative Research Centre (CRC) for Rail Innovation, *Transforming Rail: A Key Element in Australia's Low Pollution Future*, 2008: [CRC Report](#).

¹⁷ Bureau of Infrastructure, Transport and Regional Economics, *Australian Transport Statistics Yearbook 2009*: http://www.bitre.gov.au/publications/10/Files/BITRE_TRANSPORT_STATS_YEARBOOK_2009.pdf accessed 20/10/2009. NB: the most recent data provided is for 2006-07. Freight is measured by billion tonne kilometres, road:60.6 billion tonne kilometres; rail: 30.5 billion tonne kilometres. Also see: Australian Bureau of Statistics 2001, *Freight Movements Summary Australia*: [Freight Movements](#).

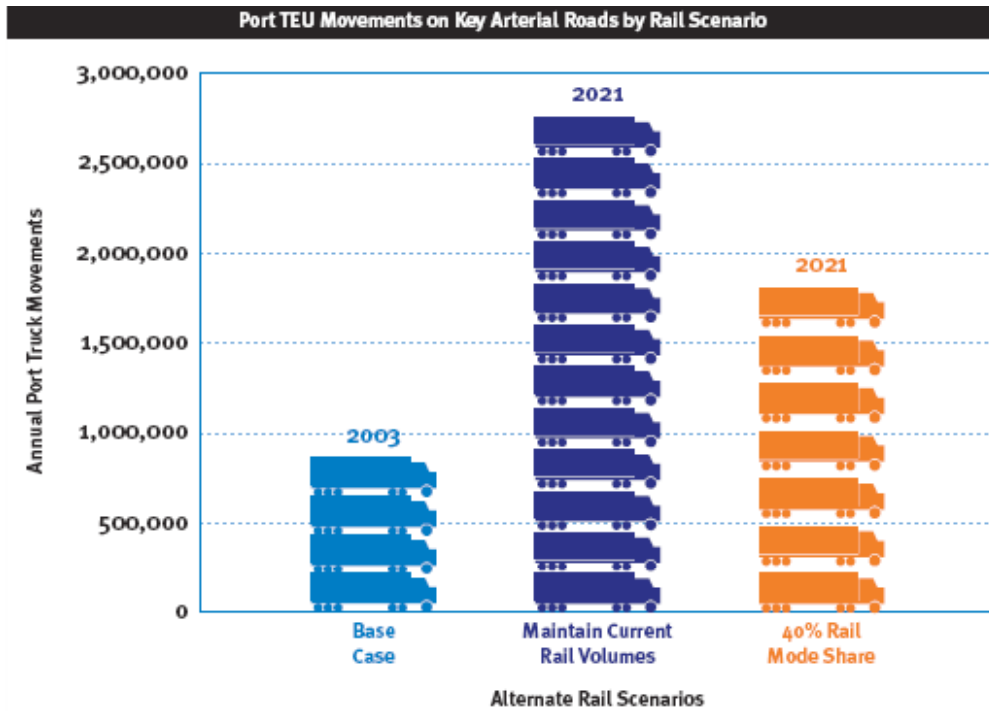
¹⁸ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

¹⁹ See NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

²⁰ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

²¹ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

Figure 5 – Port Botany Freight Movements on Road by Rail Scenario²²



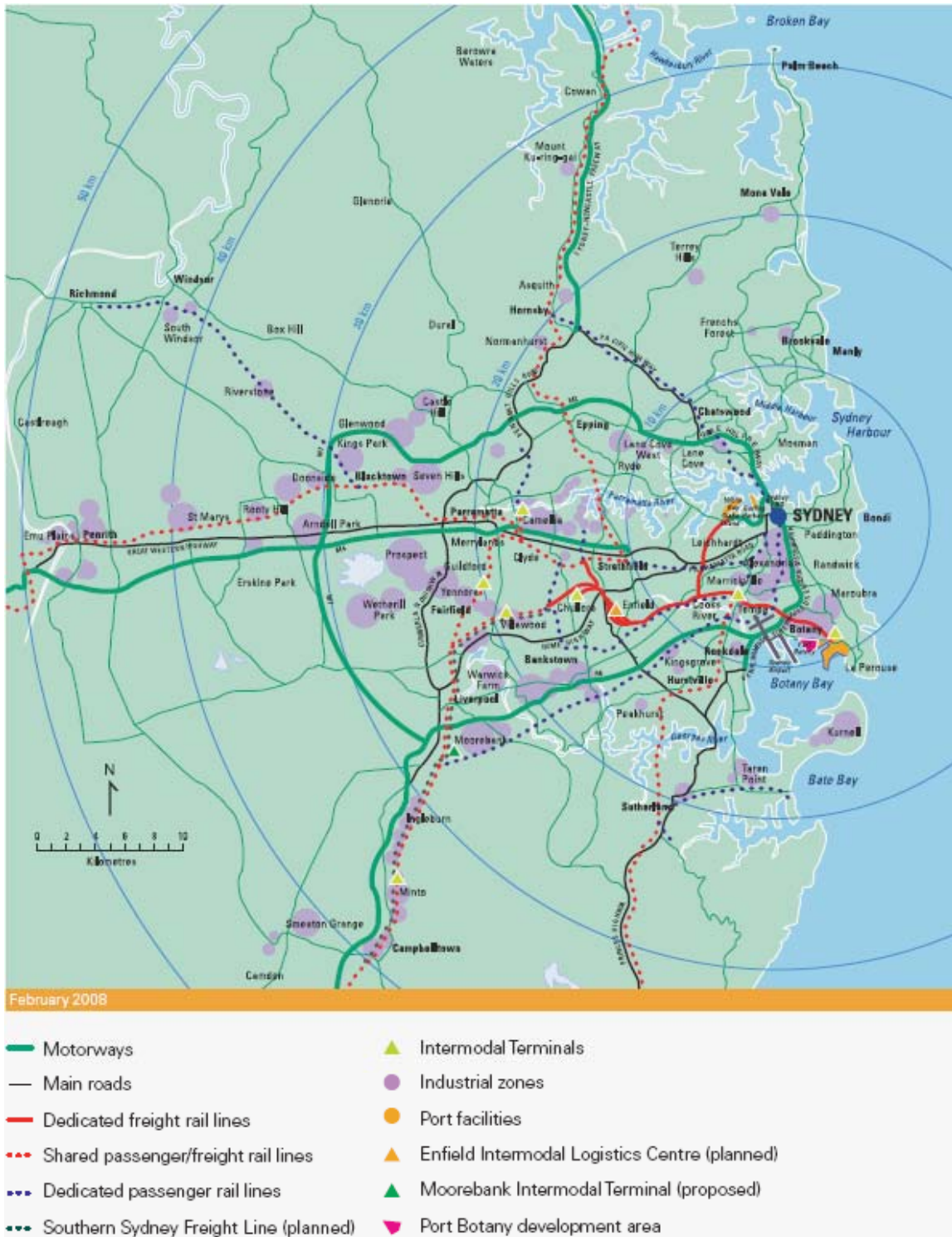
Note: This figure illustrates projected truck volumes for 2021 for two rail scenarios (maintaining the current percentage of rail transport and increasing the percentage of rail transport to 40%) against a base case of 2003.

There are a range of factors that are relevant to the division of freight transport between road and rail. Historically, there has been a significant underinvestment in rail infrastructure. Road expenditure accounts for approximately 70% of Australia’s infrastructure spending, with the remaining 30% divided between rail and ports. Between 1974 – 2004, the Commonwealth Government invested \$58 billion on roads compared with \$2.2 billion on the rail freight network.²³ Road transport is generally viewed as more efficient and flexible than rail transport. The frequency and reliability of rail freight transport is limited because passenger trains are given priority on the shared rail network. Freight is excluded from the metropolitan rail network during peak commuter periods, and increasingly during the daytime, due to capacity constraints.²⁴ This problem is exacerbated as the majority of Sydney’s existing intermodal terminals are located on the shared passenger rail network rather than on dedicated freight lines.

²² Freight Infrastructure Advisory Board, *Railing Port Botany’s Containers*, 2005: [FIAB Report](#).

²³ Barrett S, ‘Freight and Metropolitan Transport’, *Proceedings from ADC Infrastructure 21: From Incrementalism to Transformational Change*, October 2008 [ADC Infrastructure 21](#).

²⁴ NSW Government, *Metropolitan Strategy: Supporting Information*, December 2005.

Figure 6 - Sydney Metropolitan Freight Links²⁵

25

Sydney Ports Corporation, *Port freight Logistics Plan: A framework to improve road and rail performance at Port Botany*, June 2008:

http://www.sydneyports.com.au/_data/assets/pdf_file/0008/9998/Port_Freight_Logistics_Plan.pdf accessed 19/10/2009.

The rail industry also strongly maintains that there is a competitive distortion between road and rail pricing, with pricing for road freight not reflecting the true costs, particularly in relation to social and environmental costs. However, the Australian Government Productivity Commission Inquiry into road and rail freight infrastructure pricing in 2006 found that ‘competitive distortions between road and rail have been limited and not a significant source of market inefficiency’. The Inquiry Report asserts that only 10-15% of the total freight task is contestable between road and rail.²⁶

2.1 Government Commitment to a Modal Shift from Road to Rail

There are a number of reasons the government wants to encourage freight transport by rail, particularly:

- To manage the projected increase in freight in NSW. The volume of Sydney freight movements is expected to more than double between 2005-2025²⁷ and freight on the Sydney-Brisbane corridor is expected to almost triple between 2008-2029.²⁸ An increase in freight transport by rail will mean there is a reduced increase in freight transport by road, with the associated road congestion and road safety benefits.
- Climate change and air pollution benefits. The greenhouse and air pollutant emissions from rail transport of freight are significantly less than the emissions from road transport for the same amount of freight.
- Social and economic benefits. An increase in rail freight transport facilitates job creation in the mining and construction industries.

The NSW Government has highlighted the need to significantly increase the share of freight transported by rail.²⁹ Major policy initiatives of the State Government, as they relate to rail freight transport, are outlined below. Whilst there are a variety of policy decisions and documents that are referred to as a ‘freight strategy’ or ‘part of the freight strategy’, there is no published, comprehensive freight strategy for either NSW or Sydney, despite it being discussed since 1993.³⁰

²⁶ Australian Government Productivity Commission Inquiry, *Road and Rail Freight Infrastructure Pricing*, No. 41, 22 December 2006.

²⁷ Australian Bureau of Transport and Regional Economics (BTRE), *Container and Ship Movements Through Australian Ports 2004-05 to 2024-25*, Working Paper 65, June 2006: [BTRE Report](#).

²⁸ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

²⁹ The initial public statement of this was by the Hon Craig Knowles MP, Minister for Infrastructure, Planning and Natural Resources, *Media Release*, ‘Plan for Ports Freight to Deliver More Freight by Rail’, 13/12/2004.

³⁰ Nature Conservation Council of NSW, *Sustainable Transport Policy*, October 2002.

NSW State Plan

The [NSW State Plan](#) does not set as an explicit 'priority' the need to increase the modal share of freight transported by rail. The Draft State Plan did include an explicit priority: 'Increased proportion of freight on rail'. However, during the community consultation process this priority received 'mixed feedback'. The priority was removed and freight transport was incorporated into priorities on road congestion and infrastructure, outlined below.³¹

Priority P2: Maintain and invest in infrastructure

This priority has two specific targets: maintaining the average annual growth rate in capital expenditure on infrastructure over the decade and developing and reporting measures of infrastructure maintenance effectiveness. The commentary refers to efficient freight movements, increasing State and international competitiveness and encouraging regional development. There is no specific mention of rail freight transport.

Priority E7: Improve the efficiency of the road network

This priority has one specific target: improving the efficiency of the road network during peak times as measured by travel speeds and volumes on Sydney's major road corridors. The commentary identifies actions the Government is already committed to, which includes: reducing the proportion of containerised freight travelling by road.

Metropolitan Strategy

The Sydney [Metropolitan Strategy](#) contains numerous 'initiatives' that relate to the modal shift of freight transport from road to rail.

D5.2: Maximise the efficiency of freight transport and the proportion transported by rail

This initiative reiterates the Government's in principle adoption of a target of increasing rail's share of Port Botany container movements to 40% by 2011. It highlights the need for:

- Provision of the necessary road and rail infrastructure to support the growth in freight volume;
- Significant enhancement of intermodal terminal capacity, including the development of new intermodal terminals;
- Increased separation of passenger and freight services on the rail network; and
- Coordination with transport agencies and industry to encourage the modal shift of freight movements from road to rail, or to road at off-peak periods.

³¹ NSW Government, *NSW State Plan: A New Direction for NSW 2006*, p20.

D6.1: Develop the next elements of the Sydney Freight Strategy

This initiative notes that the Government's freight strategy will focus on improving the efficiency and lowering the adverse impact of freight movements in Sydney. It will address:

- Land requirements for dedicated freight hubs;
- Road and rail infrastructure requirements;
- Measures to encourage greater coordination;
- Preferred freight routes on the road network;
- Measures to help direct freight to preferred modes;
- Measures to reduce the impact of freight on the community.

D6.2: Facilitate the upgrading of the metropolitan rail freight network

This initiative identifies the need for a dedicated rail freight network to improve the reliability and attractiveness of rail freight services, the reliability of passenger services and to reduce pressure on the road network. This initiative highlights the importance of the Government working with the ARTC to facilitate:

- Construction of the Southern Sydney Freight Line;
- Enhancement of capacity on the shared metropolitan network;
- Improvement of capacity on the Botany Freight Line;
- Extension of the dedicated freight rail network to Western Sydney.

D7.1: Plan for the provision of sufficient freight transport capacity in key corridors

This initiative focuses on improvements to both the road and rail network. It emphasises two targets in relation to rail freight transport:

- Work with ARTC and RailCorp to enhance rail freight capacity between Sydney and Newcastle;
- Plan for increased interstate and regional rail freight movements.

D8.1: Protect corridors and land for freight related activities in the future

This initiative emphasises the importance of planning for enhanced rail freight capacity in the metropolitan area. It identifies three specific targets:

- Protect corridors for future transport connections;
- Plan for provision of rail connections to key industrial growth areas in Sydney;
- Facilitate zonings that encourage clustering of freight activities into freight precincts.

D8.2: Reduce noise and air impacts of freight operations

This initiative affirms the need to develop strategies to:

- Increase the volume of freight moved by rail;
- Reduce emissions from older diesel vehicles;
- Reduce noise along rail freight lines.

E2.5: Minimise household exposure to unacceptable noise levels

This initiative identifies three specific targets:

- Avoid land use conflicts through early strategic planning;
- Undertake noise mapping and develop tools to support planning measures that avoid land use conflicts;
- Link existing noise management strategies with planning controls.

State Infrastructure Strategy 2008-09 – 2017-2018

The [State Infrastructure Strategy](#) provides details on a number of rail projects, funded by ARTC and/or the State Government, which aim to increase the capacity and efficiency of the NSW rail network including:³²

- Southern Sydney Freight Line;
- Hunter Valley Investment Strategy;
- North-South Improvement Strategy;
- Rail Clearways Project.

Freight Infrastructure Advisory Board (FIAB)

FIAB was established by the NSW Government in 2004 to provide advice to the Minister on major freight infrastructure policy, project matters and new legislative and regulatory initiatives to support the delivery of the Government's freight infrastructure objectives.³³

FIAB's report *Railing Port Botany's Containers* (2005) made a number of recommendations relating to rail freight transport, including:

- The 40% target for the rail share of freight transport must be met and exceeded if possible. Government and industry need to embrace strategies to further increase the rail freight share;
- Intermodal terminal capacity must be increased to meet the rail freight share of 40%. Intermodal terminals should be connected to Port Botany by dedicated freight lines;
- An integrated logistics facility should be developed at Enfield;
- The Commonwealth Department of Defence site at Moorebank should be secured for an intermodal terminal and planning work on the development should be commenced. The Government should pursue federal funding for a rail link to the terminal;
- Existing intermodal terminals at Liverpool and Minto should be enhanced. Strategic sites for additional intermodal facilities should be confirmed and rail corridors to these sites should be secured;

³² NSW Government, *State Infrastructure Strategy 2008-09 – 2017-2018*, June 2008.

³³ Freight Infrastructure Advisory Board, *Railing Port Botany's Containers*, 2005: [FIAB Report](#).

- ARTC should take complete control of the Sydney Metropolitan Freight Network as soon as possible;
- The Botany freight line 'stage 4' amplification should be brought forward using Commonwealth Government funding;
- The Southern Sydney Freight Line should be expedited;
- Rail interfaces in Port Botany should be improved;
- A Port Botany logistics chain team should be established, based on the team operating in the Hunter Valley;
- A freight infrastructure charge should be implemented for containers transported to or from Port Botany (further detail provided below).

The report noted that at present, passenger train priority means that freight trains on the shared network can only complete one to two cycles per day in the metropolitan area. For rail to become cost competitive, it needs to complete four cycles per day, which will become possible once the Enfield intermodal terminal is operational.³⁴

Freight Infrastructure Charge

The most groundbreaking of FIAB's recommendations was Recommendation 22, which recommended that the Government draft a Freight Movements Management Act to give effect to a freight infrastructure charge. The rationale for a freight infrastructure charge is to encourage the modal shift of freight from road to rail and to decrease congestion on Sydney's roads during peak hours. The proposed charge would be collected on import and export containers. The charge would be rebated for containers transported to or from the Port by rail or by road during designated night time off peak hours.³⁵ The Government's response to this report is outlined below.

Infrastructure Implementation Group

The Infrastructure Implementation Group was established by the NSW Government to provide advice to Cabinet on government infrastructure projects and to assist government agencies with the delivery of priority infrastructure projects. It sits in the Office of the Coordinator General, within the Department of Premier and Cabinet.

In May 2007, the Infrastructure Implementation Group released a review of the FIAB report. The review was broadly supportive of the Report's recommendations, including the target to increase the share of Port Botany freight transported by rail to 40%. It recognised the need for improved infrastructure and a network of intermodal terminals to facilitate the modal shift from road to rail. In relation to the

³⁴ Freight Infrastructure Advisory Board, *Railing Port Botany's Containers*, 2005: [FIAB Report](#).

³⁵ Freight Infrastructure Advisory Board, *Railing Port Botany's Containers*, 2005: [FIAB Report](#).

proposed freight infrastructure charge, the review indicated that once adequate infrastructure was available (i.e. intermodal terminal capacity had been increased and the Southern Sydney Freight Line was operational) a freight infrastructure charge should be considered as a mechanism to reduce truck traffic travelling to and from Port Botany.³⁶

3.0 ENVIRONMENTAL BENEFITS AND IMPACTS OF RAIL FREIGHT

3.1 Environmental Benefits of Rail Freight Transport

The transport of freight by rail is widely recognised as having significant environmental benefits compared to the transport of freight by road. Freight transported by rail uses one third of the fuel required for road transport per tonne of freight hauled.³⁷ It produces only one third of the nitrous oxide, half of the volatile organic compounds and less than two thirds of the carbon monoxide.³⁸ Rail is twice as energy efficient as road, even after fuel use has been included for road pick-up and delivery from rail terminals, manufacture of transport equipment and construction of roads and railway lines. One freight train between Melbourne and Sydney replaces 150 semi-trailers and saves 45,000 litres of fuel and 130 tonnes of greenhouse gases, compared with road haulage.³⁹

Rail freight transport is also recognised as having substantially lower social and environmental costs. The economic costs of social and environmental problems such as: road congestion; traffic accidents; urban amenity; road wear; and air pollution impacts on human health and the environment are widely accepted to be higher for road than rail. The Cooperative Research Centre for Rail Innovation (which includes significant rail industry representation) asserts that for freight transport, the social and environmental costs of transport by road are approximately five times those for transport by rail.⁴⁰

³⁶ NSW Government Infrastructure Implementation Group, *Review by the Infrastructure Implementation Group of the Freight Infrastructure Advisory Board Report and Recommendations*, May 2007.

³⁷ See Department of Environment and Climate Change & Department of Planning, *Interim Guideline for the Assessment of Noise for Rail Infrastructure Projects*, 2007, p1: [IGANRIP](#).

³⁸ Queensland Transport, *Rail Network Strategy for Queensland*, (undated): http://www.transport.qld.gov.au/resources/file/eb301b0b4a1f617/Pdf_rpf_rail_network_strategy_full1.pdf accessed 30/9/2009.

³⁹ See Department of Environment, Climate Change and Water and Department of Planning, *Interim Guideline for the Assessment of Noise for Rail Infrastructure Projects*, 2007, p1: [IGANRIP](#).

⁴⁰ Cooperative Research Centre for Rail Innovation, *Social, Economic and Environmental Impacts of Transport Modes*, April 2009: <http://www.railcrc.net.au/publications/downloads/R1106-Paper-2-Social-Economic-Environmental-Impacts-of-Transport.pdf> accessed 30/9/2009.

The NSW Government has acknowledged that road has been favoured over rail (due to its flexibility) and this has led to adverse impacts such as urban congestion, noise and greenhouse gas emissions.⁴¹ Trucks account for 17% of the registered vehicles in NSW, but 31% of the fuel consumed and 34% of carbon dioxide equivalent emissions.⁴²

Traffic Congestion in Sydney has been estimated to cost somewhere between \$3.5-\$12 billion in 2005 and is projected to rise to between \$8-\$17 billion by 2020.⁴³ In 2006, freight made up 15% of vehicle kilometres travelled in the Sydney greater metropolitan area. One million trips are made across Sydney daily by commercial vehicles, with 180 000 of these by heavy vehicles.⁴⁴

3.2 Environmental Impacts of Rail Freight Transport

There are a number of environmental impacts associated with rail activities, including:

- Operational rail noise;
- Construction or maintenance noise;
- Air pollution from locomotives or cargo (particularly coal dust);
- Waste;
- Water pollution;
- Biodiversity impacts;
- Aboriginal cultural heritage impacts.

Three of these, operational rail noise, construction and maintenance noise and air pollution from locomotives or cargo, are specific to the rail industry. The remaining environmental impacts do not require the same level of rail industry specific management policies. Accordingly, the following discussion is focussed on the noise and air pollution impacts of rail freight activities.

Operational Rail Noise

Operational freight rail noise is generally characterised by periods of loud noise followed by periods of no rail noise, coinciding with train movements. In many locations rail lines were in existence prior to the surrounding development. However, rail noise has generally increased over time as the number of train movements and train speeds have increased. The major source of noise is

⁴¹ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

⁴² NSW Government *Metropolitan Strategy: Supporting Information*, December 2005.

⁴³ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

⁴⁴ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

locomotive engine noise during freight train movements. Other sources include: engine idling noise; wheel squeal (generally on tightly curved sections of track); horn sounding for safety or testing purposes; brake testing; and train shunting (which is a process whereby the configuration or location of carriages or locomotives are changed, often causing carriages to bang together).

Construction or Maintenance Noise

Construction or maintenance activities are carried out within a limited timeframe but the works involved can often be of a highly disturbing nature. Noise impacts include: noisy plant items; truck movements; reversing beepers; unloading materials; and high noise generating activities such as jack hammering, rock breaking and saw cutting. Construction and maintenance works are often conducted outside of standard construction hours (i.e. on weekends, evenings and night times) to minimise disturbance to passenger train services, which exacerbates the noise impact on local communities.

Air Pollution

Locomotive Engines

Locomotive engine air emissions constitute a small proportion of overall air pollution, but have a reasonably significant impact on the local air shed. Improvements in the State's air quality, through the reduction in industrial and road related air emissions, have led to an increased community focus on air emissions from locomotives.⁴⁵

Locomotive Cargo

Locomotives carry a range of bulk cargo, some of which generates dust particulate matter. This is a particular problem with coal loads. The impact of this dust pollution is highly localised, predominantly affecting residents and other receivers in close proximity to the rail corridor. Particulate matter can settle on properties, cars and clothing as well as being visibly air-borne. Community concerns relate to the health impacts associated with breathing this particulate matter, as well as general amenity and cleanliness issues.

⁴⁵ Environment Protection Licence, RailCorp, 12208:
<http://www.environment.nsw.gov.au/prpoeo/licences/L12208.pdf> accessed 6/10/2009.

4.0 MANAGING ENVIRONMENTAL IMPACTS

The environmental impacts of the freight rail network are generally localised, primarily affecting the environment and the community in near vicinity to the rail network. A difficult land use conflict situation has arisen, whereby urban development has encroached on freight rail lines. Combined with an increase in the frequency of freight train movements, this has generated significant community concern about the environmental impacts of the rail industry.

There are a range of measures that have been implemented or are being developed by the NSW Government and/or the rail industry to manage the environmental impacts of the freight rail network. However, it is very much still a work in progress. Numerous initiatives are awaiting finalisation by the rail industry and the amount of funding that will be committed to implement these initiatives is unclear. Whilst some improvements are being made, it remains to be seen how effective the newer initiatives will be. Managing the environmental impacts of the freight rail network will likely remain a challenging issue.

4.1 Operational Rail Noise

Operational rail noise has been the focus of the majority of environmental management of the rail industry. A number of measures have been implemented or are being developed to address operational rail noise.

NSW Rail Noise Package

The Rail Noise Package is being developed by the NSW government in conjunction with the rail industry to manage the environmental impacts of noise and vibration from the NSW rail network. The package includes five separate components as detailed below. The components undertaken by the Department of Environment, Climate Change and Water (DECCW) and the Department of Planning (DoP) have been finalised. Work is proceeding on the development of the rail industry components.

Interim Guideline for the Assessment of Noise for Rail Infrastructure Projects (DECCW & DoP, 2007)

The [Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects](#) (IGANRIP) establishes procedures for the assessment and approval of new rail infrastructure developments. The guideline sets out noise trigger levels for operational noise (including vibration) from new rail lines and redeveloped existing rail lines. The trigger levels are set out in Figure 7 over page. If a new rail development causes these noise trigger levels to be exceeded, an assessment of the potential noise impacts of the project must be undertaken. This assessment must consider what measures can be implemented to mitigate the noise impacts. The guideline discusses a range of potential noise mitigation measures, including noise mitigation to:

- Control noise at the source – noise mitigation directly on the train or track;
- Control noise in transmission – such as noise walls; and
- Control noise at the receiver – such as acoustic treatment of buildings.

The guideline notes that controlling noise at the source is the most cost-effective approach. It reduces noise for a much greater number of people than is possible by controlling noise in transmission or at the receiver, which only benefit a limited number of properties.

It is possible that a noise assessment in accordance with IGANRIP could establish that noise mitigation is required for certain sections of a new rail development only, because noise trigger levels are only exceeded at certain locations. This can be related to a wide variety of factors including existing background noise levels, topography, train speed limits and proximity between the rail line and neighbouring properties. This is similar to the situation with the Southern Sydney Freight line, which is discussed below.

Figure 7 – Noise Trigger levels for residential land uses

Type of development	Noise trigger levels dB(A)		
	Day (7am – 10pm)	Night (10pm – 7am)	Comment
New rail line development	Development increases existing rail noise levels and resulting noise levels exceed:		These numbers represent external levels of noise that trigger the need for an assessment of the potential noise impacts from a rail infrastructure project. An 'increase' in existing rail noise levels is taken to be an increase of 2 dB(A) or more in LAeq in any hour or an increase of 3dB(A) or more in LAmax.
	60 LAeq (15h) 80 LAmax	55 LAeq (9h) 80 LAmax	
Redevelopment of existing rail line	Development increases existing rail noise levels and resulting rail noise levels exceed:		
	65LAeq (15h) 85 LAmax	60LAeq (9h) 85LAmax	

Interim Guideline for Development Near Rail Corridors and Busy Roads (DoP, 2008)

The [Interim Guideline for Development Near Rail Corridors and Busy Roads](#) provides guidance to developers on how to achieve mandatory internal noise goals (which were set out in the Infrastructure SEPP 2007) for new residential and other sensitive development around rail corridors. The Interim Guideline is designed to be considered by consent authorities before approving development near rail corridors.

Rolling stock noise emissions standards

The Rail Industry Environment Committee, which represents locomotive and railway infrastructure operators across Australia, is assisting the Rail Industry Safety and Standards Board to develop voluntary national noise emission standards for locomotives.⁴⁶ Development of the standards commenced on 1 July 2007. The standards were released for review for a second time in November 2008, but have not yet been finalised.⁴⁷

Noise management manual

The rail network operators (RailCorp and ARTC) are currently preparing a noise management manual. The noise management manual will outline best practice for the mitigation of rail noise and vibration from new rail developments and operations. The manual has not yet been released.

Rail noise abatement program

RailCorp and ARTC are also preparing a rail noise abatement program that will focus on noise from existing rail operations. The Program will address acute levels of noise from the rail system on a priority basis. The program has not yet been released.

Environment Protection Licences

The NSW *Protection of the Environment Operations Act 1997* identifies activities that require an environment protection licence. In accordance with the Act, environment protection licences are required for the operation of the rail network and for the construction of new rail projects.

Management of the NSW rail network is divided between RailCorp and ARTC who both hold environment protection licences for the operation of the rail network.⁴⁸ In addition, ARTC holds a licence for the construction of the Southern Sydney Freight Line and Transport Infrastructure Development Corporation holds several licences for rail clearways projects. DECCW issues these licences to regulate specified environmental impacts of the rail industry, including operational noise impacts.

⁴⁶ These will form part of the Exterior Environment standards.

⁴⁷ Rail Industry Safety and Standards Board website:
<http://www.rissb.com.au/site/STD%20Roll%207512%20Exterior%20Environment.php>
accessed 19/10/2009.

⁴⁸ RailCorp hold environment protection licence number 12208 accessible at:
<http://www.environment.nsw.gov.au/prpoeo/licences/L12208.pdf>. ARTC hold environment protection licence number 3142 accessible at:
<http://www.environment.nsw.gov.au/prpoeoapp/LicenceDetails.aspx>

There are two principal means of reducing the operational noise impact of the rail system through the environment protection licences, as outlined below.

Locomotive Noise Limits

RailCorp and ARTC's environment protection licences establish noise limits for the introduction of new or substantially modified locomotives onto the NSW rail network. These noise limits ensure that the noise performance of locomotives introduced to the network is acceptable. RailCorp and ARTC cannot permit the introduction of a locomotive to the rail network without the locomotive receiving approval from DECCW. In order to receive this approval, locomotives are required to undergo a noise assessment to ascertain whether they meet the noise limits in the environment protection licence. Locomotives that do not comply with the noise limits can only be given approval to access the rail network if DECCW is satisfied that the following three conditions have been met:

- (a) the noise emission performance of the locomotive is consistent with current best practice; and
- (b) all measures for minimising the extent of any non-compliances have been investigated and those that are identified as reasonable and feasible have been implemented; and
- (c) none of the non-compliances will result in unacceptable environmental impacts.

The condition does not operate retrospectively, so locomotives that were introduced to the rail network prior to this locomotive testing regime being in place are not required to demonstrate compliance with the noise limits.

Pollution studies and reduction programs

Both RailCorp and ARTC's environment protection licences require them to undertake a pollution study and reduction program (PRP) that involves auditing the noise performance of locomotives using their network, through trackside noise monitoring. RailCorp and ARTC are required to report to DECCW and locomotive operators on the performance of locomotives on their network. The PRP notes that understanding the relative noise performance of different locomotives is a key initial step in managing rail noise.

Both RailCorp and ARTC's licences include another PRP requiring them to investigate specific safety practices that cause a noise nuisance to the community. RailCorp is required to investigate the practice of horn testing and horn sounding (in and out of tunnels and at level crossings) and the ARTC is reviewing the use of detonators as a standard warning device rather than an emergency warning device). The goal is to determine whether there are equally safe, less noisy alternatives being used in other jurisdictions.

In addition, RailCorp is also undertaking a PRP to mitigate the impacts of wheel squeal, which is a high pitched, high volume noise largely generated around tightly curved sections of track. The program has two components. The first component

involves monitoring locomotives to identify which locomotives have the potential to cause wheel squeal. The second component involves refining existing 'friction modifiers', which are effectively track lubricators that significantly reduce wheel squeal, to ensure they are less prone to becoming damaged and ineffective.

4.2 Construction and Maintenance Rail Noise

Construction Noise Guideline

The [Interim Construction Noise Guideline](#) was released by DECCW in July 2009. The guideline clarifies how to identify and minimise construction noise and can be used by construction project managers to improve noise control management by focussing on better work practices. The Guideline applies to both the construction and maintenance of rail infrastructure.

Environment Protection Licences

The environmental protection licences for RailCorp and ARTC provide a set of specific conditions in relation to construction and maintenance activities. The conditions identify noise management measures that should be implemented and require neighbours to be notified of out of hours construction works. In addition, the environmental protection licences currently issued to ARTC for the construction of the Southern Sydney Freight Line and TIDC for the construction of the Rail Clearways projects, have more detailed requirements in relation to construction noise.

4.3 Air Pollution

Environment Protection Licences

Pollution studies and reduction programs

ARTC's licence contains a PRP requiring them to manage coal dust emissions from coal loads. Specifically, they are required to provide a work plan outlining how appropriate technology will be adopted to significantly reduce coal emissions from the freight rail network, in consultation with relevant stakeholders.

5.0 RAIL PROJECTS

There are a number of rail projects being undertaken in NSW to facilitate the increase of freight transport by rail. The majority of these are being undertaken by ARTC as the manager of the interstate and Hunter Valley freight rail networks, although the NSW government also has some involvement. The key projects are outlined below.

5.1 Southern Sydney Freight Line

The ARTC is currently constructing the 36 kilometre [Southern Sydney Freight Line](#) (SSFL), a dedicated freight line between Macarthur and Sefton in Sydney's south (see Figure 8 over page). The SSFL will be bi-directional, non-electrified and predominantly contained within the existing RailCorp rail corridor.⁴⁹

The project will remove a large bottleneck in south west Sydney where freight trains share the rail line with passenger trains. Passenger trains are given priority over freight trains, which impacts on the efficiency of freight train movements, particularly during passenger peak hours. The SSFL is anticipated to increase the efficiency of the whole eastern seaboard rail freight network.

The project was approved in December 2006 as a major project under Part 3A of the *Environmental Planning and Assessment Act 1979*, subject to a number of conditions.⁵⁰ Construction work commenced in early 2009 and the freight line was expected to be operational by early 2010.⁵¹ However, reports indicate that the project may be delayed, with construction work due to stop in early November for at least five months as a result of planning and operational issues.⁵²

⁴⁹ ARTC, *Southern Sydney Freight Line Submissions Report*, August 2006: http://www.ssfl.artc.com.au/docs/docs/Chapters%201-4%20PR_4208%20Rev%20C.pdf accessed 17/9/2009.

⁵⁰ Project Approval, Southern Sydney Freight Line 21/12/2006: http://www.ssfl.artc.com.au/docs/docs/104_APP.pdf accessed 17/9/2009.

⁵¹ A Albanese MP, Minister for Infrastructure and Transport, *Media Release*, 'Tackling Congestion on the Sydney Rail Freight Network' 5/2/2009: http://www.minister.infrastructure.gov.au/aa/releases/2009/february/aa014_2009.htm accessed 23/9/2009.

⁵² 'Planning snags halt rail project', *Sydney Morning Herald*, 3/11/2009: <http://www.smh.com.au/national/planning-snags-halt-rail-project-20091102-htfo.html> accessed 3/11/2009.

Figure 8 – Map of the Southern Sydney Freight Line⁵³



⁵³ ARTC, Environmental Impact Assessment, Southern Sydney Freight Line: <http://www.ssfl.artc.com.au/docs/docs/approved/Summary.pdf> accessed 16/10/2009.

As shown in Figure 8, the SSFL is to be located on the western side of RailCorp's Main South Line from south of Macarthur to Ingleburn, where it will link into an existing freight passing loop until Glenfield railway station. North of Glenfield railway station, the SSFL will overpass the Main South Line and cross to the eastern side of the rail corridor⁵⁴ where it will continue until Sefton Park Junction. At Sefton Park Junction, the SSFL will connect to the Main Goods Line through a deep cutting. The central section of the SSFL, a six kilometre freight passing loop between Glenfield and Liverpool, was constructed in 1995.

The noise impacts associated with the operation of the completed SSFL have been particularly controversial, receiving much community, media and political attention. The SSFL will facilitate an increase in the number of freight train movements and the freight line is closer to some properties than the existing rail line.⁵⁵

ARTC has proposed to install noise barriers along sections of the SSFL where projected noise levels are higher than the guideline levels set by the Department of Planning in the Conditions of Approval for the project. The SSFL development approval pre-dates the release of the Interim Guideline for the Assessment of Noise for Rail Infrastructure Projects, discussed above. However, the noise assessment methodology used is similar. Importantly, ARTC is only required to manage the additional noise contribution that is attributable to the SSFL, not the noise from the whole rail corridor which includes the existing line, for which RailCorp is responsible.

Residents nearby the line have expressed concern that noise barriers are not proposed along more sections of the track, and have called on the NSW Government to install barriers at locations where they are not currently proposed. It appears that the construction of the SSFL has acted as a catalyst for awareness about wider rail noise issues, with many residents raising concerns about noise from existing rail activities on the RailCorp line.⁵⁶

ARTC is required to prepare an Operational Noise and Vibration Management Plan for the SSFL. Once operational, ARTC is also required to review the noise impacts of the SSFL and the noise mitigation measures implemented. Some sections of the community have expressed dissatisfaction with this approach, maintaining that there is a need for the immediate installation of noise barriers.⁵⁷

⁵⁴ This becomes the southern side of the rail corridor where the corridor changes direction.

⁵⁵ The location of the SSFL within the rail corridor was selected so that it would be further away from more properties than the existing line, however it is still closer to numerous properties.

⁵⁶ Put up the Barriers', *Liverpool City Champion*, 19/8/2009, p4.

⁵⁷ A McDonald MP, 'Casula Rail Noise Nuisance' *NSW Parliamentary Debate* 12/3/2009.

5.2 Hunter Valley Investment Strategy

The Hunter Valley Investment Strategy aims to significantly increase the coal throughput of the Hunter Valley rail network by resolving capacity constraints.⁵⁸ To meet anticipated demand the Strategy aims to increase the carrying capacity of the network from 85 million tonnes of coal per year in 2005 to 226 million tonnes per year in 2013.⁵⁹

The Investment Strategy commenced when ARTC took control of the network in 2004. It consists of a large number of projects including track duplications, new and extended passing loops, signalling improvements, junction upgrades and a proposed new alignment over the Liverpool Ranges. Many of these have already been completed, and current key projects are identified on the maps over page (Figures 9 and 10).⁶⁰

⁵⁸ The Hunter Valley Investment Strategy consists of two key documents: Hunter Valley Corridor Capacity Strategy which is updated annually: http://www.artc.com.au/library/news_2009-07-07.pdf and the Interstate and Hunter Valley Rail Infrastructure Strategy: http://www.artc.com.au/library/RIS_2.2.pdf accessed 23/9/2009.

⁵⁹ ARTC, *2009-2018 Hunter valley Corridor Capacity Strategy – Consultation Document* http://www.artc.com.au/library/news_2009-07-07.pdf accessed 7/10/2009 and NSW Government, *Submission to the Inquiry by the House of Representatives Standing Committee on Transport and Regional Services into the Integration of Regional Transport Links and their Interface with Ports*, June 2005.

⁶⁰ ARTC, *2008-2024 Interstate and Hunter Valley Rail Infrastructure Strategy*, June 2008: http://www.artc.com.au/library/RIS_2.2.pdf accessed 23/9/2009.

Figure 9 – Current Projects in the Lower Hunter Valley⁶¹

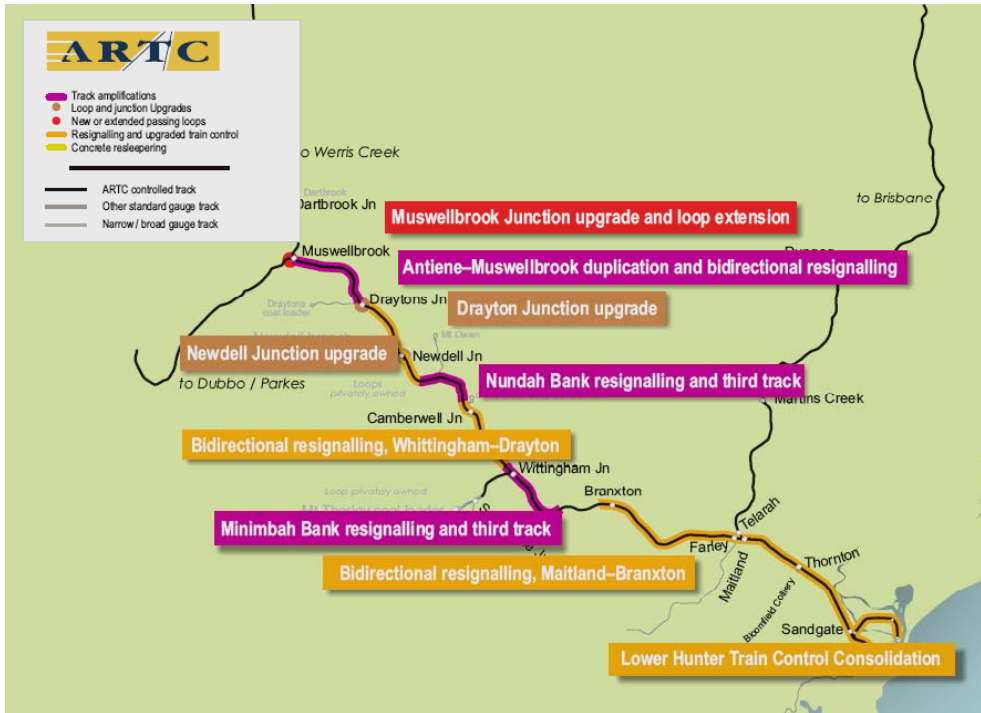


Figure 10 – Current Projects in the Hunter Valley (Ulan and Gunnedah Basin Lines)



⁶¹ ARTC website: <http://www.artc.com.au/Content.aspx?p=150> accessed 16/10/2009.

5.3 North-South Improvement Strategy

The North-South Improvement Strategy aims to increase the capacity of the Melbourne-Sydney-Brisbane rail line. The Strategy commenced when ARTC took control of the freight rail network in NSW in 2004. It involves a wide range of projects in NSW, Queensland and Victoria, including replacing wooden sleepers with concrete sleepers, construction of new passing loops and lanes, new and upgraded crossing loops, improved level crossings, signalling improvements and bridge replacement and rehabilitations. The majority of the projects are already complete, and the remainder are due to be complete by early 2010.⁶² The projects being constructed in Northern and Southern NSW are identified on the maps over page (Figures 11 and 12).

ARTC modelling suggests that the North-South Improvement Strategy will result in significant improvements in the efficiency, reliability and availability of the North-South rail corridor, as outlined in Figure 13 below.⁶³

Figure 13 – Improvements in the North-South Rail Corridor

	Melbourne - Sydney	Sydney - Brisbane
Transit Time (hours)		
2005	13.5	19.4
2010 (1500m train)	10.5	15.1
2010 (1800m train)	11.6	15.1
Reliability* (%)		
2005	55	55
2010	75	75
Availability** (%)		
2005	50	35
2010	75	60

* Reliability is estimated based on the likely period of time between a train arriving and the freight being advertised for collection. The 75% figure is highly conservative.

** Availability is based on the observed number of trucks leaving over the course of the day and rail's ability to offer a departure time equal to or later than those truck departures with an early morning arrival.

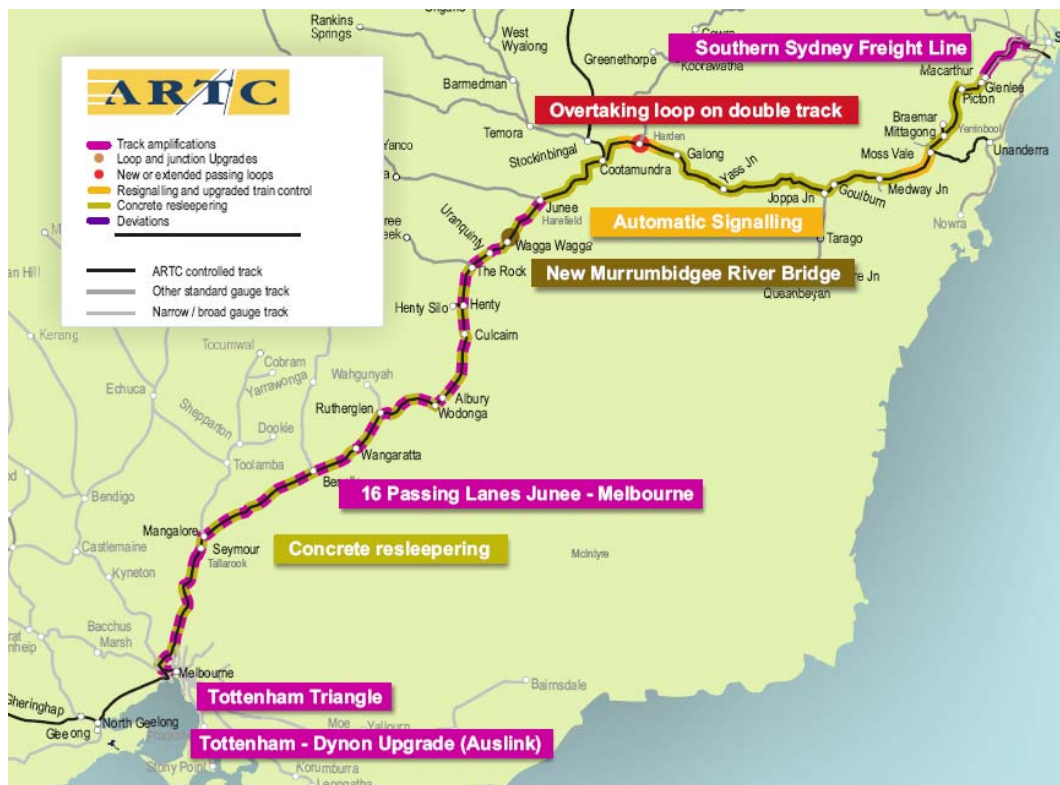
⁶² ARTC website *Investment Strategies Overview*: <http://www.artc.com.au/Content.aspx?p=154#ns> accessed 23/9/2009.

⁶³ ARTC, *North-South Corridor Strategic Investment Outline*, September 2007: <http://www.artc.com.au/library/North-South%20Corridor%20Strategic%20Investment%20Outline.pdf>; accessed 23/9/2009.

Figure 11 – Projects in the northern section of the North-South Corridor



Figure 12 – Projects in the southern section of the North-South Corridor



5.4 Maldon – Dombarton Rail Line

Port Kembla Port Corporation has recently commissioned a pre-feasibility study on the Maldon-Dombarton rail line. Construction work on this rail line was initially commenced in 1983. However the project was discontinued in 1988 as a result of a global economic downturn and the closure of a number of coal mines in the area.

The proposed rail line is approximately 35 kilometres long. It is proposed to commence on the Main South Line at Maldon (near Picton in south western Sydney) and finish at Dombarton (west of Port Kembla) and link in to an existing dual track to Port Kembla.⁶⁴

The pre-feasibility study noted:

- Significant site construction, research and detailed design have already been undertaken, much of which could be used, meaning the project could be completed significantly more quickly than a comparable new project;
- The project has the ability to avoid or forestall other road and rail transport congestion issues in the region;
- The project has the potential to be a catalyst for additional trade and commerce in the Illawarra region;
- The improved rail link to south western Sydney would represent a freight opportunity for Port Kembla, improve its cost and service levels and provide an access advantage to potential southern and western Sydney inland intermodal freight facilities;
- Without the rail line, future growth in the region may be limited, including limiting the planned growth in coal exports via Port Kembla and limiting the capacity to increase passenger transport.

Following the release of the pre-feasibility study, the Federal Government committed funding for a more detailed feasibility study to assess the cost and viability of the project. The study is to commence late this year and will take approximately 18 months to complete.⁶⁵

5.5 Northern Sydney Freight Corridor Program

The Northern Sydney Freight Corridor Program aims to reduce delays to freight trains between North Strathfield and Broadmeadow by separating freight from suburban passenger services. TIDC has commenced a feasibility study into the Northern Sydney Freight Corridor, which will develop options for separating freight

⁶⁴ Australian Government & Port Kembla Port Corporation, *Maldon-Dombarton Rail Line Pre-Feasibility Study for Port Kembla Port Corporation Report*, July 2009: http://www.portkembla.com.au/system/files/f5/o804/Maldon_Dombarton_Freight_Rail_Line_Pre_feasibility_Study_Final_Report.pdf accessed 24/9/2009.

⁶⁵ W Swan MP, S Bird MP & J George MP, *Media Release*, 'Maldon-Dombarton Rail Link', 8/7/2009.

and passenger services and include a preliminary environmental assessment.⁶⁶ The Northern Sydney Freight Corridor Program was identified as a priority for NSW in the NSW Government supplementary submission to Infrastructure Australia in August 2008.⁶⁷

5.6 Botany Freight Line

Whilst it has been highlighted that amplification works on the Botany Freight line may be necessary earlier than currently anticipated by network operators, no specific commitment has been made to seek funding for the project.⁶⁸

5.7 Rail Clearways Program

Whilst the Rail Clearways program is predominantly focussed on 'untangling' the metropolitan passenger rail network, an increase in the efficiency of the passenger network is expected to have flow on benefits for freight trains using the metropolitan network.⁶⁹

5.8 Intermodal Terminals

The need for a significant increase in intermodal terminal capacity in Sydney to facilitate an increase in the rail market share of freight has been widely recognised.⁷⁰ There are currently nine privately operated intermodal terminals in Sydney. There is limited ability to increase the capacity at these existing terminals.⁷¹ A new intermodal terminal is planned for Enfield in Sydney's west, with

⁶⁶ Transport Infrastructure Development Corporation website: www.tidc.nsw.gov.au accessed 24/9/2009.

⁶⁷ NSW Office of the Coordinator General, *NSW Submission to Infrastructure Australia – Request for Further Advice*, 27/8/2008: [http://www.parliament.nsw.gov.au/prod/PARLMENT/committee.nsf/0/f064cdda91438969ca2574f90021d6d3/\\$FILE/081106%20QON%20Attachment%20to%20Q.6%20Finance,%20Infrastructre,%20Regulatory%20Reform.pdf](http://www.parliament.nsw.gov.au/prod/PARLMENT/committee.nsf/0/f064cdda91438969ca2574f90021d6d3/$FILE/081106%20QON%20Attachment%20to%20Q.6%20Finance,%20Infrastructre,%20Regulatory%20Reform.pdf) accessed 7/10/2009.

⁶⁸ Freight Infrastructure Advisory Board, *Railing Port Botany's Containers*, 2005 [FIAB Report](#) and Infrastructure Implementation Group, *Review by the Infrastructure Implementation Group of the Freight Infrastructure Advisory Board Report and Recommendations*, May 2007.

⁶⁹ NSW Government, *Submission to the Inquiry by the House of Representatives Standing Committee on Transport and Regional Services into the Integration of Regional Transport Links and their Interface with Ports*, June 2005.

⁷⁰ See for example: Freight Infrastructure Advisory Board, 2005 *Railing Port Botany's Containers*, [FIAB Report](#); Infrastructure Implementation Group, *Review by the Infrastructure Implementation Group of the Freight Infrastructure Advisory Board Report and Recommendations*, May 2007.

⁷¹ NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

major construction work due to commence in 2010. It is anticipated that the Enfield intermodal terminal will be operational by 2011 and will service approximately one quarter of Sydney's intermodal demand.⁷² A former Commonwealth Department of Defence site at Moorebank, which is now privately owned and leased back to the Department,⁷³ has also been identified as a key location for another large intermodal terminal servicing south west Sydney.⁷⁴ Commonwealth funding was recently allocated to the Moorebank Intermodal Terminal, some of which will fund feasibility and scoping studies in consultation with the NSW Government.⁷⁵

6.0 DISUSED RAIL LINES

6.1 Transport Administration Amendment (Rail Trails) Bill

The issue of disused rail lines is currently receiving substantial political, community and media attention. The Minister for Transport Hon David Campbell MP has recently introduced a new bill into Parliament that would change the means by which the Government could close railway lines. Currently in NSW an Act of Parliament is required to close railway lines. Under the new legislation, the Transport Administration Amendment (Rail Trails) Bill 2009, the Minister for Transport would be able to authorise, on a case by case basis following public consultation, the closure of a disused railway line. The Bill also allows the Minister for Transport to confer responsibility for managing a disused railway line to the Minister for Lands and for railway tracks and other infrastructure to be sold, both without necessitating the closure of the railway line.

The Rail Trails Bill has triggered strong media, community and political debate. The Minister has asserted that the Bill has been introduced to allow disused rail lines to be developed for public use, especially as rail trails for walking, cycling or horse riding. He has noted that rail trails are currently operating in other Australian states and offer an enormous potential tourism benefit for communities in regional NSW.⁷⁶ In a letter to numerous regional newspapers, the Minister has declared

⁷² Sydney Ports Website: http://www.sydneyports.com.au/port_development/enfield accessed 13/10/2009; 'Update on Enfield Intermodal Project' *Logistics* 27/1/2009: <http://www.logisticsmagazine.com.au/Article/Update-on-Enfield-intermodal-project/435853.aspx> accessed 13/10/2009.

⁷³ A Megarrity MP, 'Moorebank Intermodal Terminal', *NSW Parliamentary Debates* 10/4/2008.

⁷⁴ Freight Infrastructure Advisory Board, 2005 *Railing Port Botany's Containers*, [FIAB Report](#); NSW Government, *Infrastructure Audit Submission to Infrastructure Australia*, June 2008.

⁷⁵ 'Projects delivered in NSW through the Nation Building Program' http://www.nationbuildingprogram.gov.au/publications/administration/pdf/NSW_Schedule_Amendment_April_09%20.pdf accessed 13/10/2009.

⁷⁶ D Campbell MP, Transport Administration Amendment (Rail Trails) Bill 2009 *Agreement in Principle Speech*, 23/9/2009.

that the new Bill is in response to community demand from groups wanting to establish rail trails, 'not about opening the door to developers or putting rail lines vital to rural and regional communities at risk'.⁷⁷ Rail Trails Australia, a national organisation working for the development and promotion of rail trails, has expressed support for the legislation, commenting that it brings NSW into line with other Australian states in allowing NSW communities to develop and enjoy rail trails.⁷⁸

In a recent Budget Estimates Committee Hearing, the Minister confirmed: 'the Bill would make provision that, after a community debate, land associated with rail corridors may be sold.'⁷⁹ This has been the focus of much of the criticism of the Bill. Opponents to the Bill argue that legislative changes are not necessary to permit the development of rail trails and that the Bill will allow rail corridors to be sold to developers. Community groups and local councils have expressed concern about the threat of losing rail corridors to developers. They have highlighted areas of rail corridor that are likely to be particularly popular with developers including sections of the Casino – Murwillumbah line (particularly in Byron Bay, Bangalow and Mullumbimby), the Newcastle City line and the Rozelle Goods Yard.⁸⁰ The Bill has been labelled a 'fire sale' and a 'bonanza' for developers.⁸¹

The NSW Farmers Association opposes the legislation because it would prevent freight rail lines from re-opening when harvests improve.⁸² The Rail, Tram and Bus Union has also expressed opposition to the Bill, believing it will put rail lines across NSW at risk.⁸³ However, the Transport Minister has stated that 'there is absolutely no intention of a wholesale sell-off of the 3,000 odd kilometres of disused rail lines

⁷⁷ D Campbell MP, 'Rail corridors for the community', Letter to the Editor, Tweed Daily News 29/9/2009. The letter was also reproduced in other regional publications including: Bellinger Courier Sun 30/9/2009; Armidale Express 30/9/2009; Cowra Guardian 30/9/2009; Byron Shire Echo 29/9/2009; Yass Tribune 30/9/2009; Blayney Chronicle 1/10/2009 and Wagga Daily Advertiser 1/10/2009.

⁷⁸ Rail Trails Australia website *Rail Trails News* 10/10/2009
<http://www.railtrails.org.au/news/news.php3?news&274&%2F> accessed 12/10/2009.

⁷⁹ General Purpose Standing Committee No 4, *Budget Estimates (Transport)*, 17/9/2009, p7.

⁸⁰ 'Rail land bill "a fire sale for developers"', *Sydney Morning Herald* 26/9/2009, p7; 'Plan to rip up rail tracks runs into resistance', *Sydney Morning Herald* 15/9/2009, 'Labor backlash threatens to derail plan for selling train lines', *Sydney Morning Herald* 3/10/2009 p4, 'Building a transport system on the run', *Sydney Morning Herald* 3/10/2009 p28, L Rhiannon MP 'Stop Rail Sell Off', <http://leerhiannon.org.au/Campaigns/stop-rail-sell-off-1#> accessed 8/10/2009.

⁸¹ 'Plan to rip up rail tracks runs into resistance', *Sydney Morning Herald* 15/9/2009; 'Rail land bill "a fire sale for developers"', *Sydney Morning Herald* 26/9/2009, p7.

⁸² See 'Open Letter': <http://www.nswfarmers.org.au/> accessed 23/10/2009.

⁸³ 'Plan to rip up rail tracks runs into resistance', *Sydney Morning Herald* 15/9/2009.

in NSW'.⁸⁴ The Bill is expected to reach the Legislative Council for debate in the near future. The Greens and the Liberal/National parties have said they will oppose the Bill.⁸⁵

6.2 Regional Freight Lines

Amidst discussion of converting disused rail lines into recreational rail trails, farmers and regional communities have been lobbying for the re-introduction of freight to a number of regional rail lines. The importance of rail freight transport for reducing the transport costs of agricultural products and reducing the number of large trucks on regional roads has been highlighted. Local councils have argued that when regional freight rail lines close, councils are forced to spend substantially more money on road maintenance. They have also raised safety concerns regarding large numbers of heavy trucks on regional roads.

The Federal Government commenced a review into the NSW Grain Freight industry in late 2008. The review was established to assess the efficiency of grain supply chains, with a primary focus on the future of regional rail branch lines used for grain transport. The [NSW Grain Freight Review Report](#) was released in October this year. The Review concluded that nine out of the 13 regional branch lines considered in the Review should be retained, and that the NSW Government should fund any necessary works to stabilise these lines at an acceptable level.⁸⁶

For two of the remaining lines, Weemelah to Camurra Junction and Boree Creek to the Rock, the review recommended that negotiations should be initiated between the Government and other relevant parties to establish a cost sharing agreement to share the costs of upgrading the lines. If cost sharing agreements cannot be reached, the review recommended closure of these lines.

For the Cowra to Demondrille (including Greenethorpe to Koorawatha) line, the review recommended that the NSW Government should fund a study into the feasibility of the line, considering what additional traffic may be able to use the line. If the study demonstrates economic justification for retention and reinstatement of the line, the review recommended that the NSW Government should fund the stabilisation of the line to an acceptable standard. The review also recommended that ongoing maintenance work for the lines should be funded through increased user access charges.

⁸⁴ 'Government rejects rail line sell-off claims', *ABC News* 5/10/2009: <http://www.abc.net.au/news/stories/2009/10/05/2704618.htm> accessed 8/10/2009.

⁸⁵ Greens website: <http://www.nsw.greens.org.au/> accessed 9/10/2009; 'Government rejects rail line sell-off claims', *ABC News* 5/10/2009: <http://www.abc.net.au/news/stories/2009/10/05/2704618.htm> accessed 8/10/2009.

⁸⁶ It was recommended that nine of the 13 lines were retained, being: North Star to Moree; Walgett to Burren Junction; Merrywinebone to Narrabri; Warren to Nevertire; Tottenham to Bogan Gate; Coonamble to Troy Junction; Lake Cargellico to Temora; Naradhan to Ungarie and Hillston to Griffith, p8.

The Central West Councils of Blayney, Cowra, Weddin, Young and Harden have jointly commissioned a study investigating the opportunities for transporting freight on the Cowra to Demondrille, Koorawatha to Greenethorpe and Blayney to Cowra rail lines.⁸⁷ A preliminary study has been submitted to the Minister for Transport and a more detailed feasibility study is currently being undertaken.⁸⁸ In light of the NSW Grain Freight Review recommendations, this study should assist the NSW Government to determine the viability of the central west rail lines.⁸⁹

The majority of the NSW Grain Freight Review Report recommendations have been positively received by farmers and regional communities, many of who lobbied strongly for the retention of regional rail lines. However, the NSW Farmers Association is arguing that the cost sharing arrangements proposed for two of the lines are unacceptable, stating that 'this is a state infrastructure issue: it's not up to individual farmers'.⁹⁰ The NSW Government has recently instituted a cost sharing arrangement on the Weemelah to Camurra Junction line to assist with maintenance costs, following the temporary closure of the line in September this year.⁹¹

There are a number of separate, positive developments for regional rail freight transport. ARTC has expressed interest in using the currently disused Kandos to Gulgong rail line for transporting coal from a proposed coal mine in the Cobbora district. In Northern NSW a proposal is expected to come before Richmond Valley Council in the near future for the construction of a new rail freight terminal. The terminal would connect to the main rail line and facilitate the transport of grain and other goods by rail instead of road.⁹²

⁸⁷ Cowra Local Government Council Meeting Minutes, 29/6/2009: <http://www.cowraregion.com.au/home/3379/JuneOrdinary.pdf> accessed 12/10/2009.

⁸⁸ 'Investigation into viability of rail lines to proceed', *Cowra Guardian*, 7/8/2009, p8.

⁸⁹ 'Report urges more western branch line investment', *ABC News*, 22/10/2009: <http://www.abc.net.au/news/stories/2009/10/22/2721087.htm> accessed 23/10/2009.

⁹⁰ 'Farmers reject industry funding model for grain rail lines', *ABC Rural*, 20/10/2009: <http://www.abc.net.au/rural/content/2009/s2719127.htm> accessed 23/10/2009.

⁹¹ D Campbell MP, Minister for Transport, *Media Release*, 'Weemelah line to resume', 15/10/2009: <http://www.transport.nsw.gov.au/news/releases/091015-grain-lines.pdf>, accessed 23/10/2009.

⁹² 'Casino set for railway revolution', *The Northern Star*, 30/9/2009; 'Rail freight terminal planned for Casino' *ABC News* 1/10/2009: www.abc.net.au/news/stories/2009/10/01/2701772.htm accessed 9/10/2009.

7.0 CONCLUSION

Despite the recognised environmental and social benefits of using rail to transport freight, rail continues to lag behind road for freight transport in NSW. There is a strong push for an increased share of freight to be transported by rail and numerous projects are underway to facilitate this modal shift. If the Southern Sydney Freight Line and the Northern Sydney Freight Corridor Program are both constructed, freight and passenger rail traffic in Sydney will be separated from Port Botany to Broadmeadow in the north and Macarthur in the south, significantly improving operational efficiency.

Whilst the environmental benefits of rail freight are significant, it is not without its environmental problems, particularly localised noise and air impacts. Whilst the NSW Government and the rail industry are focusing on addressing these environmental impacts, it remains a challenging issue.

There are currently two potentially competing uses for disused rail corridors. One seeks access to disused rail corridors for recreational and tourism opportunities, and the other seeks to re-open rail corridors as a means of freight transport in regional NSW. The success of either of these agendas has the potential to significantly impact the future of rural rail freight transport in NSW.