

**SUBMISSION TO THE STANDING COMMITTEE
ON STATE DEVELOPMENT, NSW LEGISLATIVE
COUNCIL**

INQUIRY INTO PORT INFRASTRUCTURE IN NSW

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1. Executive Summary

Australia's freight task has been growing at a pace that exceeds gross domestic product. The future NSW freight task will be characterised by increasing total freight volumes and more total freight movements.

In the next two decades the total freight task is forecast to almost double, but the road task is expected to double in just 15 years. The amount of freight transported by road will increase as a result of the trends towards increased containerisation of goods and use of light commercial vehicles.

The NSW Government's decision to earmark Port Botany as the current primary container port is appropriate given forecast freight growth. Port Botany has the capacity to accommodate larger vessels and the proposed port expansion will ensure sufficient additional future port capacity. The Government's decision takes full advantage of existing port infrastructure, established land transport infrastructure and existing economies of scale.

However, the size and nature of the forecast freight task means that more will need to be done in the future to ensure that the road and rail networks are developed in an efficient and coordinated way that facilitates economic growth and minimises congestion, noise and air pollution.

This submission outlines some potential future policy options for a sustainable transport system including policies to increase rail freight, expand full electronic tolling to the entire orbital motorway network and introduce truck tolls and/or peak period pricing.

The direct connections between ports, rail, logistics hubs and motorway networks need to be improved to encourage an increase in rail freight. Motorways should be seen as providing a transport solution along a corridor that addresses freight and passenger transport needs.

New technologies that maximise the capacity of transport infrastructure and operational efficiency should be integrated into the transport system. By 2007 at least three of Sydney's nine motorways will be fully electronic. Existing motorways will need to move to full electronic tolling to maintain current service levels as traffic growth puts increased pressure on the capacity of toll plazas.

From a motorist and business perspective, the whole NSW motorway system should be converted to full electronic tolling in a coordinated way to help maximise its capacity, increase efficiency, reduce congestion and increase travel time certainty. This has already occurred in Victoria and is an issue which will also need to be addressed in Queensland.

The introduction of truck tolls should also be considered to help meet the cost of road wear and tear and improve the efficiency and safety of the asset. The trucking industry should be better serviced with direct links from motorways to service stations, rest and accommodation facilities and intermodal facilities.

As congestion grows over time peak period pricing could increase the efficiency of the network by spreading demand and reducing peak congestion. An orbital network of motorways that is seamless and fully electronic will enable the introduction of peak period pricing.

The Commonwealth and State Government's will need to work together to manage transport demand given the size and nature of forecast increases. The task is too large for any one Government. It is critical that the Auslink white paper outline the level of funding which will be allocated to its implementation and that the level be sufficient given the future transport challenge.

2. Scope of Submission

The Inquiry onto Port Infrastructure in NSW

The Legislative Council Standing Committee on State Development has initiated an inquiry into the Government's ports growth plan which was announced by the Premier on the 5 October 2003. The inquiry's terms of reference are to examine and report on port infrastructure in NSW, particularly:

- the NSW Government's Port Growth Plan, including any planned closure of shipping freight facilities in Sydney Harbour
- the economic, social and environmental impact on the State, including on the proposed Port Botany upgrade
- the employment implications for Sydney, the Hunter and Illawarra regions
- the current and future infrastructure needs and social impacts including with respect to the adequacy of existing road and rail infrastructure, and
- the future of public land at Millers Point, Glebe Island and White Bay on which shipping freight operations are currently located.

Scope of Transurban's Submission

Transurban's submission focuses on the term of reference relating to current and future infrastructure needs and the adequacy of existing road and rail infrastructure.

The discussion in this submission is framed around the following themes:

- Transurban supports the NSW Ports Growth Plan and in particular the proposal to expand Port Botany in the first instance to cater for forecast trade growth
- Transurban supports the integration of modal share targets into infrastructure planning to ensure sustainable development and efficient freight transport
- Discussion of a range of policy options that could help manage the freight task into the future as freight continues to grow.

3. The Transurban Group

Transurban was established in Australia in 1996 to develop, finance, own and operate Melbourne's CityLink – one of the world's largest privately financed urban toll roads. Transurban now also has a 40 per cent equity stake in Sydney's Westlink M7 and holds the electronic tolling and customer service contracts for the road.

Transurban is a top 100 listed company with an enterprise value of \$4.5 billion.

Transurban is recognised as a pioneer in the development and operation of fully electronic toll roads. Full electronic tolling means that tolls are collected electronically as motorists pass underneath overhead gantries – there are no toll booths or boom gates and motorists don't have to stop or slow down to pay tolls.

CityLink is one of only three fully electronic toll roads worldwide and is regarded as the most efficient in the world. The success of CityLink, Australia's first fully electronic toll road, has led to the development of another three fully electronic toll roads in Sydney – the Cross City Tunnel, Lane Cove Tunnel and Westlink M7.

The NSW Government has decided that all new toll roads will be fully electronic and has committed to phasing out toll booths on existing motorways when there is a critical mass of electronic tag users¹. No date has been specified for this transition.

Transurban has learnt, from its experience on CityLink, that private sector roads have to be managed seamlessly within the whole transport network. This means private operators have to work closely with the government and the community. The focus when building, owning and operating a toll road must be on the whole life of the asset and on whole-of-network issues.

Transurban welcomes the opportunity to make a submission to this inquiry and to participate in the public debate on the management of freight in NSW.

¹ NSW ALP, Election Policy, 2003

4. The Freight Task

Australia's freight task has been growing at a pace that exceeds gross domestic product (GDP) and this is forecast to continue. The freight task has grown by 315 per cent since 1971 compared to GDP which has increased by just 135 per cent².

In the next two decades, the total freight task is forecast to almost double, but the road freight task is expected to double in just 15 years³. Currently, 85 per cent of freight in Australia is transported by road.

Larger Sea Freight Vessels

International trends towards the use of larger vessels to reduce shipping costs and improve sea freight efficiency will impact on the number of freight movements. The larger vessels will only be able to dock at large ports that have sufficient water depth, berth length, terminal space and/or adequate handling equipment. Freight from these larger vessels will then need to be transhipped either by road or by smaller vessels to their final destination. The transhipping of freight is likely to lead to an increase in the total number of freight movements in NSW.

Increasing number of Light Commercial Vehicles

The increasing number of light commercial vehicles (LCVs) in the NSW freight fleet will impact on the number of freight vehicles on roads. The use of LCVs is growing quickly to meet the demands of the growing 'just in time' logistics service industry, the small package delivery industry and the e-commerce market.

The LCV freight fleet has increased by 300 per cent in recent decades and the number of LCVs is forecast to grow to over 3 million in 2020, up from 1.74 million in 2000. Total kilometres travelled by LCVs are also projected to increase to over 50 billion kilometres in 2020, up from 30 billion kilometres in 2000⁴.

² Austroads, Planning For Freight in Urban Areas – Report 21, July 2003.

³ Department of Transport and Regional Services, Auslink Green Paper, p12, November 2002.

⁴ Bureau of Transport and Regional Economics

Manufacturers and suppliers want to drive further productivity through improving the efficiency of the logistics chain. Real savings are expected to arise from shortening the delivery time from factory to shopfront. Larger manufacturers are looking to deliver some perishable and non-perishable goods several times a day to meet demand direct to customers and eliminate the need for distribution and storage centres. Some top selling supermarket items already have sufficient daily turnover to enable small trucks to deliver several times a day as needed direct onto the shop floor. This means a move towards an increase in the number of light commercial vehicles on the road network.

Increased Containerisation of Freight

The trend towards increased containerisation of goods will increase pressure on the road network, as containers are more likely to be carried by road than bulk freight which is generally carried on rail. Goods that have traditionally been shipped in bulk such as coal and grain are increasingly being containerised because it improves quality control and enables the delivery of small volumes direct to the point of demand.

The Bureau of Transport Economics estimates that between 2001/2 and 2010/11 the combined level of import and export containers handled in Australia is likely to grow by about 5 per cent per annum from 2.2 million TEU⁵ to 3.8 million TEU⁶. Domestic container movements are also forecast to grow at about 8 per cent per annum over the same period⁷.

Containerised intrastate road freight is forecast to grow at 4.3 per cent per annum to 2020 and containerised interstate road freight at 5.1 per cent per annum. These growth rates will see containerised intrastate road freight more than double in 20 years and interstate road freight almost triple⁸.

⁵ Twenty-foot Equivalent Units (TEU)

⁶ Bureau of Transport Economics, Australia's Seaborne Containerised Freight, Information Sheet 20, 2002.

⁷ Bureau of Transport Economics, Australia's Seaborne Containerised Freight, Information Sheet 20, 2002.

⁸ Department of Transport and Regional Services, Auslink: green paper, 2002, p 13.

Impact on Western Sydney

Western Sydney is an important manufacturing and distribution centre and a significant origin/destination for freight⁹. The Port Botany area is currently the destination/origin of just over 40% of export TEU and about 15% of import TEU. By comparison, Western Sydney is the destination/origin of over 36% of export TEU and over 62% of import TEU.

Western Sydney is likely to grow in importance as an origin or destination for freight in NSW as its economy and population increase. In 2002 the economic output of Greater Western Sydney area was \$54 million making it the third largest economy in Australia behind Sydney CBD and Melbourne¹⁰. The population is also growing fast with 30,000 of the 50,000 people that come to NSW each year choosing to live in Western Sydney. Population growth is forecast to continue as 80 per cent of all land forecast for new residential development in Sydney is in Western Sydney¹¹.

The rise in importance of Western Sydney as an origin or destination for freight will impact on the number of freight kilometres travelled. Freight will be travelling longer distances from Port Botany to Western Sydney for processing and distribution. Currently, 75 per cent of containers from Port Botany are transported by road and only 25 per cent are transported by rail. Western Sydney currently handles the total metropolitan rail freight share through its four intermodal terminals - Camellia (40%), Clyde (7%), Yennora (40%) and Villawood (13%).

The number of freight movements in Western Sydney will increase as freight is distributed around Western Sydney and to other parts of Sydney. Most of these movements will be by road – 85 per cent of freight is currently transported by road. This will place increasing pressure on the road network particularly when it is considered that currently up to 95 per cent of all trips in Western Sydney are currently done by car.

⁹ Sydney Ports Corporation.

¹⁰ Greater Western Sydney Economic Development Board, http://www.gws.org.au/regional_profile.htm

¹¹ Greater Western Sydney Economic Development Board, <http://www.gws.org.au/population.htm>

The future NSW freight task will, therefore, be characterised not only by increasing total freight volumes but also by increases in the number of freight movements. A growing proportion of the freight task will be carried by road supported by the trend towards containerisation of goods and the use of LCVs. This will mean more freight and freight vehicles moving on NSW roads and if it is not properly managed congestion will increase affecting local amenity and noise and air pollution and inhibiting economic development in the region and the State. Managing the freight challenge will require careful planning.

5. NSW Government's Ports Growth Plan

The freight and transport sectors are strategically important to the vitality of the national and NSW economies. In 2000-01 the transport sector accounted for 4.9 per cent of total economic activity and contributed around \$31 billion to the national economy¹².

The competitiveness of industries such as manufacturing depends on the existence of an efficient transport system which is capable of delivering goods to domestic and international markets efficiently. These industries are important sources of employment and contribute to economic growth. Supporting these industries requires the development of highly efficient transport networks which integrate all modes and strengthens their competitiveness.

The cost of transporting goods is a major contributor to the final cost of products. This is because the full extent of cost savings generated over the last fifty years from the development and application of technology to industry and transport related operations have not been passed on. Addressing this issue and maintaining competitiveness will require increased integration of port and land based operations.

It is sensible to prepare for the future of the freight industry and forecast freight growth. The ports growth plan sets broad directions for the development of future port facilities and provides certainty for market mechanisms driving shipping and related infrastructure

¹² Department of Transport and Regional Services, Auslink: green paper, 2002, p2.

investment. Future investment in technically advanced and high capacity port equipment is costly and significant lead times are required.

The decision to earmark Port Botany as the current primary container port is appropriate given the size and nature of forecast freight growth. Port Botany has the capacity to accommodate larger vessels and the proposed port expansion will ensure sufficient additional capacity to meet future freight growth. The decision takes full advantage of existing port infrastructure, established land transport infrastructure and existing economies of scale.

The NSW Government has been committed to the completion of an orbital network of motorways to improve efficiency of road transport within and around Sydney including the Eastern Distributor, the M5 and the M5 East. The missing parts in the orbital network are now under development including the Lane Cove Tunnel, Cross City Tunnel and Westlink M7. The orbital network facilitates the efficient movement of freight and contributes to the productivity of the freight industry.

Westlink M7 will be a key element in meeting road freight demand. The 40 kilometre fully electronic toll road will connect the M5, M4 and M2 motorways and support efficient movement of road freight within Western Sydney and along the strategically important north-south and east-west corridors in NSW.

Westlink M7 will improve links between Port Botany and Western Sydney the destination/origin of a significant and increasing proportion of imports and exports. Westlink M7 will also reduce travel times on some journeys by an estimated 65 minutes and enable motorists to bypass up to 56 sets of traffic lights.

6. The Future of the Freight Industry

The Ports Plan and the development of the orbital network of motorways are evidence of

the Government's commitment to managing the freight task in NSW. Managing the freight task requires ongoing planning and action. Plans need to be prepared and decisions made with sufficient foresight to allow the infrastructure sector to make necessary business and investment decisions.

The efficiency of the road network and its ability to support sustainable economic growth is affected by congestion. Congestion on Sydney roads is caused by a range of factors including increasing use of private vehicles and increasing freight movements. In 2000, 70 per cent of all weekday trips were by private vehicle. Over the last decade traffic has increased by 38 per cent and an extra 600,000 vehicles have been registered in that time.

Managing the freight task is a challenge faced by Governments around the world. Preparation and planning in NSW is advanced but the size and nature of the forecast freight task means that the Government will need to continue to carefully manage the issue and plan for the future. In this regard, Transurban would like to take this opportunity to outline some potential future policy options which may assist in managing freight and road congestion.

Policies that encourage increased rail freight

Given the size of forecast freight growth it will become increasingly important to achieve a sustainable split between road and rail freight transport. The road network alone will not be able to efficiently support the forecast increased freight task without expansion. Appropriate modal share between road and rail will help delay the need for capital expenditure on new road infrastructure.

The Government and Sydney Ports Corporation have indicated support for aiming towards 40 per cent rail share of freight, up from 25 per cent in 2002/3. Achieving this modal split will depend largely on the success of efforts to increase the competitiveness of rail and the integration of the targets into strategic planning processes.

The development of intermodal terminals is an important part of the strategic planning to

increase the use of rail freight. An intermodal facility at Enfield may assist in increasing the rail share of freight and further investigation of this proposal is supported.

Intermodal facilities in Western Sydney should also be considered as key components of land transport planning. Western Sydney is far enough from the port to make double handling of containers more cost-effective than moving the same containers by road over the whole distance. Western Sydney is currently the origin or destination of the total metropolitan rail share of freight – Cameillia handles 40%, Clyde 7%, Yennora 40% and Villawood 13%¹³.

The competitiveness of rail would also be enhanced by improvements to freight rail infrastructure. For this reason, Transurban supports the recent agreement to lease NSW interstate and Hunter valley rail corridors and the dedicated metropolitan freight lines to NSW ports to the Australian Rail Track Corporation (ARTC). Transurban also supports the agreement to grant a licence to ARTC for the construction of the Southern Sydney Freight Line within the existing rail corridor.

The Southern Sydney Freight Line is an important corridor for imports and exports entering and leaving the Sydney region via Sydney's ports as well as through Melbourne and Brisbane. The agreement with ARTC will support Port Botany as NSW's primary container port and facilitate a more sustainable split between road and rail freight transport.

The main south line upgrade may also improve rail access to Port Kembla and serve as an alternative to the F5 and Princess Highway. This may be particularly important as the Government's Ports Growth Plan envisages the transfer of current port activities (car, bulk and some container handling) in Sydney Harbour to Port Kembla between 2006 and 2017.

¹³ Sydney Ports Corporation, 2000. Origin and destination study of goods moved to and from Port

Full Electronic Tolling

Road transport will continue to be the dominant transport mode even if the rail share of freight transport is increased. This is because the rail network will never be as flexible as the road network which enables easy access to countless different locations. It will therefore be critical to maximise the capacity of the road network.

Maximising road capacity will assist in managing road congestion which is a direct cost on the economy and the environment. The BTRE has estimated that the cost of congestion in Sydney in 2015 will be approximately \$8.8 billion, up from \$6 billion in 1995¹⁴. The BTRE has also found that a one per cent improvement in the efficiency of the delivery of national transport services will increase annual GDP by around \$500 million (in 2002 prices)¹⁵.

Full electronic tolling **maximises road capacity** as traffic flow is not restricted by toll booths requiring traffic to slow down or stop to pay tolls. Traffic also does not have to slow down to diverge at the toll plaza into numerous toll booths and then merge back after passing through the plaza. This means that full electronic toll roads can operate at capacity even in peak periods.

The table on the following page illustrates the significant capacity differences between a full electronic toll lane and a manually operated cash booth or automatic vehicle identification (AVI) lane where cars have tags but have to slow down as they approach and wait for a boom gate to open before proceeding through the toll booth¹⁶.

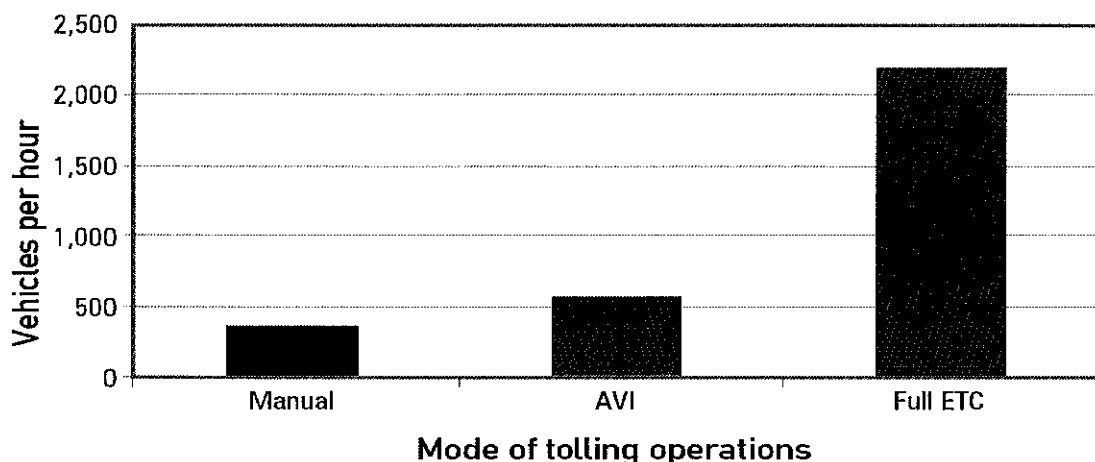
The capacity of one un-tolled freeway lane under free flow conditions is approximately 2,200 vehicles per hour. Full electronic tolling allows these free flow conditions to be maintained on motorways. The capacity of a full electronic toll lane is therefore significantly higher than the capacity of one manually operated cash booth (350-600 vehicles/booth/hour) or one AVI booth (500-700 v/b/hr).

¹⁴ Department of Transport and Regional Services, Auslink: green paper, 2002, p18.

¹⁵ Department of Transport and Regional Services, Auslink: green paper, 2002, p2.

¹⁶ Assumptions are made.

Estimated toll booth/lane capacity



As the road capacity of a full electronic toll road is already maximized Government's and operators can postpone the development of additional infrastructure to cope with increased traffic. On manual or hybrid toll roads additional capital expenditure would be required to increase road capacity to meet growing demand.

Non-stop driving also means that drivers gain **substantial fuel savings**, and **less wear and tear** on their vehicles. The Victorian Transport Association has estimated that CityLink can save the commercial sector alone up to 25 million litres of fuel a year.

Full electronic tolling also **decreases travel times** and **improves travel time certainty**. The Royal Automobile Club of Victoria has found that motorists travelling from the south-eastern suburb of Malvern to Southbank could reach their destination three times faster on CityLink than on a major alternative¹⁷. The Westlink M7 is expected to reduce travel times on some routes by up to 65 minutes and enable drivers to bypass up to 56 sets of traffic lights.

Fully electronic toll roads also benefit communities as local streets are **less congested** and **noise and air pollution is decreased** as cars and freight divert to the toll road to take advantage of travel time savings and free flowing traffic. Less traffic on local roads also improves road safety in local neighbourhoods.

¹⁷ Royal Auto, RACV members Magazine, August 2001, p16.

The Final report of the Ministerial inquiry into Sustainable Transport in NSW (the Parry Inquiry) recognised that full electronic tolling represents the best opportunity to realise a more efficient use of road infrastructure in Sydney. Full electronic tolling is flexible and can be used to levy a variable congestion charge depending on the time of day, the number of other vehicles on the road at the time and the vehicle type/size¹⁸.

The introduction of full electronic tolling to the entire Sydney orbital network will help maximise its capacity, increase efficiency, reduce congestion, and increase travel time certainty.

Toll road travel is a choice that motorists make based upon the value proposition of travel time savings. Congestion on toll roads will negate the value proposition and divert traffic back onto local roads. Local communities would struggle with increased noise and air pollution, and business would experience a reduction in productivity which can lead to potential job losses.

Truck toll and Peak period pricing

Trucks cause more wear and tear on our roads than cars because of their weight. The financial impact of this on the Government will increase as freight volumes and freight movements increase. Truck tolls can assist in raising revenue to cover these costs.

Peak hour truck tolls can also be used as a policy tool to help spread demand, reduce peak congestion and increase the efficiency of the network. Overseas experiences with traffic congestion have shown that peak period surcharges on cars and/or trucks can successfully reduce the number of vehicles on roads during peak periods. In Sydney, as shown by the Olympic experience, only a small reduction in total vehicle volume (around 12-14 per cent) is required to deliver significant improvements in road congestion¹⁹.

Worldwide, there is a move toward the development of freight management strategies that include the introduction of tolls for trucks. On the benefit side, the freight industry is

¹⁸ Ministerial Inquiry into Sustainable Transport in NSW, Final Report, December 2003

¹⁹ Paul Forward, Chief Executive Officer, Roads and Traffic Authority, Lloyds List Infrastructure Funding Conference Speech, Tuesday 17 June 2003.

helping deliver better infrastructure that reduces operating costs and improves efficiencies. The strategies also result in the development of more intense freight management and land use activities that support 7 x 24 hour operation. On the social and environmental sides, encouraging freight to move in non-peak and therefore less congested times leads to reduced noise and air pollution due to fewer stops and starts.

The UK Commission for Integrated Transport has investigated the impact of replacing vehicle excise duty with a charging scheme based on actual road use. The investigation found that congestion could be reduced by up to 44 per cent by the implementation of a fiscally neutral scheme focussing charges on the heaviest used roads at the busiest times.

Peak period pricing could readily be introduced on the orbital network of motorways through the introduction of full electronic tolling. Full electronic toll systems are flexible and can easily and quickly adapt to changing needs of the community and make adjustments to toll pricing such as peak hour pricing or truck tolling.

7. Conclusion

An efficient transportation network will be critical to realising the economic and social benefits of forecast freight growth whilst avoiding the negative impacts on traffic congestion and the environment.

Delivering an efficient transportation system that is capable of supporting forecast growth in freight and passenger demand will require a whole of network approach. Transurban, therefore supports the NSW ports growth plan because it sets broad directions for the development of future port facilities in NSW and provides certainty. Transurban also supports the Government's decision to develop a Metropolitan Strategy to cover transport, employment areas and residential needs.

This submission has identified some future policy responses which may assist in managing freight and road congestion. These include:

- the development of intermodal terminals with direct connections to motorways and the port to increase the amount of freight transported by rail
- the introduction of full electronic tolling to the entire Sydney orbital network to help maximise capacity, increase efficiency, reduce congestion and increase travel time certainty
- considering the future introduction of truck tolls and/or peak period pricing to spread demand and reduce peak congestions.

These developments are vital to retaining Sydney's position as Australia's only global city with the largest population and sustainable economic growth.