



briefing paper



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NSW Rail Freight Transport and Infrastructure

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by Christopher Angus

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NSW Rail Freight Transport and Infrastructure

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EXECUTIVE SUMMARY

The transportation of freight throughout NSW is possible thanks to an immense freight network comprised of rail, road, ports, and airports, with intermodal terminals connecting these discrete components with one another. Currently, the road network carries the majority of NSW freight. However, a modal shift from road freight to rail freight is underway: a result of existing, as well as future, capacity, efficiency, and environmental challenges.

This briefing paper is an update to a 2009 NSW Parliamentary Research Service Paper, [Rail Freight Transport in NSW](#).

The freight task

In 2011, the NSW freight network carried 409 million tonnes of freight, comprising over 72 different types of commodities. This freight task is split into two main components: bulk freight, such as coal and grain, and non-bulk freight, such as general merchandise, food and cars. The freight network is essential for the exchange of goods across NSW, and brings with it considerable economic benefits. According to one estimate, freight and associated industries contribute as much as \$58 billion annually to the NSW economy. **[2.1]**

In 2011, the NSW rail freight network, which primarily carries bulk freight, transported 136 million tonnes of freight, equivalent to 33% of the State's total freight task. In contrast, the NSW road network carried 256 million tonnes of freight in 2011: 63% of the State's freight task. **[2.2]**

The 2013 *NSW Freight and Ports Strategy* expects the freight task in NSW to nearly double between 2011 (409 million tonnes) and 2031 (794 million tonnes). Notably, the NSW coal freight task, predominantly transported by rail, is forecast to more than double in volume, from 167 million tonnes in 2011 to 367 million tonnes by 2031. **[2.3]**

The freight network

The NSW freight network is a system of interconnected rail lines, roads, ports, airports, and intermodal terminals. The rail freight network consists of three main lines: the Metropolitan Passenger Network; the Leased Network; and the Country Regional Network. Together, these lines comprise approximately 9,400 kilometres of rail line throughout the State. **[3.1]**

Administrative, industrial and legal framework

A number of NSW and Commonwealth Government agencies are involved in the development, management, and operation of the State rail freight network. These include: **[4.1-4.2]**

- Transport for NSW, the State's lead transport agency;
- Infrastructure NSW, an independent statutory agency that helps the NSW Government identify and prioritise the delivery of critical public infrastructure;

- Infrastructure Australia, an independent Commonwealth statutory body that assesses and audits all projects with over \$100 million of Australian government funding;
- The COAG Standing Council on Transport and Infrastructure, which aims to achieve a coordinated, competitive and integrated national transport and infrastructure system; and
- The National Transport Commission, an independent statutory body responsible for developing regulatory and operational reform within the transport system.

The owners and operators of the NSW rail freight network are a mix of public and private sector organisations, including: **[4.3]**

- The Australian Rail Track Corporation (ARTC), a Commonwealth Government owned corporation that functions as a “one stop shop” to provide rail operator access to the national rail network;
- John Holland, a private engineering, contracting and services provider that manages the NSW Country Regional Network; and
- Approximately 10 freight train operators who operate freight services on the NSW rail network.

The NSW rail freight network is regulated by a range of legislation. In 2009 the Council of Australian Governments agreed to a suite of national transport regulation reforms that included the creation of a national rail safety law. The *Rail Safety National Law* was adopted by NSW in 2012, and is administered by the Office of the National Rail Safety Regulator. **[4.4]**

Issues facing the rail freight network

The expected growth in freight volume creates long term capacity issues for the NSW freight sector. Rail freight faces its own unique challenges, including scheduling conflicts with metropolitan passenger services, poorly maintained regional infrastructure, and unrealised capacity on regional lines. **[5.1]**

In response to these issues, there have been proposals to move a significant share of the freight task onto rail. Moving freight onto rail offers a range of societal and environmental benefits, including lower emissions, reduced road congestion and increased safety. Accordingly, successive NSW Governments have set a range of goals to increase rail network efficiency and capacity. **[5.2]**

NSW Government strategies

The O’Farrell Government released two strategies that aim to increase the size and efficiency of the NSW freight network: the 2012 *NSW Long Term Transport Master Plan*, and the 2013 *NSW Freight and Ports Strategy*. Both strategies aim to integrate land use planning and transport planning for the purpose of planning freight and passenger movements across all modes of transport. This is to be achieved through three broad action programs: **[6.1-6.2]**

- Increasing the network efficiency of the existing rail freight network;
- Increasing future freight capacity to meet the growing freight task; and

- Creating a sustainable freight network that addresses environmental, safety and local community issues.

These strategies are being implemented in part through two plans released in 2014: *Rebuilding NSW*, which outlines how the NSW Government will invest \$20 billion in new State infrastructure, and *A Plan for Growing Sydney*, which will guide land use decisions in Sydney over the next 20 years. **[6.3-6.4]**

Commonwealth Government strategies

In addition to the NSW Government plans, there are several strategies at the Commonwealth level. Key strategies include: **[7.1-7.2]**

- The *National Ports Strategy*, which recommends a collaborative approach to future development and planning of major ports and freight infrastructure; and
- The *National Land Freight Strategy*, which aims to create an efficient, productive and competitive national land freight system.

Rail projects

A number of rail freight infrastructure projects in NSW have been completed in recent years, are being constructed, or have been proposed by the NSW Government.

Completed projects include: **[8.1]**

- The Southern Sydney Freight Line, a 36 kilometre dedicated freight line in south west Sydney; and
- The Port Botany Rail Upgrade, a two-stage development that separates the ARTC Metropolitan Freight Network from the Sydney Trains passenger rail network.

Ongoing projects include: **[8.2]**

- Stage 1 of the Northern Sydney Freight Corridor, designed to improve access and reliability for freight trains travelling between North Strathfield and Broadmeadow;
- The Intermodal Logistics Centre at Enfield, a new development that will accommodate the growing container trade travelling to and from Port Botany; and
- The Hunter Valley Strategy, which aims to increase the coal throughput of the Hunter Valley rail network by identifying and resolving capacity constraints.

Proposed projects include: **[8.3]**

- The Moorebank Intermodal Precinct, two intermodal terminals being developed on a whole-of-precinct basis following an agreement between the Commonwealth Government and the privately funded Sydney Intermodal Terminal Alliance;
- The Western Sydney Freight Line and Eastern Creek Intermodal Precinct, a long term development to reduce the region's dependence on heavy vehicle transport;
- Stages 2 and 3 of the Northern Sydney Freight Corridor, a future expansion of the Corridor that will occur after Stage 1 is delivered in mid-2016;
- The Maldon-Dombarton Railway, a dedicated rail freight line to improve linkages between the southern and western NSW coalfields and the Port Kembla coal terminal; and
- The Inland Rail Programme, a rail line west of the Great Dividing Range linking Melbourne and Brisbane.

Recent issues

The Hunter Valley coal mining industry has faced criticism for its health and environmental impacts on local communities. Recently, this has included concerns that coal trains on the Hunter Valley network are spreading fugitive coal dust emissions from wagons. In 2014 the Legislative Council's *Inquiry into the performance of the NSW Environment Protection Authority* investigated the issue of coal dust pollution. The inquiry recommended that the EPA and Chief Scientist review air quality monitoring strategies in the Hunter to determine whether coal trains need to be fully covered and empty wagons washed to reduce coal dust emissions. **[9.1]**

Increases in NSW Government funding for infrastructure projects have been accompanied by criticism over the cost of rail infrastructure projects, as well as more general concerns that poor planning and review processes are causing cost overruns and project delays. In 2012 the Legislative Council's *Inquiry into rail infrastructure project costing in New South Wales* found that the cost of building new railway infrastructure in NSW was "slightly" higher than other Australian jurisdictions, and recommended that the NSW Government strive to contain rail infrastructure costs where possible. **[9.2.1]**

In May 2015 the NSW Auditor-General released his audit of construction costs for key State infrastructure projects, finding that since 2010-11 there has been significant cost overruns on several State infrastructure projects. The Auditor-General found low compliance with independent project reviews; shortcomings in reporting to Treasury and Infrastructure NSW; and inadequate monitoring by Treasury. **[9.2.2]**

In its 2015-16 Budget the Abbott Government announced that it would undertake a scoping study into options for the future privatisation of the ARTC. The possible privatisation of the ARTC has led to concerns within the rail freight industry of increased network access costs, and a possible downgrade of the ARTC's credit rating. **[9.3]**

1. INTRODUCTION

The NSW freight network is an extensive series of rail lines, roads, ports, airports, and intermodal terminals. Every year the State's freight network transports millions of tonnes of goods, comprising dozens of different types of commodities. Freight and related logistics activity bring considerable economic benefits to the State: according to the 2012 *NSW Long Term Transport Master Plan*, they contribute as much as \$58 billion annually to the NSW economy.

The rail freight network is a significant component of the wider NSW freight network, running for almost 10,000 kilometres and predominantly transporting bulk goods such as coal and iron ore. Nevertheless, as a result of the complexity and diversity of freight, and the dispersed nature of much of the freight task, NSW remains heavily reliant on its road network to transport freight.

NSW Governments have long aspired for rail to increase its share of the freight task. With recent estimates showing that NSW freight volumes will nearly double between 2011 and 2031, the need to increase network efficiency and capacity presents an opportunity to move a large share of the freight task on to rail.

This briefing paper is an update to a 2009 NSW Parliamentary Research Service Paper, [*Rail Freight Transport in NSW*](#). The 2009 Paper introduced readers to the scale of the NSW freight task, as well as the then-State Government's efforts to implement a modal shift from road freight to rail freight. The 2009 Paper then explored rail freight's impact on the environment, noting that both environmental benefits and impacts arise from this mode of transport. Additionally, a summary of key rail projects was provided, as was the issue of using disused rail lines for new purposes.

The current briefing paper summarises the 2015 NSW freight task, and the administrative, industrial and legal framework that underpins its operations. It outlines the State's freight network, including rail, and discusses the long term capacity issues faced by the rail freight network.

The briefing paper then outlines several NSW Government strategies that address these issues, and discusses key rail freight infrastructure. Finally, the briefing paper notes recent issues pertaining to rail freight, including coal dust pollution in the Hunter Valley, the cost of rail infrastructure projects, and the possible privatisation of the Australian Rail Track Corporation.

2. THE FREIGHT TASK

2.1 Overview of the NSW freight task

2.1.1 Volume, type of freight and mode share

In 2011, 409 million tonnes of freight was transported throughout NSW. The 2013 *NSW Freight and Ports Strategy* identified over 72 different types of commodities that comprise the NSW freight task, with key NSW regions and their respective commodities including the:

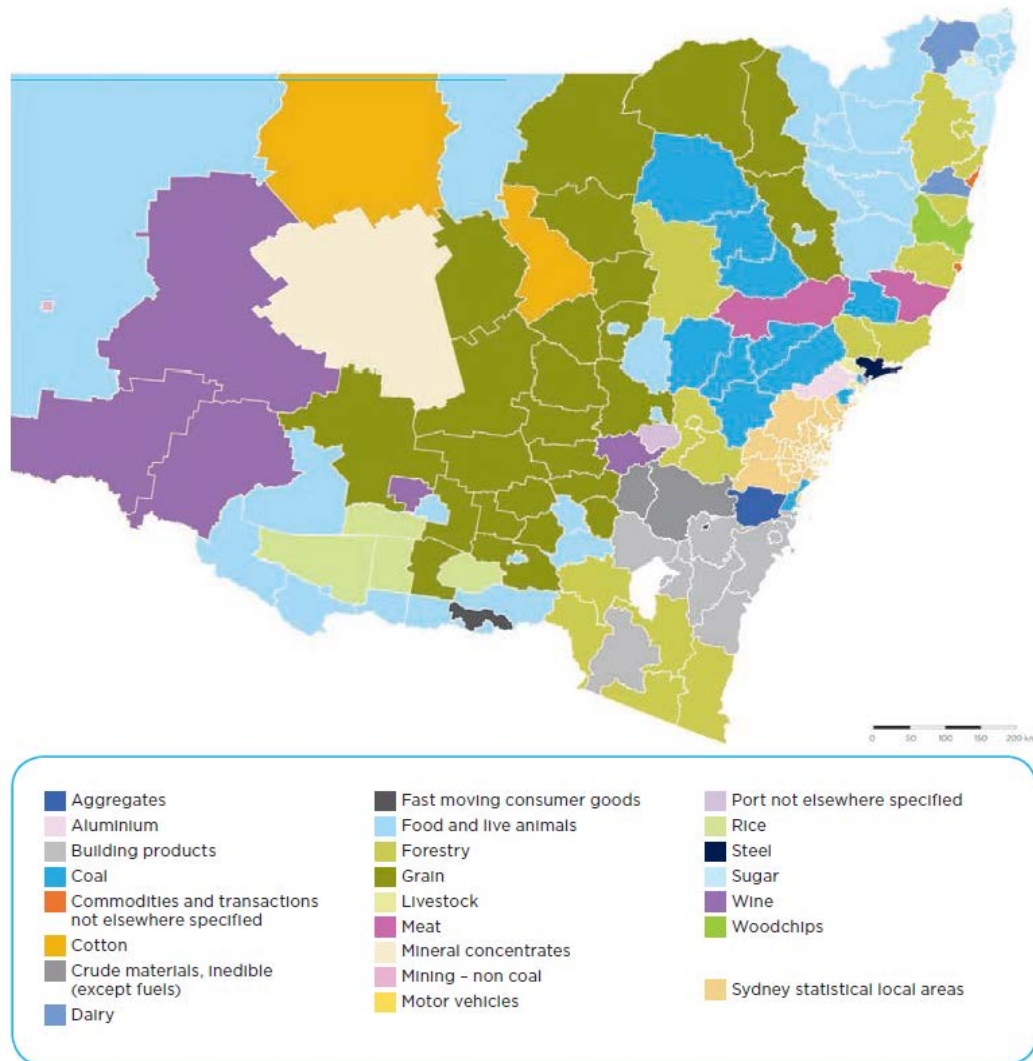
- Hunter, where significant volumes of coal are moved to Newcastle Port and several other important commodities are produced.
- Central West, where mining and agricultural production (especially grain) dominate the transport network.
- Sydney metropolitan area, where export and import products, typically in containers, are transported through Port Botany. Products can range from agricultural exports to imported consumer goods, such as electronics and whitegoods.
- Illawarra, where Port Kembla is a major trading port, exporting coal and grain among other products, and importing motor vehicles.
- South West, which is a major producer of food, such as fruit, grains, rice and wine. In this region, producers can make a choice between transporting products south to Melbourne or north to Port Kembla or Sydney.
- North West, which is also a major agricultural production area with products such as grain and cotton. Again, this region can make transport choices between moving north to Brisbane or south to Newcastle or Sydney.¹

The primary commodities transported were mining and quarry materials (48% of the total NSW freight task); manufacturing goods (33%); and agriculture, forestry and fishing products (9%).² Figure 1 on the following page shows export commodity flows by NSW Statistical Local Area.

¹ Transport for NSW, *NSW Freight and Ports Strategy*, November 2013, pp 20-1.

² Ibid pp 168-9.

Figure 1: Largest export commodity flows by Statistical Local Area³



As shown in Figure 2, the NSW freight task has grown steadily in recent decades. Total volumes of domestic freight by billion tonne kilometres⁴ grew by 53% between 1995-96 and 2009-10, with road and rail freight each growing by approximately 55% during this period (Figure 3). However, the approximate proportion of freight transported by rail, road and shipping remained the same during this 15 year period (Figure 4).

³ Ibid p 171.

⁴ A tonne kilometre is “the aggregation of the number of tonnes moved multiplied by the distance travelled in kilometres for each individual vehicle carrying freight”. See Australian Bureau of Statistics, *9208.0 - Survey of Motor Vehicle Use, Australia, 12 months ended 30 June 2012*, 23 April 2013.

Figure 2: NSW freight volumes by transport mode, 1995-96 to 2009-10 (billion tonne kilometres)⁵

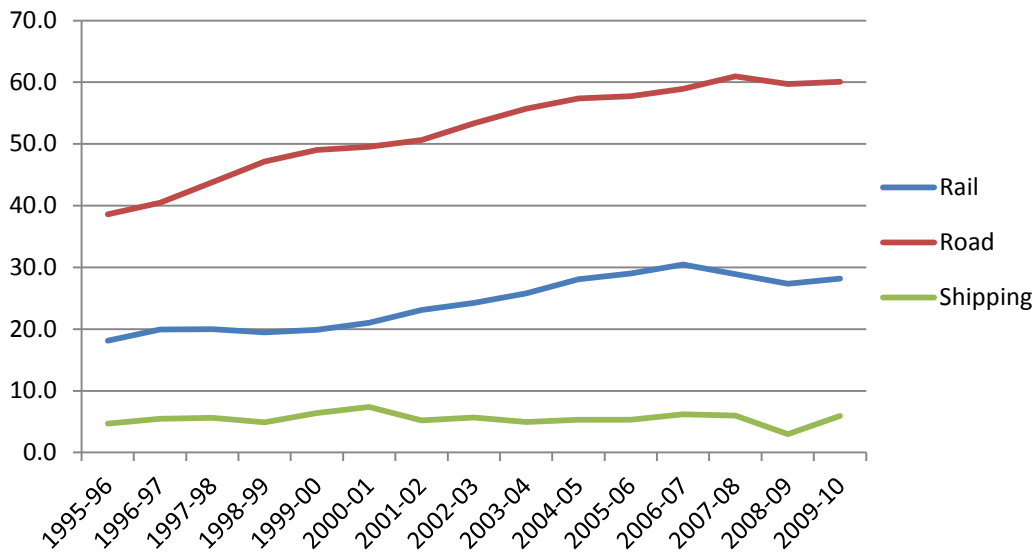
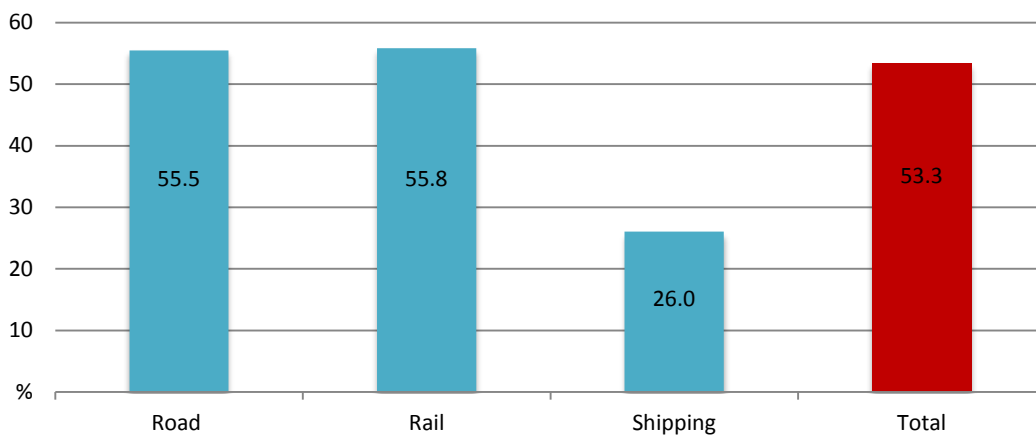


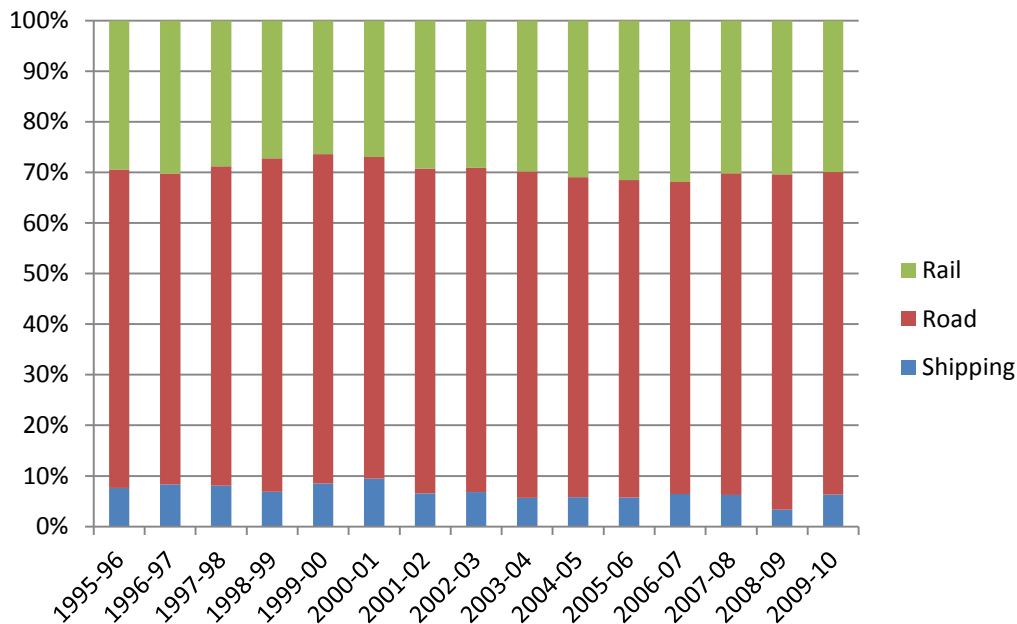
Figure 3: Growth in NSW domestic freight volumes by transport mode, 1995-96 to 2009-10 (%)⁶



⁵ Bureau of Infrastructure, Transport and Regional Economics, *Yearbook 2014: Australian Infrastructure Statistics*, December 2014, pp 50-52.

⁶ Ibid Ch 2.

Figure 4: Proportion of NSW freight volumes by transport mode, 1995-96 to 2009-10 (%)⁷



2.1.2 Bulk & non-bulk freight

There are two components to Australia's freight task:⁸

- **Bulk freight:** predominantly minerals and agricultural products such as coal, grain and fertiliser; and
- **Non-bulk/containerised freight:** general merchandise, food, cars and livestock.

Statistics showing the proportion of bulk and non-bulk freight in NSW are unavailable. Accordingly, this paper provides a broader, Australia-wide breakdown of bulk and non-bulk freight.

Bulk freight dominates Australia's rail freight network, comprising approximately 88% of the overall rail freight task in tonne kilometre terms.⁹ This is because rail freight can effectively transport coal and iron ore from integrated mining operations, where streamlined loading/unloading systems and high volumes allow for greater commodity returns than road freight.¹⁰

⁷ Ibid pp 50-52.

⁸ H Park, *Rail Freight Transport in NSW*, NSW Parliamentary Research Service, Briefing Paper No 8/2009, p 1.

⁹ Bureau of Infrastructure, Transport and Regional Economics, *Freightline I: Australian freight transport overview*, Government of Australia, May 2014, p 3.

¹⁰ Bureau of Infrastructure, Transport and Regional Economics, *Road and rail freight: competitors or complements?*, Government of Australia, 2009, Information Sheet 34, p 3.

In contrast, non-bulk freight is overwhelmingly transported by road (92%). The heavy reliance on road to transport non-bulk freight is due to several factors:¹¹

- Non-bulk freight movements exhibit more diversity and complexity than bulk freight;
- Within urban areas, road is often the only feasible transport option available for non-bulk freight; and
- Outside urban areas, low volumes and the dispersed nature of most freight tasks prevent rail from obtaining any scale-induced cost advantage.

Around 8% of Australia's non-bulk freight is transported by rail, primarily along the Eastern States-Perth and the Melbourne-Brisbane corridors. Other rail corridors carry even smaller shares of non-bulk freight.¹²

2.1.3 Economic value of the freight network

The freight network is essential for the exchange of goods across NSW, which in turn brings economic benefit to the entire State. This is explained further in the 2012 *NSW Long Term Transport Master Plan*:

At the most basic level, freight determines the availability of, and the prices we pay, for goods. It helps to create a worldwide market for NSW products by facilitating the transport of goods from the place of production to the place where they are consumed, including assembly of raw materials and distribution of finished goods ... Freight is particularly critical to the economic development of regions, by facilitating the production of goods best suited to specific regions, and enabling larger scale production than would otherwise occur.¹³

A 2015 KPMG report estimated that the NSW freight transport and logistics industry accounts for up to \$19.5 billion of Gross State Product per year (5.2% of total GSP), and employs 797,000 employees across 165,000 businesses.¹⁴

Other estimates have found that even greater economic benefits arise from the freight network. By including the wider impacts of transport activity on other industries, the 2012 *NSW Long Term Transport Master Plan* estimated that the gross value added for freight and logistics in NSW was as high as \$58 billion per annum.¹⁵

The economic benefits of freight, including rail, are expected to increase in the coming decades. In its 2015 *Australian Infrastructure Audit*, Infrastructure Australia projected a 48% increase in NSW rail freight's direct economic

¹¹ Ibid p 5.

¹² Ibid p 3.

¹³ Transport for NSW, [NSW Long Term Transport Master Plan](#), December 2012, pp 265-6.

¹⁴ KPMG, [Transport Freight and Logistics – Sector Demographics: Final Report](#), Transport for NSW, January 2015, pp 15, 17.

¹⁵ Transport for NSW, note 13, pp 265-6.

contribution¹⁶ between 2011 and 2031, from \$862 million to \$1.274 billion per annum.¹⁷

2.2 Rail freight in NSW

According to the 2013 *NSW Freight and Ports Strategy*, the NSW rail network carried 136 million tonnes of freight in 2011. This represents 33% of the State's total freight task.¹⁸ Other sources have reported higher freight volumes. For example, data from the Commonwealth Bureau of Infrastructure, Transport and Regional Economics (BITRE) shows that the NSW rail freight network transported 175 million net tonnes of bulk freight in 2012-13.¹⁹

Like the rest of Australia, the NSW rail freight task is predominantly comprised of bulk freight (Figure 5). This is illustrated by the fact that in 2011 rail carried over 70% of the State's coal task,²⁰ but only 14% of Port Botany container freight (a decline from 25% in 2001).²¹

In contrast, the NSW road network carried 256 million tonnes of freight in 2011 (63% of the total freight task).²² The dominance of road freight is illustrated by Infrastructure NSW in its 2012 *State Infrastructure Strategy*, which reported that 80% of interstate freight movements by volume were transported by road.²³

¹⁶ A measure, in dollar terms, of the direct value that households, individuals and businesses derive from our infrastructure: Infrastructure Australia, [Australian Infrastructure Audit: Our Infrastructure Challenges](#), Vol 2, April 2015, p 280.

¹⁷ Ibid p 140.

¹⁸ Transport for NSW, note 1, p 27.

¹⁹ Bureau of Infrastructure, Transport and Regional Economics, [Trainline 2: Statistical Report](#), Government of Australia, November 2014, p 127.

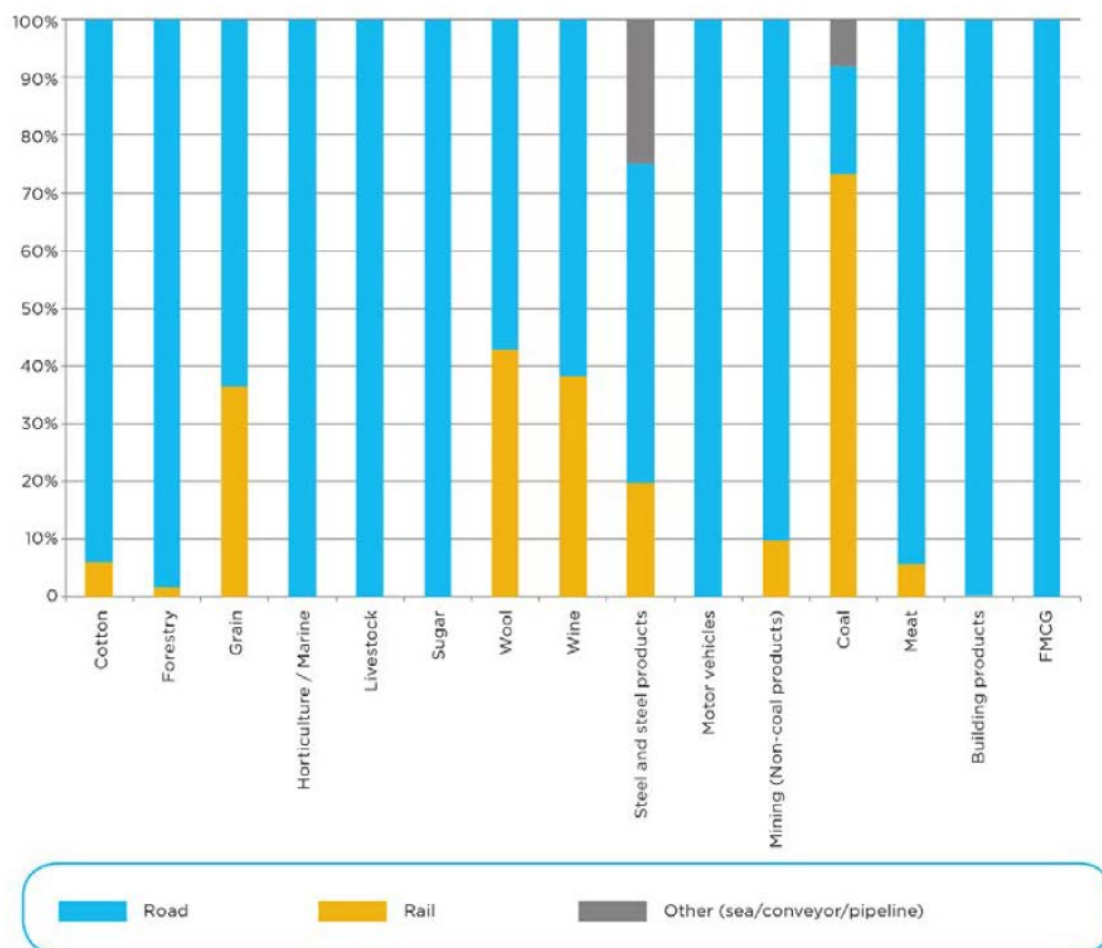
²⁰ Transport for NSW, note 13, p 278; Infrastructure NSW, [First Things First: The State Infrastructure Strategy 2012-2032](#), September 2012, p 120.

²¹ Ibid p 27.

²² Transport for NSW, note 1, p 23.

²³ Infrastructure NSW, [First Things First: The State Infrastructure Strategy 2012-2032](#), September 2012, p 130.

Figure 5: NSW freight mode share for selected commodities, 2011²⁴



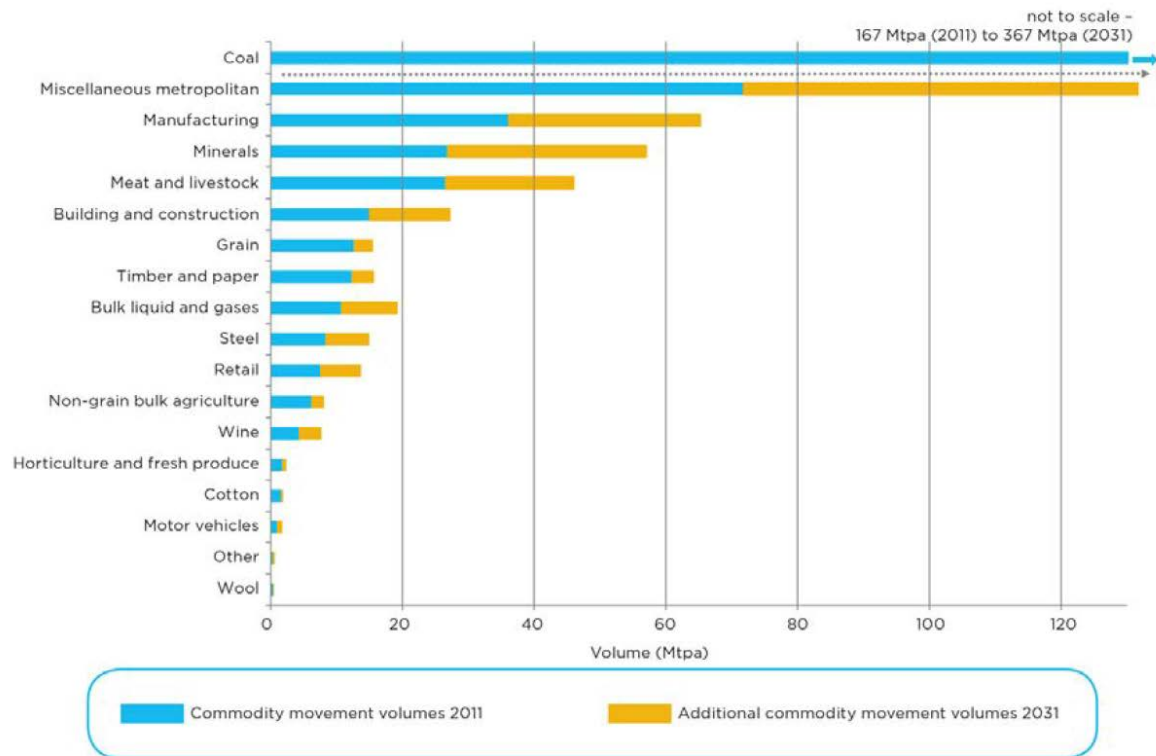
2.3 A growing freight task

According to the 2013 *NSW Freight and Ports Strategy*, the freight task in NSW will nearly double between 2011 (409 million tonnes) and 2031 (794 million tonnes). This is due to the demand for goods and services within NSW growing faster than population growth, as well as the continued growth of mining operations in the State.²⁵

²⁴ Transport for NSW, note 1, p 23. Note: FMCG is an acronym for Fast Moving Consumer Goods, products typically sold in supermarkets and discount stores. See *ibid* p 224.

²⁵ Transport for NSW, note 1, p 168.

Figure 6: Commodity movement volume growth in NSW, 2011-2031²⁶



The NSW coal freight task, predominantly transported by rail, is forecast to more than double in volume from 167 million tonnes in 2011 to 367 million tonnes by 2031: an increase of 4% per annum (Figure 6). All other commodities are assumed to grow by 3% per annum, except for agricultural freight, which is forecast to grow at a modest 1% per annum.²⁷

As shown in Figures 7 and 8 on the following page, this uneven growth between different commodities will result in a significant increase in mining's share of the NSW freight task.

²⁶ Ibid.

²⁷ Ibid.

Figure 7: Growth of the NSW freight task by industry, 2011 to 2031²⁸

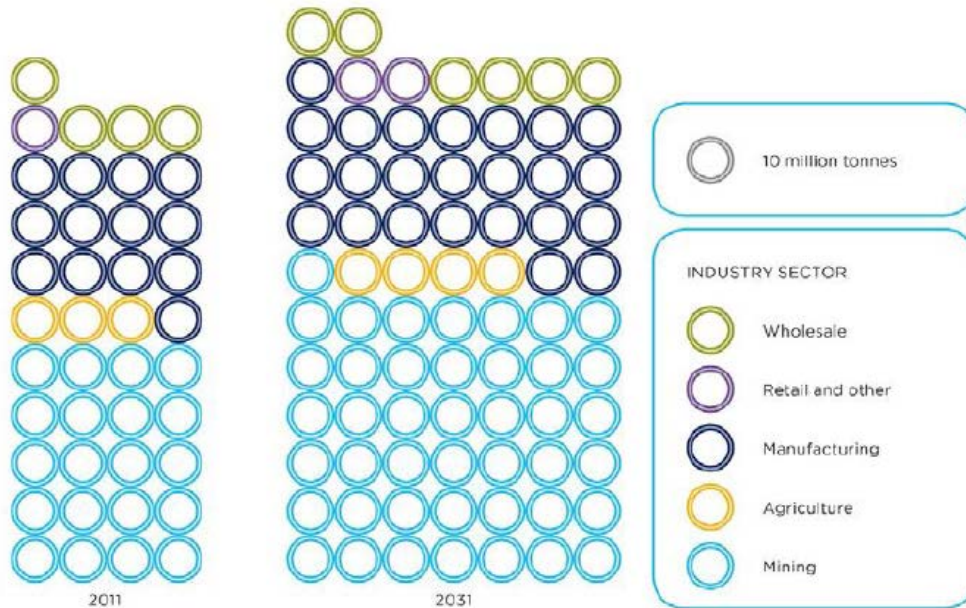
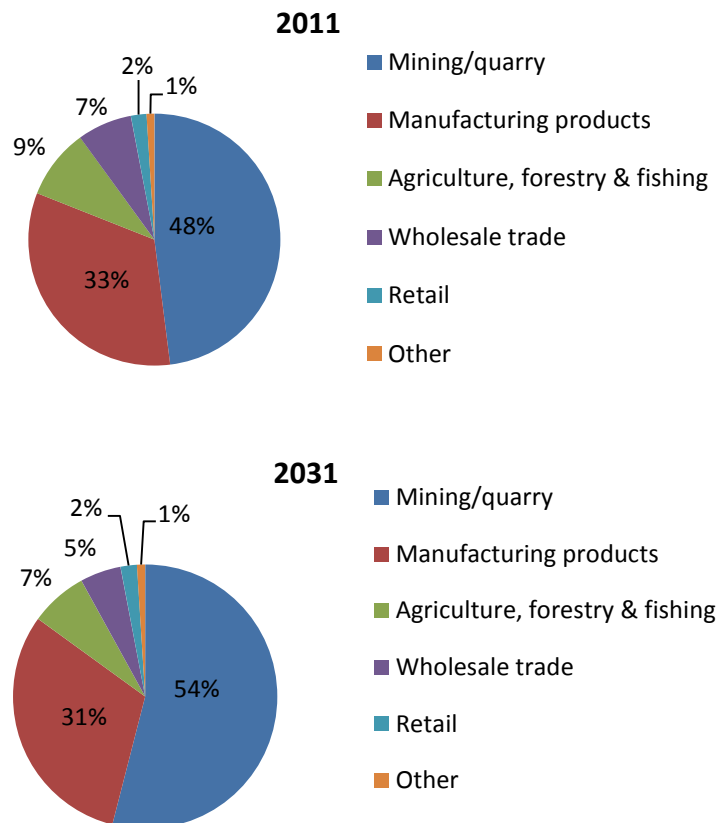


Figure 8: Share of the NSW freight task by sector and volume²⁹

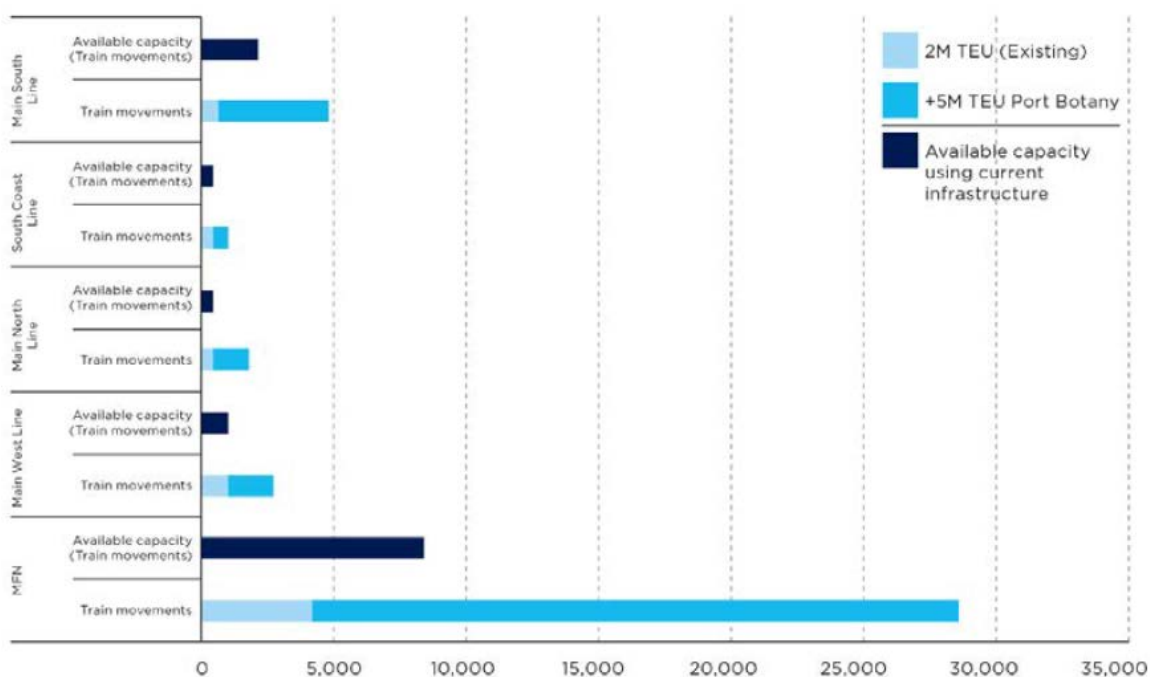


²⁸ Ibid.

²⁹ Ibid p 169.

Containerised freight through Port Botany is projected to grow at 7% per annum until 2031 – the same average rate of growth that occurred between 2003 and 2013. Figure 9 compares the capacity of the key rail freight corridors to and from Port Botany under a ‘do minimum’ scenario with projected freight increases. Under the ‘do minimum’ scenario, rail freight will account for 28% of all freight movement to and from Port Botany by 2031.

Figure 9: Key rail freight corridors showing estimated annual volume and capacity for container movement to and from Port Botany to 2031³⁰



The dark blue bars show the available capacity in train path movements when all other freight and passenger movements are counted.

The light blue bars show the current activity from container train movements in the rail corridor for 2 million TEU per annum at 14% mode share to rail.

The medium blue bars show the additional container train movements needed in the corridor if the total Port Botany container task reaches seven million TEU per annum at 28% mode share to rail.

3. THE NSW FREIGHT NETWORK

3.1 Overview of the existing network

3.1.1 Freight network size and structure

The NSW freight network is a system of interconnected rail lines, roads, ports, airports, and intermodal terminals. As summarised by the 2012 *NSW Long Term Transport Master Plan*, the NSW freight network is comprised of:

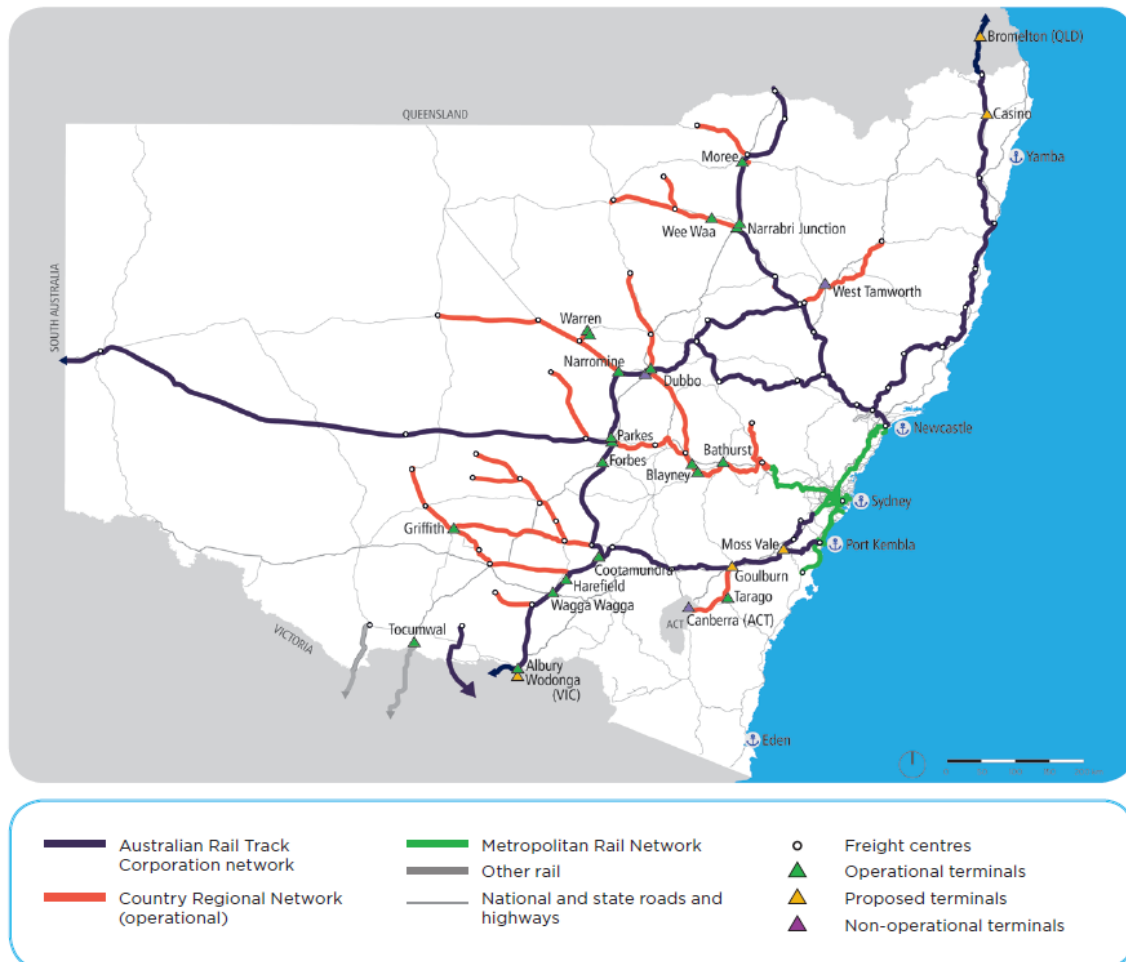
- 185,000 kilometres of state and local roads
- 9,400 kilometres of rail line
- Four major commercial sea ports (Port Botany, Port Jackson, Port Kembla)

³⁰ Ibid p 28.

and the Port of Newcastle) and 27 smaller regional ports and coastal harbours

- Sydney Airport and some regional airports
- Intermodal container freight terminals and various smaller multi-modal terminals and rail sidings.³¹

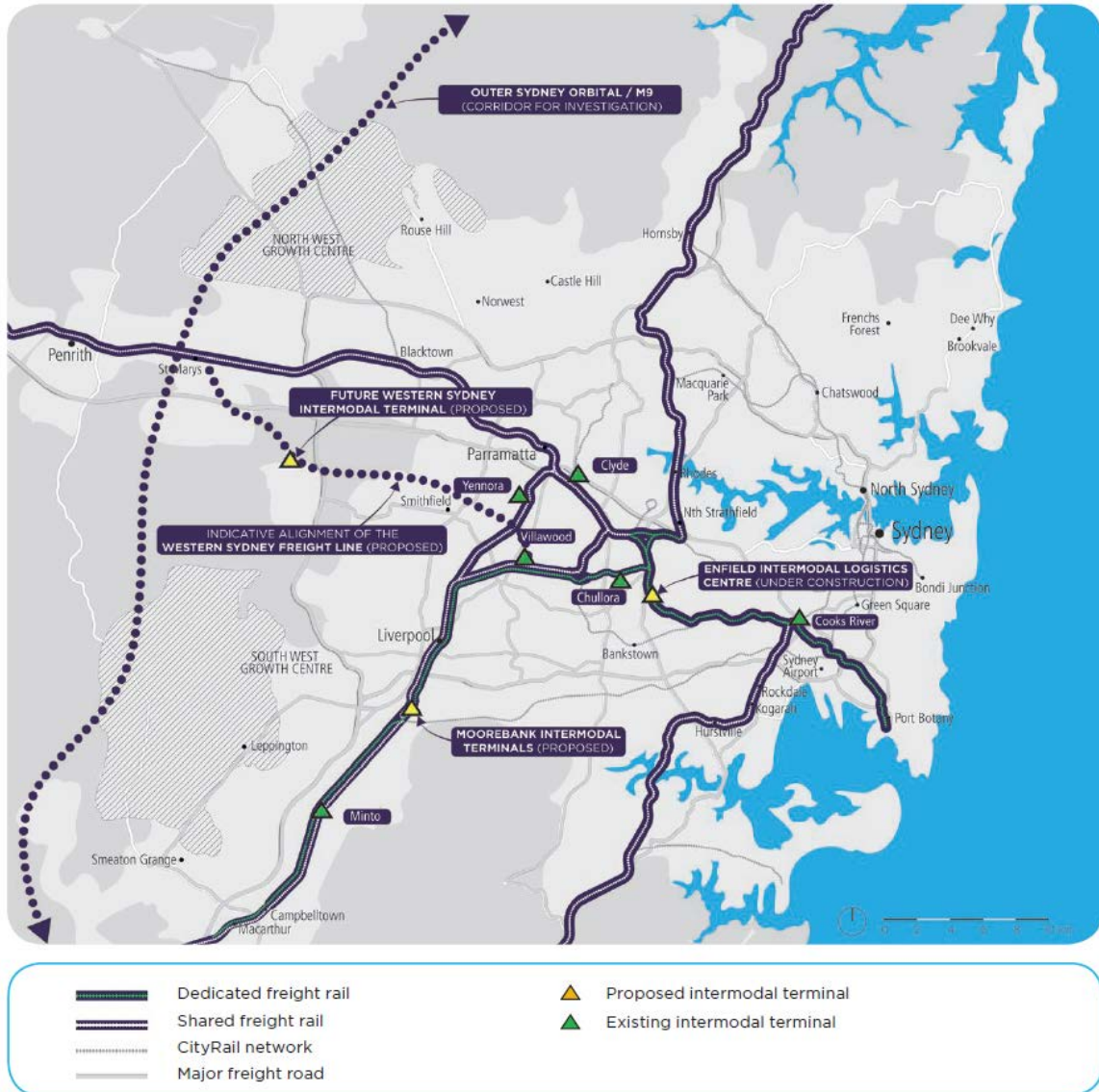
Figure 10: The NSW freight network, including regional intermodal container freight terminals³²



³¹ Ibid p 263.

³² Ibid.

Figure 11: The Sydney freight network, including intermodal terminals³³



³³ Ibid p 264.

3.1.2 Rail freight network

According to the 2013 *NSW Freight and Ports Strategy*, the State's rail freight network is comprised of the following components:

- Metropolitan Passenger Network (MPN): approximately 697 kilometres of operational track extending south to Nowra and Macarthur, west to Lithgow and north to Broadmeadow/Newcastle. The MPN is shared infrastructure used predominantly for the provision of passenger services.
- Leased Network: approximately 3,270 kilometres of operational track leased to the ARTC. This includes the:
 - Metropolitan Freight Network (MFN): nestled within the MPN, the MFN extends from Port Botany to Sefton and Flemington Junctions, and is used exclusively for freight movements.
 - Interstate Network: main line track that links to ARTC's Victorian, Queensland and South Australian networks.
 - Hunter Valley Network: extends from Port of Newcastle through the Hunter Valley to Gap (Werris Creek).
 - Southern Sydney Freight Line from Macarthur to Sefton
 - ARTC's inland route from Parkes to North Star via Narromine, Dubbo and Werris Creek.
- Country Regional Network (CRN): approximately 2,400 kilometres of operational regional and branch line track that does not form part of the Interstate or Hunter Valley networks.
 - Branchline/Grain Line Network: a component of the CRN, with approximately 1,000 kilometres of branch line track used predominantly for haulage of grain, with lower mass and speed limits than other parts of the network.³⁴

A map of the NSW rail network, including freight and passenger lines, is shown on the next page. The proposed Inland Rail Link shown on the map is discussed further in chapter 8.3.5.

³⁴ Ibid p 187.

Figure 12: Map of NSW rail networks³⁵



³⁵ Ibid p 188.

A list of entities that own and/or manage the NSW rail network is provided in the following table. Further details about network owners and managers are provided in chapter 4.1.

Table 1: Ownership and management of the NSW rail network ³⁶		
Rail network	Owner	Manager
Metropolitan Passenger Network	RailCorp	Sydney Trains (Sydney services); NSW Trains (regional services)
Metropolitan Freight Network	Transport for NSW	Australian Rail Track Corporation
Interstate and Hunter Valley Networks (Leased Network)	Transport for NSW	Australian Rail Track Corporation
Country Regional Network	Transport for NSW	John Holland Rail

4. ADMINISTRATIVE, INDUSTRIAL AND LEGAL FRAMEWORK

4.1 NSW Government agencies

4.1.1 Transport for NSW

Transport for NSW (TfNSW) is the State's lead transport agency. It is an integrated statutory authority responsible for the coordinated delivery of services across all modes of NSW transport. TfNSW was created on 1 November 2012 following the passage of the *Transport Legislation Amendment Act 2011*.³⁷ According to the Act's Second Reading Speech:

... the objectives of Transport for NSW are to plan for a transport system that meets the needs and expectations of the public; to promote economic development and investment; to provide integration at the decision-making level across all public transport modes; to promote greater efficiency in the delivery of transport infrastructure projects; and to promote the safe and reliable delivery of public transport and freight services.³⁸

TfNSW has several functions under the *Transport Administration Act 1988*, including:³⁹

- Transport planning and policy;
- Transport public funding;
- Transport infrastructure;
- Capital works programs and budgets;
- Contracting for the delivery of transport services; and
- Transport services coordination.

Prior to 2012 there were a number of NSW statutory authorities responsible for

³⁶ Ibid p 187.

³⁷ *Transport Legislation Amendment Act 2011* (NSW) Pt 1A.

³⁸ Duncan Gay MP, *Second Reading Speech*, NSW Parliamentary Debates, Legislative Council, 23 August 2011, p 4363.

³⁹ *Transport Administration Act 1988* (NSW) Sch 1, cl 1.

the provision and operation of rail infrastructure, and the operation of trains. Former agencies included the Transport Construction Authority and the Country Rail Infrastructure Authority.⁴⁰

TfNSW was granted the statutory power to direct existing transport agencies in relation to the exercise of their functions.⁴¹ This power was used to abolish several existing authorities, with their functions absorbed by TfNSW,⁴² and to modify the functions of other agencies such as GrainCorp.⁴³

As shown in Table 1, TfNSW owns the State's three non-metropolitan rail networks, which are primarily used for rail freight movements. The Leased Network and the Metropolitan Freight Network are currently leased to and managed by the Australian Rail Track Corporation, while the Country Regional Network is managed by John Holland.⁴⁴

4.1.2 Infrastructure NSW

Infrastructure NSW is an independent statutory agency that was established in July 2011 under the *Infrastructure NSW Act 2011*. Its role is to help the NSW Government identify and prioritise the delivery of critical public infrastructure in NSW.⁴⁵ Section 11 of the *Infrastructure NSW Act 2011* sets a range of general and specific functions for the agency. Notable functions include the following:

- Preparing and submitting to the Premier:⁴⁶
 - A 20 year State Infrastructure Strategy;
 - 5 year infrastructure plans;
 - Sectoral State infrastructure strategy statements
- Reviewing and evaluating proposed major infrastructure projects by government agencies or the private sector and other proposed infrastructure projects;⁴⁷ and
- Assessing the risks involved in planning, funding, delivering and maintaining infrastructure, and the management of these risks.⁴⁸

In September 2012 Infrastructure NSW released *First Things First: The State Infrastructure Strategy 2012-2032*. The 2012 Strategy assessed the current

⁴⁰ Gladys Berejiklian, Duncan Gay, '[RTA abolished as Transport for NSW takes shape](#)', Media Release, 15 July 2011; Transport for NSW, '[Sydney Ferries](#)', 8 May 2015. Note: Although the Sydney Ferries name remains in use, since July 2012 it has been run under the NSW Government's franchise model by Harbour City Ferries.

⁴¹ [Transport Administration Act 1988](#) (NSW) s 3G.

⁴² Berejiklian and Gay, note 40.

⁴³ RailCorp, [Annual Report 2013-14](#), 31 October 2014, p 2.

⁴⁴ Transport for NSW, [Country Rail Contracts](#), 14 April 2014.

⁴⁵ Infrastructure NSW, [About INSW](#), n.d.

⁴⁶ [Infrastructure NSW Act 2011](#) (NSW) s 11(1)(a)-(c).

⁴⁷ *Ibid* s 11(1)(e).

⁴⁸ *Ibid* s 11(1)(h).

state of infrastructure in NSW, including the freight network, and the needs and strategic priorities for infrastructure over the next two decades. In response, the NSW Government released its own 20 year State Infrastructure Strategy, which supported or considered 63 of the 70 recommendations made in the 2012 Strategy.⁴⁹

In November 2014, Infrastructure NSW released the *State Infrastructure Strategy Update*, an update to its 2012 Strategy. The Update was prepared at the direction of the Premier, who requested guidance as to how proceeds from the NSW Government's *Rebuilding NSW* initiative could be spent. The Update provided 30 investment recommendations, including a reservation of \$400 million for the *Fixing Country Rail Program* (discussed further in chapter 6.3).⁵⁰

4.2 Commonwealth Government agencies

4.2.1 Infrastructure Australia

Similar to its NSW counterpart, Infrastructure Australia is an independent Commonwealth statutory body that was established in April 2008 under the *Infrastructure Australia Act 2008*.

Infrastructure Australia acts as an advisor to governments, industry and the community on Australia's current and future infrastructure needs, including financing, delivering and operating infrastructure, and how to better plan and utilise infrastructure networks. It assesses all projects with over \$100 million of Commonwealth government funding and publishes its conclusions.⁵¹

One of Infrastructure Australia's key functions is to conduct audits to determine the adequacy, capacity and condition of nationally significant infrastructure.⁵² Its most recent audit, published in May 2015, performed the following assessment:

The Australian Infrastructure Audit takes a strategic approach to assessing our nation's infrastructure needs. It examines the drivers of future infrastructure demand, particularly population and economic growth.

The Audit provides a top-down assessment of the value-add, or Direct Economic Contribution of infrastructure; considers the future demand for infrastructure over the next 15 years, and delivers an evidence base for further gap analysis, long term planning and future investment priorities.⁵³

4.2.2 COAG Standing Council on Transport and Infrastructure

The COAG Standing Council on Transport and Infrastructure was formed in December 2013, and is composed of Commonwealth, State, Territory and New Zealand Ministers with responsibility for transport and infrastructure issues, as

⁴⁹ Infrastructure NSW, *2012 State Infrastructure Strategy: First things first*, n.d.

⁵⁰ Infrastructure NSW, *2014 State Infrastructure Strategy Update*, November 2014, p 156.

⁵¹ Infrastructure Australia, *Purpose*, Australian Government, n.d.

⁵² *Infrastructure Australia Act 2008* (Cth) s 5(a).

⁵³ Infrastructure Australia, *Australian Infrastructure Audit*, Australian Government, May 2015.

well as the Australian Local Government Association. Its objectives are as follows:

The Council's objective is to achieve a co-ordinated and integrated national transport and infrastructure system that is efficient, safe, sustainable, accessible and competitive. Achieving this objective will support and enhance Australia's economic development and social and environmental well-being.

National cooperation through the Council will seek to maximise the contribution of effective transport and infrastructure to Australia's productivity. The Council will undertake critical reforms for Australia that will drive future prosperity.⁵⁴

The Council meets twice yearly to discuss issues such as transport safety and security, infrastructure policy and investment, and infrastructure and related land use planning. Industry representatives attend these meetings as observers and provide their views on the items for consideration by Ministers.⁵⁵

Following each meeting, the Council issues a communiqué that summarises the meeting's discussions and outcomes. The latest communiqué, published on 22 May 2015, discussed the results of Infrastructure Australia's National Infrastructure Audit, and was briefed on heavy vehicle regulation by the National Transport Commission and the National Heavy Vehicle Regulator.⁵⁶

4.2.3 National Transport Commission

The National Transport Commission is an independent statutory body that is funded predominantly by State and Territory Governments (65% of funding), with the Commonwealth providing additional funding (35%). The Commission is charged with improving the productivity, safety and environmental performance of Australia's road, rail and intermodal transport systems, and develops regulatory and operational reform within these areas.⁵⁷

The Commission leads the implementation of the Rail Safety National Law under the administration of the Office of the National Rail Safety Regulator (see chapter 4.4.1), and has produced a series of discussion papers and reviews into rail productivity issues with the aim of growing the Australian economy, and delivering better safety and environmental outcomes.⁵⁸

4.3 Network owners/operators

4.3.1 Australian Rail Track Corporation

The Australian Rail Track Corporation (ARTC) is a Commonwealth Government owned corporation. It was created in 1998 after the Commonwealth, State and

⁵⁴ COAG Standing Council on Transport and Infrastructure, [About the Council](#), 8 December 2014.

⁵⁵ Ibid.

⁵⁶ Transport and Infrastructure Council, [Communiqué](#), Sydney, 22 May 2015.

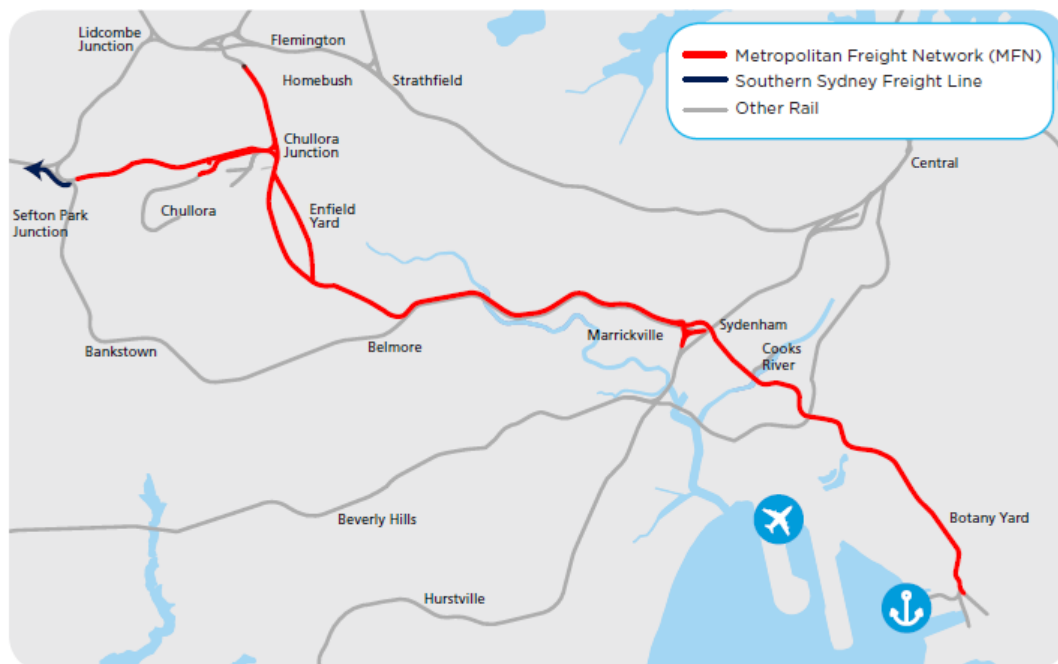
⁵⁷ National Transport Commission, [Who we are & what we do](#), 14 November 2014.

⁵⁸ National Transport Commission, [Productivity](#), 22 July 2014.

Territory governments agreed to form a “one stop shop” to provide rail operator access to the national rail network.⁵⁹

In order to meet the ARTC’s “one stop shop” objective, in 2004 the NSW Government leased key sections of the NSW rail network to the ARTC. The leasing arrangement, which lasts for a 60 year period, began with the immediate transfer of the Interstate and the Hunter Valley Networks, followed in 2011 by track from Gap to Boggabilla and, in 2012, the Metropolitan Freight Network.⁶⁰ ARTC also funded the construction of the Southern Sydney Freight Line, which commenced operations in January 2013.⁶¹

Figure 13: ARTC-leased freight rail lines in Sydney⁶²



The ARTC network is used to move a range of freight commodities, including coal, iron ore, other bulk minerals and agricultural products.⁶³ Across its network, the ARTC is responsible for the following:

- Selling access to train operators
- The development of new business
- Capital investment in the corridors
- Management of the [Leased] Network

⁵⁹ ARTC, *About ARTC*, n.d; Transport for NSW, note 1, p 189.

⁶⁰ Transport for NSW, note 1, p 189.

⁶¹ Department of Infrastructure and Transport, *Addressing Sydney's Freight Rail Bottleneck*, Government of Australia, n.d., p 1.

⁶² Transport for NSW, note 1, p 189.

⁶³ ARTC, *About ARTC*, n.d.

- The management of infrastructure maintenance⁶⁴

4.3.2 RailCorp

RailCorp owns the Metropolitan Passenger Network, and provides third party rail operator access to its network.⁶⁵ Prior to July 2013, RailCorp provided metropolitan passenger rail services and long distance rail services. These respective operations have since moved to TfNSW, which operates these services through its subsidiaries Sydney Trains and NSW Trains.

Currently, RailCorp's sole responsibility is ongoing ownership and management of its rail and rail property assets.⁶⁶ It is responsible for:

- Management of non-operational real property assets (residual assets)
- Land owner responsibilities for all real property assets, including acquisition, remediation and disposal
- Managing access to the rail network by third-party rail operators
- Managing the contract with [Airport Link Company] for the operation of the Airport Link Stations
- Maintaining land information
- Leasing out of premises within railway stations and other locations⁶⁷

4.3.3 John Holland

John Holland is an Australian engineering, contracting and services provider that is involved in the infrastructure, energy and resources and transport services sectors.⁶⁸ John Holland's rail division has managed the NSW Country Regional Network on behalf of TfNSW since January 2012, after signing a 10 year performance-based contract with the agency.⁶⁹

John Holland provides network access to freight and passenger rail services and conducts maintenance on over 5,000 kilometres of regional NSW rail and associated land and infrastructure, including:

- 2,386 kilometres of operational freight and passenger lines
- 3,139 kilometres of non-operational lines
- 27,000 hectares of land and infrastructure
- 1312 level crossings (300 active)
- 1200+ property assets (including 356 heritage)

⁶⁴ Ibid.

⁶⁵ Transport for NSW, note 1, p 187.

⁶⁶ Ibid p 2.

⁶⁷ RailCorp, note 43, p 7.

⁶⁸ John Holland, *About Us*, n.d.

⁶⁹ Ibid.

- 600 rail under-bridges, and
- 384 road over-bridges.⁷⁰

4.3.4 Freight train operators

In addition to rail track owners and managers, there are approximately 10 rolling stock providers who operate freight services on the NSW rail network.⁷¹ The relationship between the train operators and the track owners/managers is as follows:

[S]ervice providers apply for access to the network from the rail track managers, such as Sydney Trains and ARTC, and receive paths on which to operate. Freight rail operator services are procured by the end use customer or their agents.⁷²

A list of principal freight train operators is provided below:

Train operator	Primary freight task
Aurizon	Coal, iron ore, intermodal, cattle, grain, mixed bulk
Asciano (Pacific National, Patrick)	Coal, ores, intermodal, steel, grain, mixed bulk
Qube Holdings	Intermodal, grain, mixed bulk
Southern Shorthaul Railroad	Coal, grain, cotton
Freightliner Australia	Intermodal, coal, ores
GrainCorp	Grain ⁷⁴

4.4 Legislation

Transport legislation in NSW is administered by both the Minister for Roads, Maritime and Freight, and the Minister for Transport and Infrastructure, while environmental legislation relating to freight is administered by the NSW Environment Protection Authority. This legislation operates within a broader national framework.

4.4.1 National Rail Safety Regulator

In July 2009, the Council of Australian Governments agreed to a suite of national transport regulation reforms that included the creation of a national rail safety law and a National Rail Safety Regulator to oversee these laws.⁷⁵ The Commonwealth Department of Infrastructure and Regional Development summarised the reasons for the establishment of national rail safety regulation:

⁷⁰ Ibid.

⁷¹ Transport for NSW, note 1, p 191.

⁷² Ibid.

⁷³ Bureau of Infrastructure, Transport and Regional Economics, note 19, p 126.

⁷⁴ Commenced train operations in NSW on 29 May 2009, operating grain trains on behalf of the NSW Government. See *ibid* p 107.

⁷⁵ Department of Infrastructure and Regional Development, [National Rail Safety Regulation and Investigation](#), Government of Australia, 11 May 2015.

The rail reform aims to resolve a century of inconsistent regulatory practices between the states and territories that have constrained rail transport operators across jurisdictional borders. The practical benefits of national rail safety regulation will include single national accreditation for rail transport operators, removing duplication of auditing, monitoring and inspection processes, and the improved availability of resources and specialist knowledge to inform decision making and safety investigations.⁷⁶

South Australia was chosen by the Council of Australian Governments to host the Office of the National Rail Safety Regulator, which commenced operations in January 2013.⁷⁷ The National Rail Safety Regulator currently has responsibility for the regulatory oversight of rail safety law in all States and Territories except for Queensland and Western Australia.⁷⁸

In NSW, the *Rail Safety (Adoption of National Law) Act 2012* gives effect to the *Rail Safety National Law*. Despite not being an Act itself, the *Rail Safety National Law* applies in NSW as if it were an Act.⁷⁹ The Office of the National Rail Safety Regulator explains further:

The *Rail Safety National Law* was first enacted in South Australia and each state and territory is to pass a law, explaining that the *Rail Safety National Law* (being the schedule to the South Australian law) is the rail safety law in that state or territory or replicates that law. The law establishes the ONRSR as the body responsible for rail safety regulation in that state or territory.⁸⁰

The NSW Independent Transport Safety Regulator provides specific functions and services under a service agreement with the Office of the National Rail Safety Regulator, including performing regulatory compliance and enforcement activities.⁸¹

4.4.2 Other NSW rail freight legislation

Key legislation related to the NSW rail freight sector is listed in Table 3.

Legislation	Function
<i>Rail Safety National Law (NSW)</i>	Establishes a national system of rail safety, including provision for the appointment, functions and powers of the National Rail Safety Regulator.
<i>Rail Safety (Adoption of National Law) Act 2012</i>	Repealed the <i>Rail Safety Act 2008</i> , and applies the <i>Rail Safety National Law</i> to NSW law.
<i>Transport Administration</i>	Guides the administration of the NSW transport system,

⁷⁶ Ibid.

⁷⁷ Standing Council on Transport and Infrastructure, [Communique](#), Council of Australian Governments, 9 November 2012.

⁷⁸ Standing Council on Transport and Infrastructure, [Communique](#), Council of Australian Governments, 10 May 2013.

⁷⁹ [Rail Safety \(Adoption of National Law\) Act 2012](#) (NSW) s 4.

⁸⁰ Office of the National Rail Safety Regulator, [Legislation](#), 21 April 2015.

⁸¹ Independent Transport Safety Regulator, [Corporate Plan 2014-15](#), 2014.

<u>Act 1988</u>	notably the objectives and functions of the lead transport agency, Transport for NSW.
<u>Protection of the Environment Operations Act 1997</u>	Provides the NSW Environment Protection Authority with regulatory tools to help protect the environment through best practice regulation. Encompasses rail freight activities.
<u>Infrastructure NSW Act 2011</u>	Establishes Infrastructure NSW, an independent statutory agency that assists the NSW Government in identifying and prioritising the delivery of vital public infrastructure.

5. ISSUES FACING THE RAIL FREIGHT NETWORK

5.1 Challenges for the rail freight network

The anticipated growth in freight volume (per chapter 2.3) creates challenges for the entire NSW freight sector. Currently, NSW's freight network faces capacity issues, with key parts of the network under pressure to match demand.⁸² The 2013 *NSW Freight and Ports Strategy* warned that, in order to maintain an effective freight network, long term improvements were essential:

By 2031, all key corridors will struggle to meet demand unless action is taken. In particular, by 2031 the [Metropolitan Freight Network] will need to carry around two million [Twenty Foot Equivalent Units], which will equate to approximately 25,000 additional train movements each year on that part of the network alone.⁸³

As freight volumes increase across the NSW freight network, the rail freight sector faces its own unique challenges. As explained by Infrastructure NSW in its 2012 *State Infrastructure Strategy*, a key issue arises when freight services must share the rail network with passenger services:

Rail freight operations are constrained when the network is shared or interfaces with metropolitan passenger services. This is particularly apparent during the peak commute hours where curfews prevent freight train access on the metropolitan network.⁸⁴

Passenger service delays can affect the movement of bulk freight to the ports through the shared Sydney Trains network, increasing the risk of freight services missing scheduled port departures.⁸⁵

Regional rail freight is affected by poorly maintained infrastructure. Infrastructure NSW has commented that the condition of the Country Rail Network is significantly worse than the metropolitan networks, forcing trains to abide by severe operating and axle load limits.⁸⁶ These infrastructure issues are caused in part by the seasonal nature of grain harvests, which produce inconsistent freight volumes. This means that a number of regional lines have

⁸² Transport for NSW, note 1, p 19.

⁸³ Ibid p 27.

⁸⁴ Infrastructure NSW, note 23, p 41.

⁸⁵ Transport for NSW, note 1, pp 25, 39.

⁸⁶ Infrastructure NSW, note 23, p 41.

unrealised capacity for extended periods, resulting in insufficient access fees to cover maintenance costs.⁸⁷

Rail capacity issues affect more than just rail freight. NSW Ports has commented that the greatest challenge affecting its transport-logistics chains is the lack of efficient road and rail connections to its ports:

NSW Ports sees itself as the long-term custodian of these major port assets and therefore recognises that increased usage of rail is an important factor in achieving efficient Port operations that can cater for forecast trade demands. Increased use of rail will reduce the growth in Port-related truck movements, managing the volume of trucks on the shared road network.

The use of rail to and from the Ports is currently constrained by a number of factors including: the need to travel on the shared passenger rail network, which gives priority to commuter trains; the lack of intermodal terminal capacity; inadequate rail siding lengths requiring shunting; and operational inefficiencies at varying stages of the rail journey.⁸⁸

5.2 Increasing the rail freight task

In response to recent freight capacity issues, there have been proposals to move a significant share of the freight task onto rail. A shift to rail is supported by evidence showing that an increased rail freight task can produce a range of logistical, environmental and economic benefits:

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. It produces only one third of the nitrous oxide, half of the volatile organic compounds and less than two thirds of the carbon monoxide. 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.⁸⁹

Infrastructure Australia stated that freight rail will play a growing role in the movement of goods between ports and inland freight terminals, as well as the movement of non-bulk freight over longer distances.⁹⁰ The authority also outlines the various benefits that rail freight has over road freight:

Rail offers an alternative to road transport and societal benefits in terms of lower emissions, reduced road congestion and increased safety per tonne kilometre, particularly over longer distances or when carrying heavy goods. ... The benefits of growth in the modal share of rail in handling the overall freight task can include:

⁸⁷ Transport for NSW, note 1, pp 25, 39.

⁸⁸ NSW Ports, [Five year port development plan](#), March 2014, p 5.

⁸⁹ H Park, note 8, p 14.

⁹⁰ Infrastructure Australia, note 53, p 98.

- improved land use and urban densification;
- reduced carbon emissions;
- reduced congestion; and
- reduced accidents.⁹¹

Successive NSW Governments have indicated their desire to increase rail's share of freight. Past Labor Governments highlighted the need to increase the share of freight transported by rail in a number of policy decisions and documents, and set a range of goals to increase rail network efficiency and capacity.⁹²

These goals are detailed further in chapter 2.1 of the 2009 NSW Parliamentary Research Service Paper, [*Rail Freight Transport in NSW*](#).

In 2011 the O'Farrell Government released *NSW 2021*, a 10 year plan to guide the NSW Government's policy and budget decision making process across a broad range of economic and social reforms. Under the Plan, the NSW Government committed to doubling the proportion of container freight movement by rail through NSW ports by 2020. Among other things, the Government committed to creating a NSW freight strategy that would integrate strategic land use and transport planning.⁹³

To this end, the O'Farrell Government released two policy documents that, along with other goals, aim to increase the size and efficiency of the NSW freight network. These documents—the 2012 *NSW Long Term Transport Master Plan*, and the 2013 *NSW Freight and Ports Strategy*—are discussed in chapters 6.1 and 6.2.

This was followed in 2014 by the *Rebuilding NSW* plan, which outlines how the NSW Government intends to fund the infrastructure designed to further the goals in the two strategies, and *A Plan for Growing Sydney*, which guides land use decisions in Sydney over the next 20 years. These plans are discussed further in chapters 6.3 and 6.4

6. NSW GOVERNMENT POLICIES AND STRATEGIES

6.1 2012 NSW Long Term Master Plan

In December 2012, TfNSW released the *NSW Long Term Transport Master Plan* (2012 Master Plan), an integrated transport strategy for NSW. The 2012 Master Plan integrates land use planning and transport planning for the purpose of planning freight and passenger movements across all modes of transport. It aims to set a clear direction to develop the State's transport system into the future.⁹⁴

⁹¹ Ibid pp 96, 98.

⁹² H Park, note 8, pp 9-10.

⁹³ NSW Government, [*NSW 2021: A plan to make NSW number one*](#), 2011, p 39.

⁹⁴ Transport for NSW, note 13, p 3.

6.1.1 Problems with the existing network

The 2012 Master Plan identified three broad challenges faced by the NSW freight network, including the rail freight network: network efficiency; the growth of future freight capacity; and the management of freight's community and environmental impacts.⁹⁵

Network inefficiencies included:⁹⁶

- Poor coordination and transparency along the supply chain;
- Issues with shared rail access between passenger and freight rail trains; and
- Rail freight competitiveness issues, such as the lack of critical mass volumes in certain markets, and the need for delivery points closer to customers.

Capacity issues on the rail freight network included:⁹⁷

- A lack of metropolitan intermodal terminal infrastructure that would allow an increase of rail's share of container freight;
- Limited regional intermodal terminal infrastructure that would enable economies of scale to be achieved; and
- Coal rail lines reaching capacity as the coal task doubles by 2031.

Community and environmental impacts included insufficient planning for freight logistics chains, and rail noise adversely affecting nearby residents. The 2012 Master Plan commented that these impacts could result in conflict, particularly where the freight network shares infrastructure with other users.⁹⁸

6.1.2 Long Term Master Plan response

Having identified these problems, the 2012 Master Plan stated that the NSW Government would:

- **Increase network efficiency** by fixing bottlenecks on road and rail networks, ensuring better regulation, modernising the network, and removing obstacles to improved freight productivity
- **Grow future freight capacity** to meet the growing freight task through targeted investment that expands road and rail capacity to support the growth of critical industries and by making better use of the existing network
- **Manage the community and environmental impacts** of freight to promote sustainability.⁹⁹

⁹⁵ Ibid.

⁹⁶ Ibid p 269.

⁹⁷ Ibid pp 278-9.

⁹⁸ Ibid pp 288-9.

⁹⁹ Ibid p 262.

Each response is discussed in greater detail in the following chapters.

6.1.3 Improving network efficiency

The 2012 Master Plan concluded that systematic and strategic coordination of supply chains was needed in order to ensure the competitiveness of the NSW freight and logistics industries. It commented that:

The key role of government in contributing to effective supply chains is its involvement in pricing and regulation, governance, market participation and reform. It also must ensure continuous improvement in its own management of freight and supply chain issues and measure and report critical freight and supply chain data regularly to enable better decision making. This will ensure the freight and logistics industry can continue to do what it does best: deliver best practice logistics functions to support industry.¹⁰⁰

The following table outlines the 2012 Master Plan's goals and key actions to improve the efficiency of the NSW rail freight network:

Table 4: NSW Long Term Transport Master Plan – improving network efficiency ¹⁰¹		
Strategy	Goal	Example actions
<i>Identify freight movements and network demand</i>	Develop a regime to measure and monitor performance, asset management and congestion.	<ul style="list-style-type: none"> Establish freight network performance indicators and measure performance; Improve freight data collection and strategic analysis; Undertake detailed economic analysis of the impact of freight transport in NSW.
<i>Shift more freight movements to off-peak periods</i>	Take advantage of currently underused network capacity, particularly in the evening, night or early morning.	<ul style="list-style-type: none"> Support a greater shift to off-peak freight movements.
<i>Create a seamless national freight network</i>	Improve regulation of the freight network and Australia-wide operating conditions to avoid unnecessary duplication and imposition of costs on freight operators who cross state boundaries.	<ul style="list-style-type: none"> Authorise the system of national transport safety regulators (for rail, the National Rail Safety Regulator).
<i>Reform rail access</i>	Assess and reform regulatory access arrangements that apply to the Metropolitan Rail	<ul style="list-style-type: none"> Review the NSW rail access regime.¹⁰²

¹⁰⁰ Ibid p 290.

¹⁰¹ Ibid pp 290-93.

¹⁰² The review of the NSW rail access regime commenced with the release of an issues paper in November 2012. The submissions period ended on 28 February 2013 and the review is ongoing. See Transport for NSW, [NSW Rail Access Regime](#), 5 December 2014; Advice received from Transport for NSW, 27 May 2015.

Network, Country Regional
Network and the ARTC.

6.1.4 Growth of future freight network capacity

The 2012 Master Plan commented that, in order to manage the growing freight task, it was necessary to provide rail operators with better access, encourage more efficient use of the network, and remove constraints affecting productivity.¹⁰³

A number of short, medium and long term actions were formulated in order to successfully meet this goal, as outlined below.

Table 5: NSW Long Term Transport Master Plan – growing future capacity¹⁰⁴

Timeline	Actions
<i>Short to medium term</i>	<ul style="list-style-type: none"> • Develop a metropolitan network of intermodal terminals; • Develop intermodal terminals in regional NSW in collaboration with councils and industry; • Deliver Stage One of the Northern Sydney Freight Corridor Program; and • Establish a freight investment framework and maintain a program of freight infrastructure projects.
<i>Medium term</i>	<ul style="list-style-type: none"> • Develop rail freight capacity projects, including the upgrade of Chullora Junction, and duplication of the Port Botany line; and • Protect strategic rail freight corridors, commencing with the proposed Western Sydney Freight Line and Western Sydney Intermodal Terminal.
<i>Long term</i>	<ul style="list-style-type: none"> • Develop the proposed Western Sydney Freight Line and Western Sydney Intermodal Terminal; and • Continue work with the Commonwealth Government to develop the Inland Rail Route.

6.1.5 Managing community and environmental impacts

The 2012 Master Plan listed several actions to help deliver a sustainable freight system which could manage community and environmental impacts.

Short term actions included improving integration of land use and freight planning by collaborating with industry, the community and local councils to create best practice partnerships and guidelines. Continued efforts to prioritise safety on the freight network were also formulated.¹⁰⁵

In the medium term, the NSW Government would address freight emissions and noise impacts. For rail, this involved development of a comprehensive approach

¹⁰³ Transport for NSW, note 13, p 295.

¹⁰⁴ Ibid pp 295-98.

¹⁰⁵ Ibid p 299.

to managing the impacts of rail freight noise, with input from infrastructure owners, developers, train operators and the community.¹⁰⁶

6.2 2013 NSW Freight and Ports Strategy

In November 2013 the NSW Government released the *NSW Freight and Ports Strategy* (2013 Strategy). In order to maintain consistency with earlier Government plans, many of the goals in the 2013 Strategy mirror those of the 2012 Master Plan.¹⁰⁷

The 2013 Strategy also responds to and continues the goals of several other plans and strategies, including the *NSW 2021 Plan*, and Infrastructure Australia's National Port and National Land Freight Strategies.¹⁰⁸

6.2.1 Purpose of the 2013 Strategy

The 2013 Strategy's purpose is to provide the NSW Government, industry and other stakeholders with a framework to guide investment and other decisions pertaining to freight logistics in NSW.¹⁰⁹

The NSW Freight and Ports Strategy identifies where government intervention is justified to enhance productivity and economic efficiency by addressing problems with the operation of markets and institutions, and balancing competing interests and impacts. Government intervention can be in the form of the provision of physical infrastructure, coordination and control, market structure reforms, co-investment with the private sector, regulatory reform and other economic incentives.¹¹⁰

The 2013 Strategy outlined policy, infrastructure and land planning initiatives to be implemented over the next 20 years, with the following aim and objectives (see Figure 14):

The aim of the NSW Freight and Ports Strategy is to provide a transport network that allows the efficient flow of goods to their market. ... Providing a network that eliminates or at least minimises congestion will support economic growth and productivity and encourage regional development.

In support of this aim, Transport for NSW has developed freight specific objectives which reflect the importance of the freight transport network for a competitive and productive NSW economy, as well as the need to integrate freight transport with other productive and non-productive activities and land uses.

The objectives are:

- **Delivery of a freight network that efficiently supports the projected growth of the NSW economy**

¹⁰⁶ Ibid.

¹⁰⁷ Transport for NSW, note 1, p 10.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

- **Balancing of freight needs with those of the broader community and the environment.**¹¹¹ [emphasis in original]

Key to the implementation of these objectives are logistical improvements within the NSW freight network. The NSW Government's role in creating an efficient network with appropriate capacity is as follows:

The role of government in the freight task focuses on delivering network capacity to enable supply chain efficiency. This includes removing obstacles for achieving best practice, creating capacity and, where necessary, becoming involved in the marketplace to ensure the network operates efficiently.

These actions will have to be achieved within available public funds, influenced by fiscal trends and the cost of infrastructure. Government can facilitate private investment, and will continue to balance the needs of industry and productivity with public amenity. It will concentrate on reducing network congestion and mitigating any noise and pollution impact on communities and the environment.

In addition to funding, the transport network also needs land. Future transport corridors, and land for logistics facilities, need to be protected. Knowing the capacity of the current network, and forecasting where and when growth will occur, will lead to the identification of areas where network expansion is required. The task will then be to coordinate planning between government and to reserve land to ensure network capacity is available in the right place and at the right time.¹¹²

6.2.2 2013 Strategy response

The 2013 Strategy listed three Strategic Action Programs to address the challenges associated with the anticipated long term doubling of the NSW freight task.¹¹³

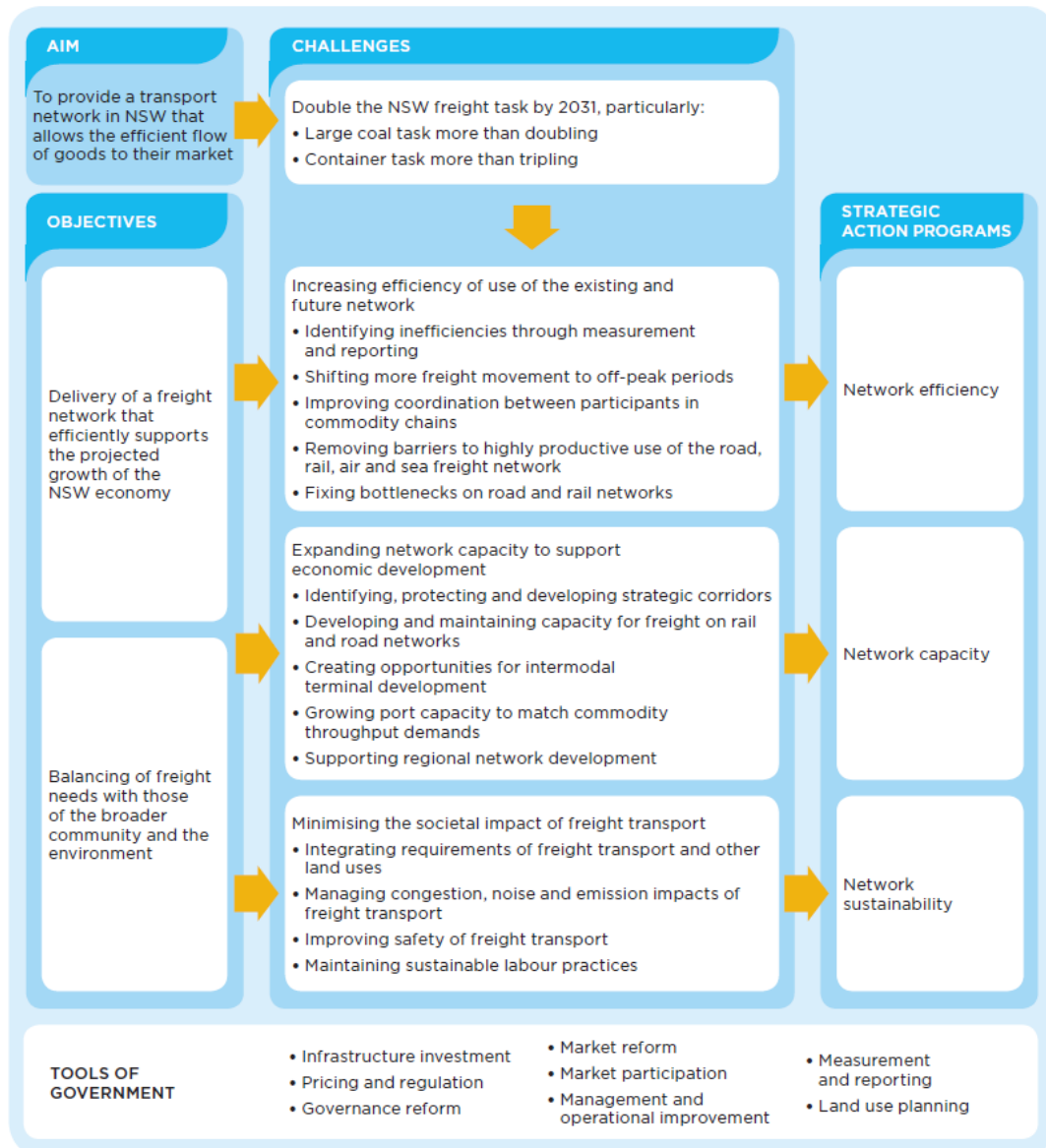
These Strategic Action Programs, and their links to the framework's aim and objectives, are shown in Figures 14 to 17. Each Strategic Action Program is detailed in the following chapters.

¹¹¹ Ibid p 11.

¹¹² Ibid Foreword.

¹¹³ Ibid p 12.

Figure 14: The NSW Freight and Ports Strategy framework¹¹⁴



6.2.3 Strategic Action Program 1 – Network efficiency

The first Strategic Action Program is designed to optimise the efficiency of the State's freight supply chains. The 2013 Strategy notes that, although new capacity is necessary to keep up with freight demand, freight must also make best use of the existing network and assets:

Network efficiency is achieved through the provision of physical infrastructure, control systems, user performance and pricing. Inefficiencies in use of the network create 'friction' and add unnecessary costs, hence the core issue in a supply chain is optimal efficiency. It is estimated that each one per cent increase in freight efficiency saves the national economy \$1.5 billion. Given that supply chains can only perform as well as their weakest component, the

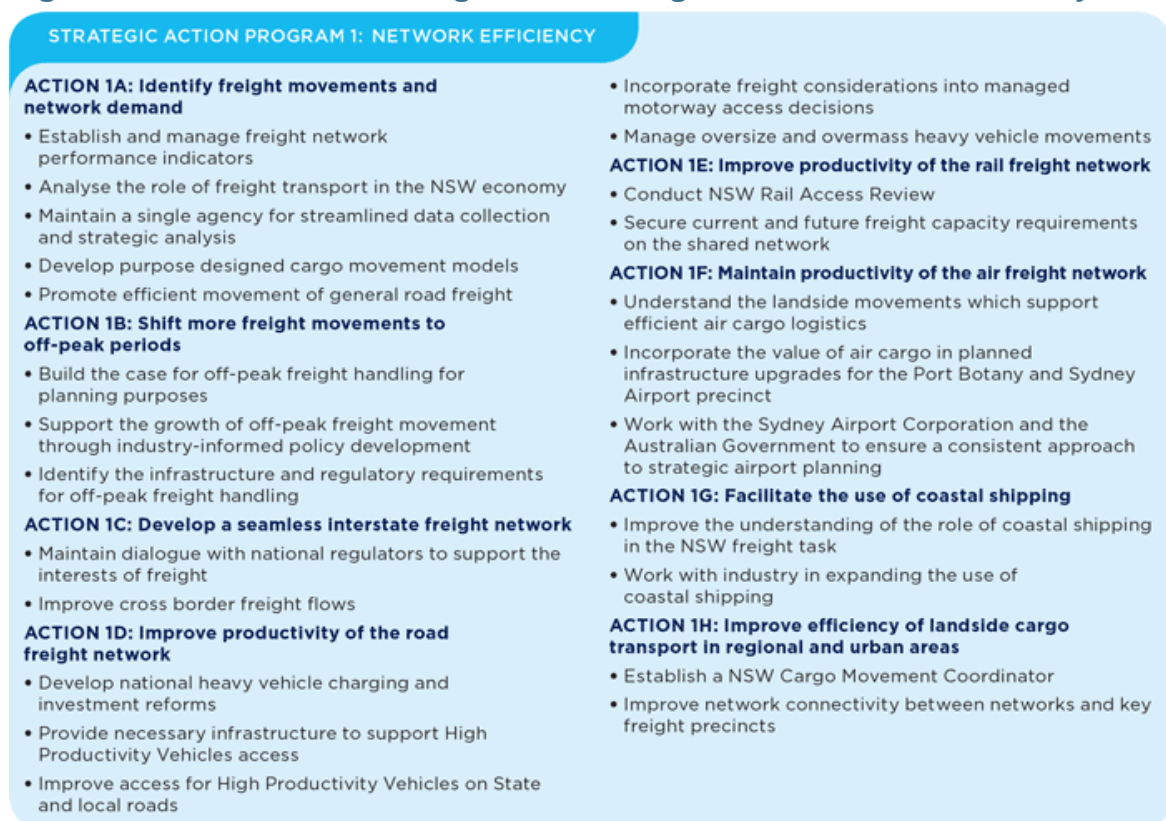
¹¹⁴ Ibid.

logistics industry is focused on ensuring that performance, capacity and delivery are brought to the highest possible level across the whole supply chain.

Achieving network optimisation requires governance arrangements to better coordinate supply chains and to measure and report on their performance. It also requires government support to improve the underpinning regulatory environment through the harmonisation of rules and removal of unnecessary impediments.¹¹⁵

To improve freight network efficiency, Strategic Action Program 1 outlines eight actions for the entire NSW freight network, which are shown in Figure 15:

Figure 15: Overview of Strategic Action Program 1 – Network efficiency¹¹⁶



Many of these actions reiterate goals from the 2012 Master Plan.

For example, one component of Action 1E reiterates the 2012 Master Plan's task of completing a review of the NSW Rail Access Regime. However, Action 1E also addresses issues of network control and access management on the shared rail network. It states that sufficient train paths on the shared network should be secured for freight, while ensuring the alignment and efficiency of the interface between the dedicated freight networks and the shared networks.¹¹⁷

¹¹⁵ Ibid p 51.

¹¹⁶ Ibid p 52.

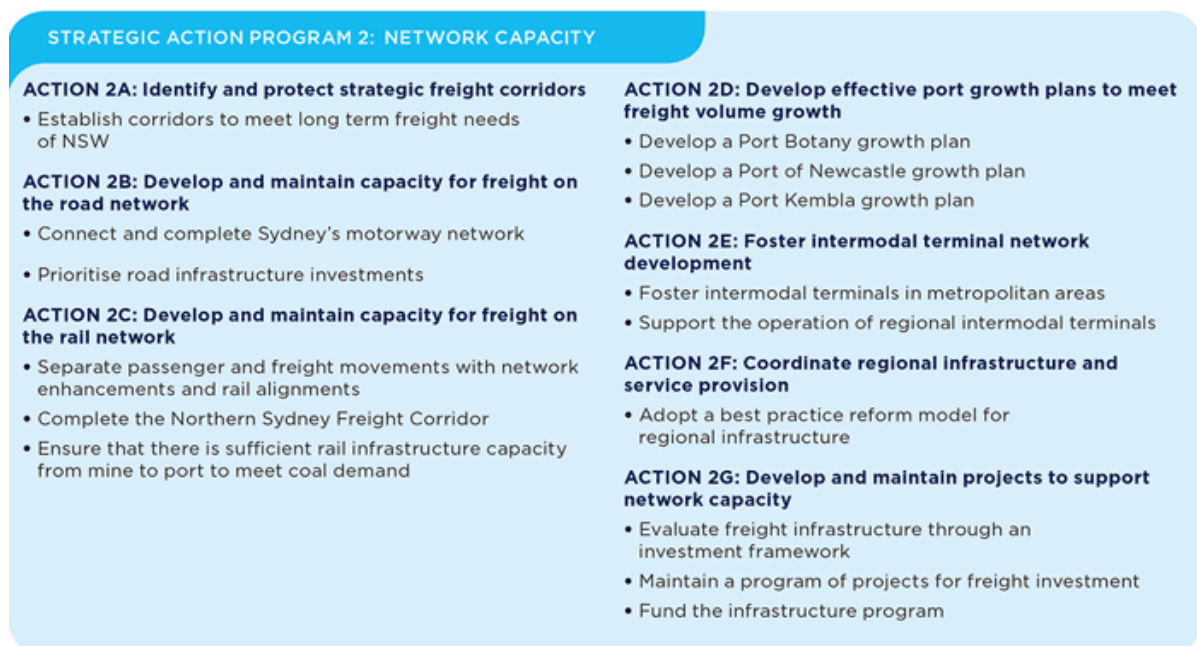
¹¹⁷ Ibid p 79.

6.2.4 Strategic Action Program 2 – Network capacity

The second Strategic Action Program found that the fragmented construction, maintenance and improvement of freight network infrastructure has resulted in a number of performance issues. These include “missing links”, pinch points and weight limitations that constrain performance.

Accordingly, the Program sets out eight actions to establish and maintain a whole-of-network approach to capacity and performance, which is expected to help facilitate the free flow of goods to the market.¹¹⁸

Figure 16: Overview of Strategic Action Program 2 – Network capacity¹¹⁹



Key actions for, or related to, the NSW rail freight network include the following:

Actions	Tasks
<i>Identify and protect strategic freight corridors</i>	<ul style="list-style-type: none"> • Establish corridors to meet long term freight needs of NSW. Examples include investigations into the Maldon to Dombarton Railway, and further work on the Northern Sydney Freight Corridor.
<i>Develop and maintain capacity for freight on the rail network</i>	<ul style="list-style-type: none"> • Separate passenger and freight movements with network enhancements and rail alignments; • Complete the Northern Sydney Freight Corridor; • Ensure that there is sufficient rail infrastructure capacity from mine to port to meet coal demand.

¹¹⁸ Ibid p 96

¹¹⁹ Ibid p 97.

¹²⁰ Ibid ch 4.2.

Foster intermodal terminal network development

- Foster intermodal terminals in metropolitan areas, including:
 - Expansion of the Southern Sydney Freight Line;
 - Development of new intermodal facilities at Moorebank;
 - Construction of Enfield staging roads to enable Port Botany intermodal services and duplication of the Port Botany line; and
 - Identifying and preserving land for a Western Sydney intermodal terminal and freight line.

6.2.5 Strategic Action Program 3 – Network sustainability

Complementing the efficiency and capacity improvements, Strategic Action Program 3 sets the goal of creating “a sustainable freight network that balances efficient freight movements with community expectations of safety, good neighbourhood amenity and positive environmental outcomes.”¹²¹

This goal is to be achieved through planning decisions that integrate land use and freight logistics for long term outcomes. As explained in the 2013 Strategy, an efficient freight network can bring benefits to the entire State:

Allowing the efficient flow of goods to the market has inherent benefits for the environment and community. Lower costs, better management of impacts like noise, reduced emissions and increased use of green technology contribute to efficiency. Protecting communities and the environment up front also reduces longer term costs to government due to remediation and retrofitting.¹²²

Figure 17: Overview of Strategic Action Program 3 – Network sustainability¹²³

Under Action 3B, the following actions are proposed to manage congestion, noise and emission impacts from rail freight:¹²⁴

¹²¹ Ibid p 135.

¹²² Ibid.

¹²³ Ibid p 52.

¹²⁴ Ibid pp 140-43.

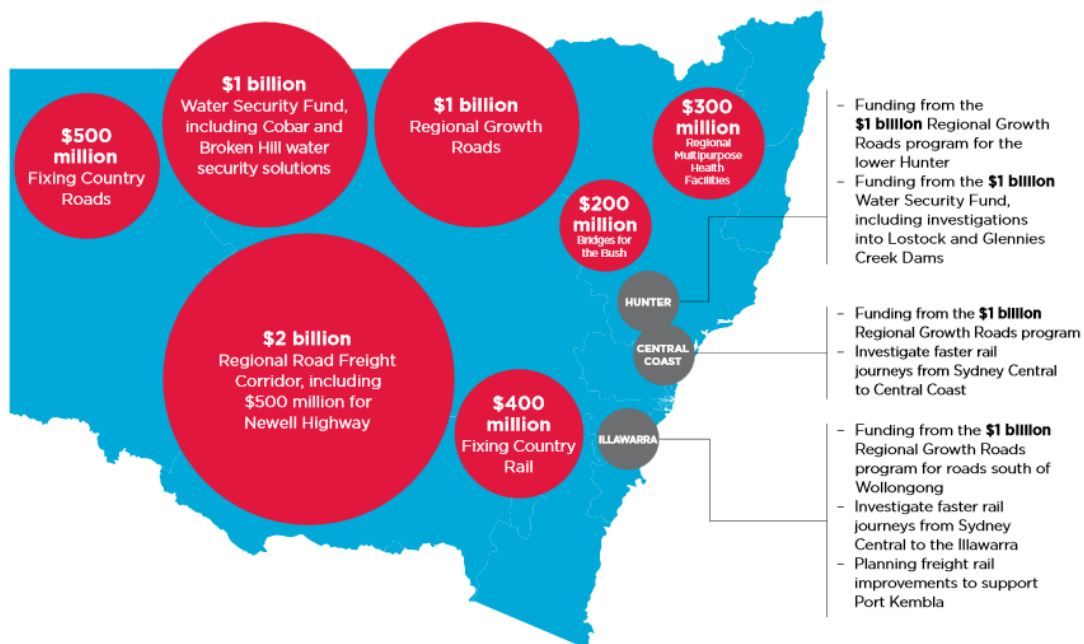
- Assess the cost of congestion for freight users to identify locations where unnecessary costs are being imposed by congestion;
- Implement noise management plans for rail freight, which currently does not have recognised noise standards; and
- Reduce greenhouse gas emissions through low emission technologies and fuels and programs, as well as through efficiency measures outlined under Strategic Action Program 1.

Action 3C relates to the National Rail Safety Law, which was discussed in chapter 4.4.1 of this paper. The 2013 Strategy affirms ongoing NSW Government support for the National Rail Safety Regulator and its implementation of national rail safety reforms.¹²⁵

6.3 Rebuilding NSW: State Infrastructure Strategy 2014

In November 2014 the NSW Government released its *Rebuilding NSW: State Infrastructure Strategy 2014* (2014 Plan), fully adopting the recommendations proposed by Infrastructure NSW in its 2014 State Infrastructure Strategy Update. The 2014 Plan aims to “turbocharge” the State through a \$20 billion investment in new productive infrastructure, the creation of up to 100,000 new jobs, and downward pressure on electricity prices for consumers.¹²⁶

Figure 18: Rebuilding NSW – Regional investment¹²⁷



¹²⁵ Ibid p 148.

¹²⁶ NSW Government, *Rebuilding NSW: State Infrastructure Strategy 2014*, November 2014 p 1.

¹²⁷ Ibid p 7.

The 2014 Plan reserves funding for a wide range of projects, including public transport infrastructure, urban and regional roads, water security, education and health. This includes funding for a range of rail freight projects, including the following:¹²⁸

- Assessment of projects that support rail freight from Port Botany to the Moorebank Intermodal precinct, and projects that secure freight paths for regional exporters at Port Kembla;
- Encouraging the ARTC to increase capacity on the Southern Sydney Freight Line;
- Continuing work to reserve the corridor/site and commence assessment for the Western Sydney Freight Line and Eastern Creek Intermodal Terminal; and
- Gauging private sector interest in construction and operation of the Maldon-Dombarton Railway.

Additionally, the Baird Government committed \$400 million to its *Fixing Country Rail* program from 2018-19. According to the Minister for Roads, Maritime and Freight, much of the program's funding will be invested in grain rail lines and will complement existing work to update these lines:

Since 2011 [the NSW Government has] invested more than \$190 million to upgrade and repair grain rail lines, with another \$150 million committed over the next three years ... A total of \$21 million will be spent on upgrading rail sidings on the country regional network over the next three years, with the first projects at Nevertire and Ardlethan due for completion in September this year.

...

Complementary investment is being undertaken by GrainCorp and Emerald Grain which will ensure these savings are passed on to the growers. This is an important saving: At Ardlethan GrainCorp expects to achieve a saving of up to \$7.80 per tonne, \$2.20 of which is related to rail siding upgrades. A saving of up to \$7.80 per tonne is a substantial saving for a regional industry.

In addition to the work we are currently undertaking our regional rail network, in particular our grain lines, will enjoy a further investment of \$400 million as part of the Rebuilding NSW plan under an initiative to be called Fixing Country Rail.¹²⁹

The final business cases for the *Fixing Country Rail* program are to be completed by mid-2016.¹³⁰

6.4 2014 Plan for Growing Sydney

December 2014 saw the release of *A Plan for Growing Sydney*, which will guide

¹²⁸ Ibid pp 3-4.

¹²⁹ Duncan Gay MP, [Grain Rail Lines](#), NSW Parliamentary Debates, Legislative Council, 2 June 2015, p 19.

¹³⁰ NSW Government, note 126, p 15.

land use decisions in Sydney over the next 20 years. Although the strategy predominantly focuses on issues such as housing production, several goals aim to improve freight networks in Sydney.

The strategy notes that both the Sydney Airport and Port Botany precincts are tightly constrained and have limited room to expand. In response, the NSW Government intends to work with local councils to reduce land use conflict between residential areas and the freight network, and identify and protect strategically located sites that support the freight network.¹³¹

Noise from freight being moved on road and rail is also a sensitive issue for communities living close to freight corridors. The strategy states that the NSW Government and local councils will develop buffer measurements that balance the needs of the freight industry with local communities.¹³²

Additionally, *A Plan for Growing Sydney* emphasises the importance of maintaining strong transport connections between Sydney and regional NSW. In line with this, the NSW Government is to preserve a corridor for the Outer Sydney Orbital to improve freight connections from regional NSW to Sydney Airport and Ports.¹³³

7. COMMONWEALTH GOVERNMENT STRATEGIES

In addition to the NSW Government plans in chapter 6, there are several strategies at the Commonwealth level. Key strategies relevant to the NSW rail freight task are summarised below.

7.1 2011 National Ports Strategy

The *National Ports Strategy*, jointly authored by Infrastructure Australia and the National Transport Commission, was endorsed by COAG in July 2012.¹³⁴ The Ports Strategy emphasises that ports and associated land-side logistics chains are critical to Australian business competitiveness, and that a long-term integrated plan is required to help attract public and private investment in ports and related logistics sectors.¹³⁵

Although the Ports Strategy does not make rail freight-specific recommendations, it warns that Australia will face major efficiency implications if significant improvements are not made to both ports and related landside road and rail systems in the coming decades. The Ports Strategy therefore recommends a collaborative approach for the future development and planning

¹³¹ Ibid.

¹³² Ibid pp 42-3.

¹³³ Ibid p 50.

¹³⁴ COAG, *National Ports Strategy (2011)*, 11 July 2012.

¹³⁵ Infrastructure Australia, National Transport Commission, *National Ports Strategy: Infrastructure for an economically, socially, and environmentally sustainable future*, 2011, p 5.

of Australia's major ports and freight infrastructure.¹³⁶

7.2 2012 National Land Freight Strategy

The COAG Standing Council on Transport and Infrastructure released its *National Land Freight Strategy* in 2012. The long term objectives of the Land Freight Strategy are to ensure:

- an efficient, productive and competitive national land freight system;
- a sustainable land freight system that responds to growth and change; and
- that policies affecting land freight are aligned and coherent across governments.¹³⁷

The Land Freight Strategy complemented a range of existing NSW strategies and policies, including the NSW Long Term Transport Master Plan, and the then-Draft Freight and Ports Strategy and the Draft Plan for Growing Sydney.¹³⁸ Consistent with the NSW strategies, the Land Freight Strategy found that existing freight planning and infrastructure challenges, combined with the forecast doubling of Australia's freight task by 2030, "underpin the case for affording priority attention and focus to the national freight task."¹³⁹

The Land Freight Strategy identifies six major challenges facing freight today that require coordinated policy action by Commonwealth, State, Territory, local governments and industry. These are summarised in the table below.

Table 7: National Land Freight Strategy – challenges facing freight ¹⁴⁰	
Challenges	Responses
<i>Planning for the future</i>	<ul style="list-style-type: none"> • Australian Governments to map key freight routes; • States and Territories to identify funding, regulatory or corridor protection measures for these freight routes; • States and Territories to implement mechanisms for protecting freight corridors and precincts for the growing freight task.
<i>Investing in the right infrastructure</i>	<ul style="list-style-type: none"> • Government investments in freight infrastructure to be made in line with the priorities identified in the long term freight plans; • Governments to progress demonstration projects and initiatives to address specific infrastructure impediments on an ongoing basis.
<i>Better access, investment and charging for heavy</i>	<ul style="list-style-type: none"> • Australian Governments to improve freight access and outcomes as a key deliverable under the Heavy

¹³⁶ Ibid p 7.

¹³⁷ COAG Standing Council on Transport and Infrastructure, *National Land Freight Strategy: A place for freight*, 2012, p 1.

¹³⁸ Then named the "Metropolitan Strategy for Sydney".

¹³⁹ COAG Standing Council on Transport and Infrastructure, note 137, pp 10-12.

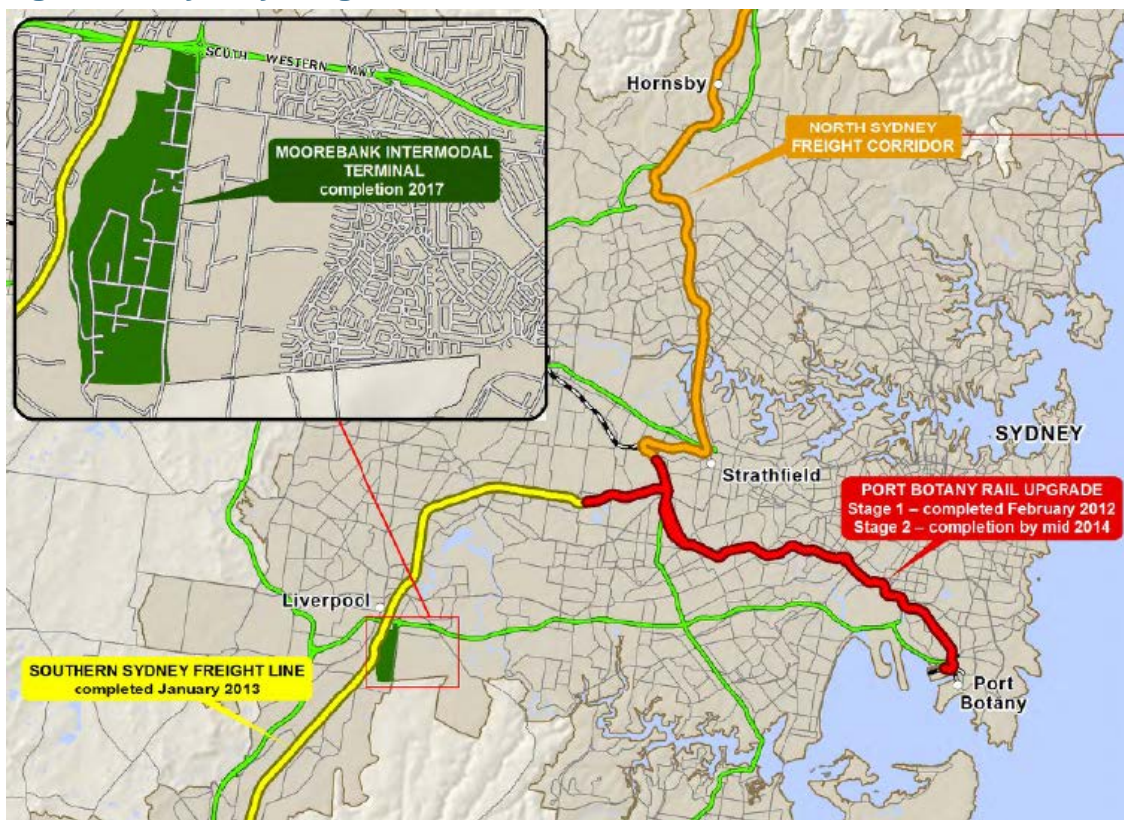
¹⁴⁰ Ibid ch 3.

<i>vehicles</i>	Vehicle Charging and Investment initiative.
<i>Better regulation</i>	<ul style="list-style-type: none"> The Productivity Commission to review the overall economic impact of the national transport regulation reforms by December 2016.
<i>Understanding the freight task</i>	<ul style="list-style-type: none"> The Commonwealth Department of Infrastructure and Transport, through BITRE, to: <ul style="list-style-type: none"> Commence publishing freight data in the form of a series of short publications by December 2013; Produce nationally consistent freight data by December 2014.
<i>Building community support</i>	<ul style="list-style-type: none"> Industry to work with all tiers of government to enhance community engagement on the value and importance of the freight task by December 2014.

8. RAIL PROJECTS

A number of rail freight infrastructure projects in NSW have been either completed in recent years, are currently under construction, or have been proposed by the NSW Government. A map of Sydney's freight network projects is shown below:

Figure 19: Sydney freight network¹⁴¹



¹⁴¹ Department of Infrastructure and Transport, note 61, p 3.

This chapter provides an update for some of the projects discussed in the 2009 NSW Parliamentary Research Service Paper, *Rail Freight Transport in NSW*. It also sets out the details of more recent projects.

8.1 Completed projects

8.1.1 Southern Sydney Freight Line

The Southern Sydney Freight Line is a 36 kilometre dedicated freight line between Macarthur and Sefton in south west Sydney (Figure 20). The SSFL is bi-directional, non-electrified and predominantly contained within the existing RailCorp rail corridor.¹⁴²

Figure 20: The Southern Sydney Freight Line¹⁴³



¹⁴² H Park, note 8, p 22.

¹⁴³ Ibid p 23.

As part of its lease commitment with the NSW Government, the ARTC initiated and funded the construction of the SSFL, which began in October 2008 and commenced operations in January 2013.¹⁴⁴ The SSFL's main objective is to enable the flow of goods to and from Sydney during peak passenger hours. Prior to its completion, passenger operations were given priority access, limiting freight access to the network between peak periods. Now operational, the SSFL improves reliability for passenger and freight rail movements, increases flexibility for timetabling of freight services, and may help shift some of the growing road freight task to rail.¹⁴⁵

8.1.2 Port Botany Rail Upgrade

In order to improve rail access arrangements to Port Botany, the Abbott Government provided \$145 million in funding for the Port Botany Rail Line Upgrade in the 2014-15 Budget.¹⁴⁶ The project, which complements the Southern Sydney Freight Line and other Metropolitan Freight Network upgrades, was completed in two stages.

Stage 1 was completed in February 2012 and removed a significant bottleneck between the Port Botany Rail Yard and port terminals, while also improving safety and operating arrangements.¹⁴⁷ Stage 2 was completed in January 2015, and included the following components:

- Major reconfiguration and signalling of Port Botany rail yard, which is the interface between ARTC's rail network and the stevedores, reducing congestion and increasing capacity
- A train staging area at Enfield, to hold and re-sequence trains away from the Port
- Additional signalling to effectively extend double tracks from Cooks River to Mascot
- Complete separation of signalling systems from Sydney Trains passenger operations
- Dedicated network control with ARTC, operated from its Junee Control Centre.¹⁴⁸

The Port Botany Rail Upgrade resulted in the separation of the ARTC Metropolitan Freight Network from the Sydney Trains rail network. It is expected to increase capacity, reduce congestion, enhance efficiency and streamline freight operations.¹⁴⁹

¹⁴⁴ Ibid; Anthony Albanese, '[New Line to Reduce Congestion on Sydney Rail Network Opens](#)', Media Release, 21 January 2013.

¹⁴⁵ Transport for NSW, note 1, p 110.

¹⁴⁶ ARTC, '[Port Botany Rail Upgrade Commissioned](#)', Media Release, 16 January 2015; Jamie Briggs, '[Building New South Wales' Transport Infrastructure for the 21st Century](#)', Media Release, 13 May 2014.

¹⁴⁷ Department of Infrastructure and Transport, note 61, p 2.

¹⁴⁸ ARTC, '[Port Botany Rail Upgrade Commissioned](#)', Media Release, 16 January 2015

¹⁴⁹ Ibid.

8.2 Ongoing projects

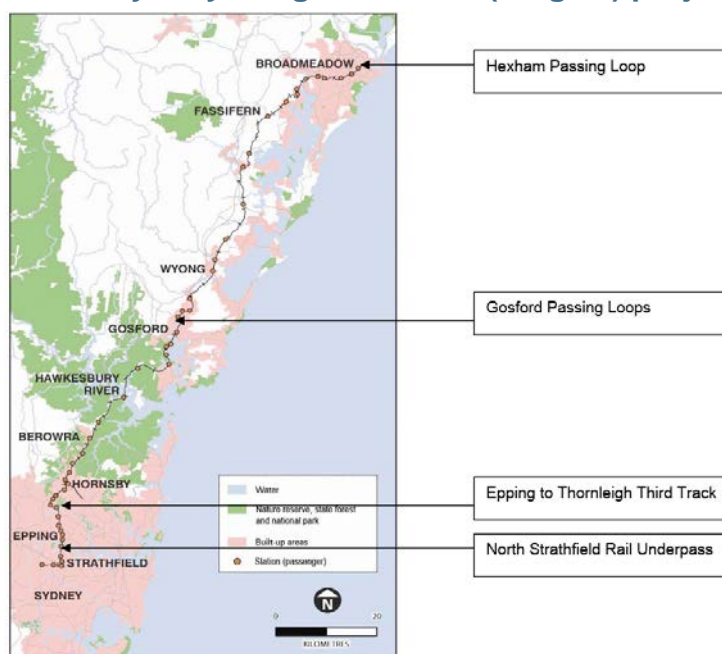
8.2.1 Northern Sydney Freight Corridor (Stage 1)

Stage 1 of the Northern Sydney Freight Corridor is a \$1.1 billion suite of infrastructure upgrades that are designed to improve access and reliability for freight trains travelling between North Strathfield and Broadmeadow.¹⁵⁰

The Northern Sydney Freight Corridor is comprised of four projects:

Project name	Project purpose
<i>Hexham Passing Loop</i>	Provides space for holding freight trains before they enter the shared passenger and freight rail network.
<i>Gosford Passing Loops</i>	Construction of two passing loops that allow passenger trains to overtake freight trains.
<i>Epping to Thornleigh Third Track</i>	A new third track to separate northbound freight from all-stops passenger train movements along the steep incline between Epping and Thornleigh.
<i>North Strathfield Rail Underpass</i>	A tunnel to remove the need for freight trains to cross over existing tracks.

Figure 21: Northern Sydney Freight Corridor (Stage 1) projects¹⁵²



The Hexham Passing Loop was completed and opened in 2012. The remaining three projects are scheduled for completion in 2016.¹⁵³

¹⁵⁰ Ibid p 192.

¹⁵¹ Transport for NSW, *Northern Sydney Freight Corridor: Fact Sheet*, April 2014.

¹⁵² Transport for NSW & Government of Australia, *Northern Sydney Freight Corridor Strategic Review Report*, July 2012, p 6.

¹⁵³ Transport for NSW, *Northern Sydney Freight Corridor Program*, 20 November 2014.

The Northern Sydney Freight Corridor is funded by the NSW and Commonwealth Governments. It is also subject to an agreement between TfNSW, RailCorp and the ARTC that delivers certainty of access for freight trains, preserving the Northern Sydney Freight Corridor for freight operations for 20 years upon completion.¹⁵⁴ According to TfNSW, the Northern Sydney Freight Corridor is expected to make rail freight more competitive by:

- Improving freight train access through northern Sydney to the metropolitan freight network, Port Botany and container freight terminal;
- Reducing freight transport operating costs;
- Easing peak hour restrictions on freight services; and
- Improving reliability of passenger services on the Main North Line.¹⁵⁵

8.2.2 Enfield Intermodal Logistics Centre

The Intermodal Logistics Centre at Enfield was developed in response to growing container trade through Port Botany, which grew at a compound annual growth rate of 8.9% per annum between 2002-03 and 2007-08, and is expected to more than double 2007-08 volumes by 2027-28.¹⁵⁶

The Enfield Intermodal Logistics Centre is part of a network of existing and planned intermodal terminal facilities in Sydney, and is expected to service around a quarter of the State's intermodal demand.¹⁵⁷ According to Sydney Ports, the Enfield Intermodal Logistics Centre consists of the following:

- an intermodal terminal in a 13 hectare area, where a total of 300,000 TEUs [twenty-foot equivalent units] can be moved into and out of the site. These containers will be moved on and off trains and trucks utilising two 920 metre rail sidings and the adjacent through line;
- five warehouses close to 52,500 square metres where around one third of the import containers would be unpacked for delivery and one sixth of the containers packed for export;
- a light industrial and commercial area, comprising up to 40,000 square metres.
- two road access points linking to Roberts Road and the Hume Highway through industrial areas;
- empty container storage areas;
- on-site traffic management and queuing; and
- a six hectare ecological area.¹⁵⁸

The main construction works for the Enfield Intermodal Logistics Centre

¹⁵⁴ Transport for NSW, note 1, p 192.

¹⁵⁵ Ibid.

¹⁵⁶ Sydney Ports, [Intermodal Logistics Centre at Enfield: Project Overview](#), November 2008, p 1.

¹⁵⁷ Ibid.

¹⁵⁸ Ibid p 4.

commenced in July 2011 and were completed in December 2013, with some operational activity commencing on 28 March 2015.¹⁵⁹ It is expected to operate at full capacity by 2016.¹⁶⁰

8.2.3 Hunter Valley Strategy

The Hunter Valley Coal Chain is the largest coal export operation in the world, comprising approximately 35 coal mines, 31 coal train loading points, four above-rail operators, and three coal terminals. Its freight is transported to coal terminals at the Port of Newcastle, which see the movement and loading of over 1,400 coal vessels per year.¹⁶¹

Figure 22: Hunter Valley Coal Chain¹⁶²



In 2005, a year after commencing its lease of the Interstate and Hunter Valley rail networks, the ARTC began releasing annual Hunter Valley infrastructure enhancement strategies. The purpose of these strategies is “to significantly increase the coal throughput of the Hunter Valley rail network by resolving capacity constraints.”¹⁶³

The most recent annual strategy, the *2014-2023 Hunter Valley Corridor Capacity Strategy*, is the eighth in the series.¹⁶⁴ It aims to increase the coal throughput of the Hunter Valley rail network by identifying and resolving capacity constraints.

¹⁵⁹ NSW Ports, *Intermodal Logistics Centre (ILC) at Enfield*, n.d.

¹⁶⁰ Sydney Ports, note 156, p 4.

¹⁶¹ Legislative Council, General Purpose Standing Committee No 5, *The performance of the NSW Environment Protection Authority*, Report 40, February 2015, p 31.

¹⁶² Infrastructure NSW, note 23, p 139.

¹⁶³ H Park, note 8, p 25.

¹⁶⁴ ARTC, *2014-2023 Hunter Valley Corridor Capacity Strategy*, July 2014, p 3.

As explained below, the Eighth Capacity Strategy identifies future capacity issues, and sets out how the ARTC will keep rail corridor capacity ahead of coal demand:

The fundamental approach of ARTC in developing this Strategy has been to provide sufficient capacity to meet contracted volumes based on the principles of the ARTC Hunter Valley Access Undertaking (HVAU), while also having regard to and identifying those projects that would be desirable to accommodate prospective volumes that have not yet been the subject of a contractual commitment.¹⁶⁵

The Eighth Capacity Strategy reported that currently contracted export coal volumes will increase from 168.7 metric tonnes per annum (mtpa) in 2014 to 191.5 mtpa in 2016, after which they will stabilise. Prospective volumes are also forecast to increase substantially, from 3.6 mtpa in 2015 to 85.2 mtpa by 2021.¹⁶⁶

Figure 23: Forecast volume at Newcastle Port compared to assumed port capacity (mtpa)¹⁶⁷



The Strategy concluded that this growth would necessitate the development of the proposed Terminal 4 (T4) on Kooragang Island, as well as additional terminal capacity in advance of the T4 development.¹⁶⁸ The T4 coal terminal has received approval from the Planning Assessment Commission, despite claims of a softening coal market and community objections.¹⁶⁹ Recent issues related to coal freight are discussed further in chapter 9.1.

The Strategy also highlighted projects that would improve efficiency and rail

¹⁶⁵ Ibid.

¹⁶⁶ Ibid.

¹⁶⁷ Ibid p 8.

¹⁶⁸ Ibid p 3.

¹⁶⁹ ABC News, [\\$5bil Newcastle T4 coal terminal gets PAC thumbs up](#), 16 December 2014.

capacity, with examples including:¹⁷⁰

- Increasing train speed and length between Ulan and Muswellbrook, as well as constructing a bypass and additional passing loops;
- Continued signalling works between Muswellbrook and Hexham, and a concept assessment for a bi-directional third track between Farley and Maitland; and
- Development of the Hexham Holding Road project, which involves the construction of a five track re-sequencing facility to manage disruption for volumes above 180 mtpa.

8.3 Proposed projects

8.3.1 Moorebank Intermodal Precinct

The NSW and Commonwealth Governments have identified the Moorebank Intermodal Precinct as an important strategic location to increase Sydney's intermodal capacity.¹⁷¹ Both Governments are working together to develop the Precinct: the Commonwealth ran the tender for its construction and has worked with the NSW Government on landside access issues.¹⁷²

The Precinct is to be developed over the short to medium term¹⁷³ and will involve the construction of two intermodal terminals:

- The Moorebank Intermodal Terminal, to be developed by the Moorebank Intermodal Company, a Commonwealth Government Business Enterprise;¹⁷⁴ and
- The privately funded Sydney Intermodal Terminal Alliance (SIMTA), a joint venture between Qube Holdings and Aurizon.¹⁷⁵

Benefits of the Precinct include: helping ease the Port Botany bottleneck; meeting the existing intermodal shortfall within Sydney; reducing road congestion; and improving national productivity.¹⁷⁶

Additionally, Infrastructure NSW notes that once the Precinct is complete, the NSW and Commonwealth Governments will be able to commence a number of other major freight infrastructure projects:

The opening of new intermodal terminals at Enfield and Moorebank and the expanded use of existing terminals at Chullora, Minto and Yennora may provide an impetus for movement of containers by rail within the Sydney metropolitan area. A number of capital projects and operational improvements could be

¹⁷⁰ ARTC, note 164, pp 19, 21, 27.

¹⁷¹ Transport for NSW, note 1, p 122.

¹⁷² Infrastructure NSW, note 50, p 148.

¹⁷³ Transport for NSW, note 13, p 295.

¹⁷⁴ Moorebank Intermodal Company, *History*, 2013.

¹⁷⁵ Sydney Intermodal Terminal Alliance, *Who is SIMTA?*, 2015.

¹⁷⁶ Moorebank Intermodal Company, *Why we need the terminal*, 2013.

undertaken in partnership with the Commonwealth Government and the private sector.¹⁷⁷

On 4 June 2015, the Commonwealth Government approved the Moorebank Intermodal Company (MIC) entering into an agreement with SIMTA to develop the two projects on a whole of precinct basis. Under the terms of the agreement, the two tracts of land will be combined under a land trust and leased to SIMTA for 99 years.¹⁷⁸

Key dates for the Precinct's construction are shown below:

- Mid 2015 – MIC is seeking concept approval for development on the MIC site and SIMTA is seeking project approval for the first stage of development on the SIMTA site.
- Late 2015 – construction commences on the rail connection and the first stage of the IMEX terminal and warehousing on the SIMTA site.
- Late 2017 – operation of the first stage of the IMEX terminal commences.
- Late 2019 – operation of the first stage of the interstate terminal commences.¹⁷⁹

8.3.2 Western Sydney Freight Line and Eastern Creek Intermodal Precinct

In its 2012 State Infrastructure Strategy, Infrastructure NSW recommended that the NSW Government, while waiting to determine if the State's short haul import export intermodal market was viable, should identify and preserve a rail corridor for a Western Sydney Freight Line and land for an intermodal terminal at Eastern Creek.¹⁸⁰

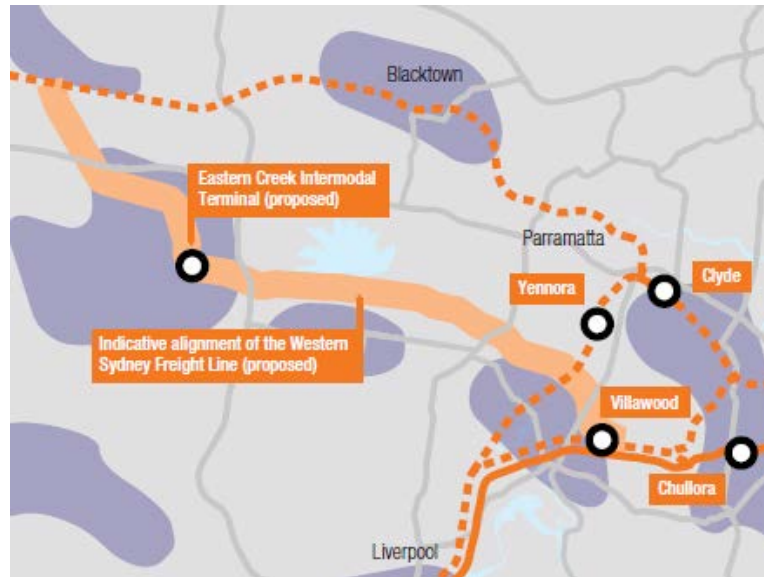
¹⁷⁷ Infrastructure NSW, note 50, p 57.

¹⁷⁸ Moorebank Intermodal Company, SIMTA, ['Government approves MIC and SIMTA agreement to develop and operate Moorebank Intermodal Terminal'](#), Media Release, 4 June 2015.

¹⁷⁹ Moorebank Intermodal Company, [Fact Sheet: Moorebank Intermodal Freight Precinct](#), June 2015.

¹⁸⁰ Infrastructure NSW, note 23, pp 124-26.

Figure 24: Western Sydney Freight Line and Eastern Creek Intermodal Precinct¹⁸¹



The 2012 Master Plan and the 2013 Strategy both stated that the NSW Government would identify and preserve land for the long term development of these projects.¹⁸² Both noted that, without these projects, it was unlikely that goals for an increased rail freight modal share would be met.¹⁸³

Infrastructure NSW reiterated its recommendation in its 2014 State Infrastructure Strategy update, and further recommended that work commence to assess the full development of the Western Sydney Freight Line and Eastern Creek Intermodal Precinct.¹⁸⁴ It outlined the benefits of these projects and their estimated costs:

Currently, the WSEA [Western Sydney Employment Area] is dependent for its freight needs on heavy vehicle transport. By 2036, 4.3 million truck kilometres a year could be saved through the WSFL and terminal precinct project.

Preservation of the corridor and site is required due to rapid urban development in the region, in particular in the WSEA. This will avoid the need for costly acquisition and retrofitting of urban areas to accommodate future freight rail access. It will also ensure that sufficient capacity is available for warehousing and empty container facilities close to the proposed intermodal terminal at Eastern Creek. The estimated project cost is \$2.2 billion.¹⁸⁵

8.3.3 Northern Sydney Freight Corridor (Stages 2 & 3)

The 2012 Master Plan and the 2013 Strategy stated that the NSW Government

¹⁸¹ Ibid p 125.

¹⁸² Transport for NSW, note 13, pp 209, 297-8; Transport for NSW, note 1, pp 99, 108, 121.

¹⁸³ Transport for NSW, note 13, p 298; Transport for NSW, note 1, p 128.

¹⁸⁴ Infrastructure NSW, note 50, p 63.

¹⁸⁵ Ibid, pp 62-3.

would seek funding from the Commonwealth Government to commence planning and delivery for Stages 2 and 3 of the Northern Sydney Freight Corridor.¹⁸⁶ The 2013 Strategy made the following comments about these future stages:

The Northern Sydney Freight Corridor (NSFC) program is needed to resolve the rail constraints between Strathfield in Sydney and Broadmeadow in Newcastle on the east coast interstate rail freight network to meet medium to long-term freight demand. This proposal seeks detailed planning works required for NSFC Stage 2 and 3. Construction of stages 2 & 3 is estimated to be required by 2028.¹⁸⁷

According to TfNSW, Stage 2 and 3 projects have not been fully defined or costed. This will not occur until after Stage 1 is fully delivered in mid-2016.¹⁸⁸

8.3.4 Maldon–Dombarton Railway

The Maldon-Dombarton Railway is a proposed 35 kilometre single track dedicated rail freight line between Maldon, in the Southern Highlands, and Dombarton, near Port Kembla.¹⁸⁹

Figure 25: Maldon-Dombarton Railway and nearby road and rail network¹⁹⁰



The Railway was initially proposed in the early 1980s to provide improved linkages between the southern and western NSW coalfields and the newly constructed Port Kembla coal terminal.¹⁹¹ However, construction was cancelled

¹⁸⁶ Transport for NSW, note 13, p 285; Transport for NSW, note 1, p 209.

¹⁸⁷ Transport for NSW, note 1, p 210.

¹⁸⁸ According to advice received from Transport for NSW, 27 May 2015.

¹⁸⁹ Transport for NSW, *Maldon to Dombarton Railway*, 10 April 2015.

¹⁹⁰ Infrastructure NSW, note 50, p 65.

¹⁹¹ Transport for NSW, note 1, p 194.

in 1988 following a global economic downturn and the closure of several coal mines in the region.¹⁹²

In 2009, the Commonwealth Government commissioned a pre-feasibility study into the Maldon-Dombarton Railway. The pre-feasibility study noted:

- Significant site construction, research and detailed design [has] 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.¹⁹³

A follow-up feasibility study was conducted in 2011. It found that construction of the Railway would take three to four years and cost between \$624 and \$667 million. The 2011 study reported that the benefits of the Railway included increased efficiency for train operators and a net reduction in noise and pollution impacts. However, it also expressed concern about the project's benefit-cost ratio of 0.56 (meaning that estimated economic benefits would comprise only 56% of capital costs).¹⁹⁴

The NSW Government has given conditional support for the Railway. The 2013 Strategy stated that future operations will likely be freight only and involve diesel locomotives. It was also noted that construction works must address the following issues:

- The environmental and contamination issues associated with building and operating a diesel hauled railway through part of the Sydney water catchment.
- Re-design of the tunnel to effectively deal with emissions from freight trains in a 4 kilometre long tunnel. Loaded trains from Port Kembla would be climbing a 1:30 grade and tunnel design would need to ensure locomotives are able to operate optimally.
- Modern fire and life safety controls associated with tunnel operations.¹⁹⁵

¹⁹² H Park, note 8, p 29.

¹⁹³ Australian Government & Port Kembla Port Corporation, [Maldon-Dombarton Rail Line Pre-Feasibility Study for Port Kembla Port Corporation Report](#), July 2009, p i.

¹⁹⁴ ACIL Tasman, [Maldon-Dombarton Rail Link Feasibility Study: Final Report](#), September 2011.

¹⁹⁵ Transport for NSW, note 1, p 195.

In October 2014 TfNSW opened a Registration of Interest process for the Maldon-Dombarton Railway, inviting private sector organisations to outline how they would construct, operate and maintain the Railway. The Registration of Interest closed on 10 April 2015, and TfNSW is currently evaluating the responses.¹⁹⁶

8.3.5 Inland Rail programme

Following two major studies conducted in 2006 and 2010, the Commonwealth Government commissioned the ARTC to design and construct the Inland Rail programme, a rail line west of the Great Dividing Range linking Melbourne and Brisbane.¹⁹⁷ The proposed route for the Inland Rail programme is based on the alignment proposed in the 2010 Inland Rail Alignment Study, and can be seen in Figure 12.

Key project information is outlined below:

- Inland Rail will deliver a transit time for freight between Melbourne and Brisbane that is competitive with road.
- The route would be approximately 1,730 km and would provide a competitive freight price with road.
- Inland Rail will use the existing interstate rail line through Victoria and southern NSW but will require approximately 400 km of track upgrades predominately in NSW and approximately 600 km of new track through northern NSW and south-east Queensland.
- Inland Rail will provide a second link between Queensland and the southern states, ensuring resilience and redundancy for the existing rail network and allow freight travelling from Brisbane to Melbourne to bypass the busy Sydney network.¹⁹⁸

Although the 2010 Study found that the programme was not commercially viable on a standalone basis, it concluded that growing demand for freight movement along the corridor would result in positive financial returns once operations commenced between 2030 and 2035.¹⁹⁹

The Commonwealth Government has committed \$300 million to enable pre-construction activities for the Inland Rail programme, including detailed corridor planning, environmental assessments, and community consultation.²⁰⁰ According to the ARTC, construction is set to commence in 2015, with priority projects in NSW to include track upgrading from Narrabri to Moree and North Star, and from Parkes to Narromine.²⁰¹

¹⁹⁶ Transport for NSW, note 189.

¹⁹⁷ ARTC, [Inland Rail](#), n.d.

¹⁹⁸ Department of Infrastructure and Regional Development, [Inland Rail—a New Rail Connection Between Melbourne and Brisbane](#), 10 April 2015.

¹⁹⁹ ARTC, [Melbourne–Brisbane Inland Rail Alignment Study – Final Report](#), July 2010, p 105.

²⁰⁰ Department of Infrastructure and Regional Development, note 198.

²⁰¹ ARTC, [Inland Rail](#), n.d.

9. RECENT ISSUES

9.1 Coal dust pollution

As discussed in chapter 5.2, considerable environmental benefits may arise if rail increases its share of the freight task. This is because many costly environmental and social issues that affect the road network, such as congestion, traffic accidents, urban amenity, road wear, and air pollution, affect the rail network to a much lower degree.²⁰²

Nevertheless, rail freight is not free of environmental problems, having its own unique issues that must be addressed. Examples of these issues were summarised in the 2009 NSW Parliamentary Research Service Paper, [*Rail Freight Transport in NSW*](#):

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.²⁰³

The 2009 Paper discusses a number of rail freight-related environmental issues, including operational rail noise, construction and maintenance noise, and air pollution. The focus of this briefing paper is on air pollution, specifically coal dust pollution in the Hunter Valley.

9.1.1 Health impacts

There is significant ongoing debate regarding the health impacts of the Hunter Valley coal mining industry. The Hunter Valley coal mining industry has faced criticism for its health and environmental impacts on local communities. Critics of the industry include the Climate and Health Alliance, which summarised these impacts as follows:

The impacts on local communities in the Hunter Valley include exposure to harmful air, noise and water pollution, distress associated with social disruption, and a sense of abandonment as governments prioritise the interests of the coal industry above that of the community. Government regulations are failing to protect the community and the Hunter Valley's natural assets from the negative impacts of the region's intensive coal mining and coal combustion industries.²⁰⁴

The Climate and Health Alliance reported that both short and long term health risks are associated with exposure to particulates from mining, including increased hospital admissions, heart attacks and strokes, lung cancer, and

²⁰² H Park, note 8, p 14.

²⁰³ Ibid p 17.

²⁰⁴ Climate and Health Alliance, [*Coal and health in the Hunter: Lessons from one valley for the world*](#), February 2015, p 3.

respiratory disease.²⁰⁵ Coal dust and particulates:

... are produced when coal is transported, loaded and unloaded, and when blown by the wind from coal stockpiles and piles of overburden.

Each year 22,000 trains with four million coal wagons travel through the Hunter Valley to the port of Newcastle. Each wagon is uncovered, so there is no barrier to wind blowing coal dust along the rail corridor, across communities in the Hunter and in the city of Newcastle, which is home to the world's biggest coal export terminal.

Diesel powered coal trains, trucks and other heavy vehicles and machinery used in the coal mining industry also produce air emissions that can be harmful to health. Around 50 per cent of non-road diesel emissions in Australia are estimated to come from mining and construction.²⁰⁶

The Alliance has also argued that the proposed construction of the T4 coal terminal at the Port of Newcastle will increase coal train pollution along the rail corridor through Hunter towns and Newcastle suburbs, and may add up to 363 tonnes of particle pollution to Newcastle's air.²⁰⁷ The ARTC estimated that, on average, over 300 trains use the Hunter Valley network each day, and approximately half of these are coal trains.²⁰⁸

In response, the mining industry has argued that concerns over coal dust pollution have been overstated. According to peak industry body the NSW Minerals Council, available scientific evidence shows that coal trains have not had a significant impact on ambient air quality around the Newcastle rail corridor. The NSW Minerals Council summarises this evidence as follows:²⁰⁹

- The air quality in Newcastle has met national air quality standards 9 of the last 10 years;
- There is little or no evidence that uncovered wagons contribute significantly to particulate air quality in the Newcastle area;
- Monitoring along the rail corridor indicates air quality is comparable to the broader region; and
- Monitoring shows more dust settles next to the highway than the railway.

In 2013, under the terms of its Environment Protection Licence, the ARTC published the results of particulate emissions monitoring undertaken by Katestone Environmental. The report reached the following conclusion:

The monitoring found there was no statistically significant difference in concentrations of Total Suspended Particulates (TSP), PM₁₀ and PM_{2.5} (particulate matter with [a] diameter of 10 micrometres or 2.5 micrometres) between loaded coal trains, freight trains and passenger trains.

²⁰⁵ Ibid p 20.

²⁰⁶ Climate and Health Alliance, note 204, p 12.

²⁰⁷ Ibid pp 39, 43.

²⁰⁸ ARTC, [2014 Annual Report](#), 2014 p 16.

²⁰⁹ NSW Mining, [Rail corridor scientific evidence](#), n.d.

Similar to the previous results, the latest monitoring also found that average concentrations of TSP, PM₁₀ and PM_{2.5} associated with unloaded coal trains, and average concentrations of TSP associated with loaded coal trains, were higher compared to when no train passed the monitoring station.²¹⁰

9.1.2 Inquiry into the performance of the NSW EPA

In February 2015 the Legislative Council's General Purpose Standing Committee No 5 completed its *Inquiry into the performance of the NSW Environment Protection Authority*. As part of the inquiry's terms of reference, it reviewed Environment Protection Authority (EPA) investigations into, and public statements about, coal dust pollution in the Hunter Valley.²¹¹

The inquiry explained how the ARTC is regulated by the EPA, and the pollution reduction programs that have been imposed on the ARTC in recent years:

Under the *Protection of the Environment Operations Act 1997*, the ARTC holds an environment protection licence (EPL) issued by the EPA for railway systems activities. An EPL may include emission and noise limits, pollution reduction programs (PRPs) and monitoring requirements which can drive improvements in the environmental performance of industry over time. The key environmental issues associated with the operation of the rail network are noise and air emissions.

...

Between 2008 and 2013, in response to increasing community concern regarding particulate emissions from coal trains operating on the New South Wales network, the EPA imposed three separate pollution reduction programs (PRPs) on the ARTC. As part of this, the Corporation was required to undertake a series of studies into particulate emissions associated with coal trains.

In response, the ARTC produced three reports. The first report was a 'data gap analysis' which identified dust mitigation options for further review. The second and third reports comprised dust monitoring studies undertaken at sites within the Hunter Rail Corridor.²¹²

The ARTC studies found no appreciable difference between emissions from coal trains and other types of freight trains. However, significant amendments to the second study, and poor communication on the part of the EPA, led to allegations of an EPA cover up.²¹³

Reviewing these allegations, the Upper House inquiry rejected the cover up claims, but made the following recommendations in relation to community concerns over coal dust pollution:

Recommendation 6

²¹⁰ ARTC, '[Results from Particulate Emissions Monitoring in the Hunter Valley Released](#)', Media Release, 31 May 2013.

²¹¹ Legislative Council, General Purpose Standing Committee No 5, note 161, p iv.

²¹² Ibid p 33.

²¹³ Ibid p 45.

That the NSW Environment Protection Authority consult with the new Chief Scientist and Engineer to review the air quality monitoring strategy in the Upper and Lower Hunter, including a survey of international data and policy responses to the issue, and request recommendations to devise a monitoring network that will assist with any knowledge gaps and strengthen the confidence of the community. The response from the NSW Environment Protection Authority should include its advice on the method of funding this monitoring network.

Recommendation 7

That, in the event that the Chief Scientist recommends that all coal trains be fully covered and all empty wagons be washed to reduce coal dust emissions, the NSW Environment Protection Authority amend the relevant licences to adopt the Chief Scientist's recommendation.²¹⁴

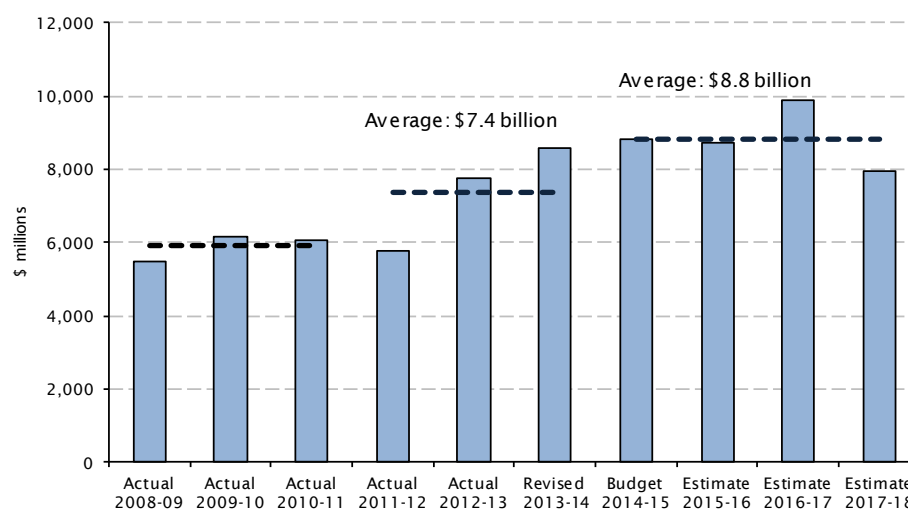
The NSW Government will provide its response to the inquiry in August 2015.

9.2 Rail infrastructure costs

In line with the NSW Government's long term strategic plans, there has been an increase in State infrastructure project funding. According to Infrastructure NSW:

With \$15 billion allocated in 2014–15, State infrastructure expenditure will total \$61.5 billion over the four years to 2017–18. This is a step change in the level of investment in infrastructure – an average 19 per cent higher each year over the next four years than for the three years to 2013–14, and 49 per cent higher than the three years prior to that.²¹⁵

Figure 26: State funded infrastructure program funding²¹⁶



The increase in infrastructure funding has been accompanied by criticism of project costs. Two issues include:

²¹⁴ Ibid p 47.

²¹⁵ Infrastructure NSW, note 50, p 141.

²¹⁶ NSW Government, [2014-15 Infrastructure Statement](#), Budget Paper No 4, p 1-3.

- Concerns that NSW rail infrastructure projects are more expensive than in other parts of Australia; and
- Ineffective planning and review processes that have led to cost overruns and project delays.

9.2.1 Are NSW rail infrastructure projects too expensive?

In 2012 the Legislative Council's General Purpose Standing Committee No 3 completed its *Inquiry into rail infrastructure project costing in New South Wales*. The inquiry considered whether it cost more to build rail infrastructure in NSW than in other Australian States or overseas. Using a 2010 Ernst & Young cost benchmarking study, the Committee concluded that the cost of building new railway infrastructure in NSW was "slightly" higher than other Australian jurisdictions: approximately \$39 million per track kilometre, compared to \$27 million for the rest of Australia.²¹⁷

Although the Committee did not consider this cost difference to be too excessive, it nevertheless recommended that the NSW Government strive to contain rail infrastructure costs where possible. The Committee made nine recommendations directed to TfNSW in order to try and reduce rail infrastructure costs. All were accepted by the NSW Government.²¹⁸

These recommendations included that TfNSW:²¹⁹

- Undertake further research to produce standardised and more accurate cost estimates;
- Investigate higher corporate costs, rail client administrative costs and other costs incurred for rail projects;
- Examine increasing in-house expertise to reduce overreliance on consultants; and
- Establish guidelines for effective risk allocation and procurement models to more effectively manage risk.

9.2.2 Infrastructure project cost overruns

In May 2015 the NSW Auditor-General released its audit on construction costs for key State infrastructure projects. The Report found that since 2010-11 there had been significant cost overruns on several projects:

Our research shows that the 88 construction projects estimated to cost over \$50 million listed in the State Budget (Budget Paper 4) over the period 2010–11 to 2013–14 experienced an overall cost growth of over three per cent after their funding was initially approved. Their estimate to complete grew by \$900 million

²¹⁷ Legislative Council, General Purpose Standing Committee No 3, [Rail infrastructure project costing in New South Wales](#), Report 26, March 2012, pp 20-1.

²¹⁸ NSW Government, [Government response to the inquiry into Rail infrastructure project costing in New South Wales](#), 6 September 2012.

²¹⁹ Legislative Council, General Purpose Standing Committee No 3, note 217, p x.

in total, from \$27.97 billion to \$28.87 billion. Of the 50 such projects which have been completed, their cost grew by some \$720 million in total, from \$10.73 billion to \$11.45 billion, a 6.7 per cent increase. These understate the true level of cost increase because each of the project estimates in the Budget Papers already has a contingency allowance built in to cover unforeseeable occurrences.²²⁰

The Auditor-General examined 17 projects from six agencies as case studies. It found that nine of the 17 projects were responsible for cost overruns totalling \$700 million. Notably, around half of the \$700 million overrun was attributed to the South West Rail Link, which had increased in cost from \$1.365 billion to \$1.789 billion as a result of project scope changes.²²¹

The Auditor-General found low compliance with independent “Gateway” reviews, designed to provide structured and independent snapshots of a project’s status at critical stages; shortcomings in reporting to Treasury and Infrastructure NSW; and inadequate monitoring by Treasury. According to the Auditor-General:

- no mandatory Gateway reviews were undertaken at the justification/option consideration stage
- mandatory final business case Gateway reviews were common, but not universal
- several final business case Gateway reviews were conducted after funding approval
- mandatory post final business case reviews were generally not undertaken
- Gateway review quality improved over time, with recent reviews generally satisfactory.²²²

In response to the Auditor-General’s findings, the secretary of the Department of Premier and Cabinet stated that the NSW Treasury would look at how to manage risks when larger projects made late changes to their scope.²²³

9.3 Privatisation of the ARTC

In 2014 the Commonwealth Government’s National Commission of Audit recommended that the ARTC be privatised. It recommended that a scoping study be undertaken after 2016 in order to determine an appropriate access regime, plus implications for the ARTC’s leases and other considerations stemming from the intergovernmental agreement that established the ARTC.²²⁴ The Commission estimated the value of the ARTC’s fixed assets to be \$4.47

²²⁰ NSW Auditor-General, [Large construction projects: Independent assurance](#), May 2015, p 5.

²²¹ Ibid p 14.

²²² Ibid p 16.

²²³ Geoff Winestock, [NSW auditor slams \\$700m cost blow-out on big projects](#), Australian Financial Review, 7 May 2015.

²²⁴ National Commission of Audit, [Towards Responsible Government: The Report of the National Commission of Audit Phase One](#), Government of Australia, February 2014, p 223.

billion.²²⁵

In its 2015-16 Budget the Abbott Government announced that, as part of its “Smaller Government” reforms, it would undertake a scoping study into options for the future privatisation of the ARTC.²²⁶

The possible privatisation of the ARTC has led to concerns within the rail freight industry. Rail operator Pacific National has warned that privatisation may increase the cost of access for network users, citing the Port of Melbourne’s proposed rent increases of 800% for a new stevedore ahead of a planned \$6 billion sale to the private sector.²²⁷

Credit rating agency Moody’s Investors Services has also indicated that it could downgrade the ARTC’s credit rating if the scoping study results in privatisation. Moody’s commented that the ARTC’s current high Aa2 credit rating²²⁸ is primarily a result of Government ownership:

[The existing credit rating] reflects Moody’s assessment of a high likelihood of support by the Government due to its 100% ownership interest in ARTC, the public policy role and mandate of ARTC as an essential component of the nation’s logistics and strategic framework, and that there is currently no indication that ARTC is targeted for privatization by the Government.

As such, ARTC’s ratings could be lowered if, in Moody’s view, there is a weakening in the likelihood of support from the Government, including the Government making clear its intention for a full or partial sale of its 100% ownership, interest, governance or backing of ARTC, such that it has a reduced incentive to provide support to ARTC in the event of stress.²²⁹

²²⁵ National Commission of Audit, *Towards Responsible Government: The Report of the National Commission of Audit Phase Two*, Government of Australia, March 2014, p 7.

²²⁶ Government of Australia, *Budget 2015-16: Budget Measures*, Budget Paper No 2, p 92.

²²⁷ Andrew White, *Privatisation of Australian Rail Track Corporation will lift costs*, The Australian, 20 May 2015.

²²⁸ Obligations rated Aa2 are judged to be of high quality and are subject to very low credit risk. See Moody’s Investor Service, *Rating Symbols and Definitions*, March 2015, p 5.

²²⁹ Moody’s Investor Service, *Moody’s: No immediate rating impact from government’s announcement of scoping study for ARTC*, Media Announcement, 15 May 2015.

10. CONCLUSION

Should forecasts prove accurate, the NSW freight network faces significant capacity issues in the coming decades as demand for a range of commodities, most notably coal, increases. While the NSW Government believes that its rail freight network should handle increasing volumes of freight, it has nevertheless acknowledged that the existing rail network suffers from a number of capacity and efficiency issues that must be addressed.

Proposed solutions to the challenges were outlined in the 2012 *NSW Long Term Transport Master Plan* and the 2013 *NSW Freight and Ports Strategy*, consistent with the broader goals set out in the *NSW 2021* plan. These strategies have been followed by *Rebuilding NSW*, which set out the funding mechanisms for the priority infrastructure designed to implement the goals outlined in these strategies, and *A Plan for Growing Sydney*, which guides land use decisions in Sydney over the next 20 years.

To date, a number of key projects have been successfully completed, with others currently at various stages of development. A continuing issue in all major infrastructure works is the potential risk of cost blow outs or project delays.

It is acknowledged by many observers, and past and present NSW governments alike, that an expanded rail freight network can bring a range of social, environmental and economic benefits to NSW that the road network cannot match.

However, the NSW rail network is a broad and complex sector, with a freight task that varies immensely in its impact on each local community it affects. While an increase in Sydney's rail freight task may well herald a reduction in emissions and bring with it significant economic benefit, an increase in coal freight in the Hunter Valley risks exacerbating existing environmental and health issues. Such challenges will undoubtedly continue into the future as NSW governments attempt to expand the freight network in a manner that balances economic growth with community expectations and environmental impacts.