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Transport in NSW

by

Stewart Smith

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by

Stewart Smith

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CONTENTS

Executive Summary

1.0	Introduction	1
2.0	The Institutional Context	1
2.1	Roads, Transport and the Environment	1
2.3	Motor Vehicle Emission Standards	3
2.5	Roads - an Overview of Expenditure	8
3.0	A Brief History of Rail in Australia	10
3.1	NSW Railways - A Contemporary History	14
4.0	NSW and Future Transport Requirements	18
4.1	Action for Transport 2010, an Integrated Transport Plan for NSW ..	18
4.2	Action for Transport 2010 an Integrated Transport Plan for Sydney ..	21
5.0	Conclusion	25

EXECUTIVE SUMMARY

This paper is an update of the 1995 Briefing Paper *Sydney, Transport and Ecologically Sustainable Development*. This Paper concentrates on the institutional framework of transport systems, and discusses current transport developments. In regards to roads, ownership and control of the system lies with the States and Territories. The National Road Transport Commission (NRTC) was formed in 1991 to overcome resultant barriers to more efficient road transport by introducing nationally consistent transport policies and laws. Together with the National Environment Protection Council, the two organisations formed a Motor Vehicle Environment Committee, which has as its objective to minimise the impact of the motor vehicle on the environment (pages 1-2).

In 1997 the Prime Minister the Hon John Howard MP made a commitment to harmonise Australia's vehicle noxious gas emission standards with international standards by 2006. The Motor Vehicle Environment Committee has developed a discussion paper on methods to achieve this commitment. The Committee made eight recommendations, which if implemented may result in Australia's emission standards not complying with international standards by 2006 (pages 3-8).

In 1996-97 the total amount of road-related expenditure by the Commonwealth, State, Territory and local governments was \$6.2 billion. Revenue collected by the Commonwealth, State and Territory governments from a selection of motor vehicle taxes and charges in the same year was \$13.9 billion (page 8).

In NSW the Roads and Traffic Authority manages the operations, maintenance and enhancement of 17,620 km of State roads, including National Highways. It also manages 2,971 km of Regional and Local roads in unincorporated areas where there is no local council. The RTA also assists local councils in managing 18,429 km of Regional roads, and to a limited extent, Local roads, through funding and other support. Total roads program expenditure by the RTA for 1997-98 was \$2,055 million, of which \$1,377 million was spent on the maintenance and development of the State road network. Expenditure was funded by the State which contributed \$1,591 million, the Commonwealth contributed \$244 million for National Highways in NSW, \$75 million for Roads of National Importance, \$12 million for accident blackspot treatments and \$8 million under the *Interstate Road Transport Act 1985*. In NSW, motor vehicle tax raised \$675 million, fuel levies raised \$512 million, and RTA revenue raised \$234 million (page 9).

A brief history of rail and rail reform is presented. An overriding feature of railways since the introduction and subsequent dominance of the car and road infrastructure is its lack of investment by government owners (pages 10-12).

A 1999 report on railway reform by the Productivity Commission concluded that increasing the commercial focus of the railways is the key to improving productivity and facilitating the investment required to consolidate rail's position in the transport market. It also concluded that alternatives to government provision have an important role to play in the rail industry. Alternatives include: contracting out services; franchising; and privatisation (page 13).

Other important reforms noted by the Commission include competitive neutrality, both within the rail industry and between road and rail. In regard to the latter, government decision making in relation to investment, taxes and charges, access regimes, safety regulations and operating standards can all affect competitive neutrality between road and rail transport. It was noted by the Commission that heavy vehicle charges do not cover the full cost of road usage, including direct and indirect costs such as pollution.

A contemporary history of railway reform in NSW is also presented. Significant reforms to reduce operating costs have been achieved since the 1980s. Currently, rail services have been separated into different government owned corporations. The Rail Access Corporation owns the rail tracks and provides open access to accredited rail operators. The Railway Services Authority was corporatised in 1998, is now called Railway Services Australia, and provides services such as maintenance and construction of track to the railway industry. FreightCorp hauls a wide range of bulk commodities and other freight, and the State Rail Authority is comprised of two divisions, CityRail and Countrylink (pages 14-18).

The future transport requirements of the State have been a concern of governments for some time. The prospect of increased air pollution in the Greater Sydney Metropolitan Area led the Government to develop a series of action plans to curb this threat. Part of these commitments were to develop an integrated transport plan, and subsequent plans were released for both the State and specifically Sydney in November 1998. These plans are discussed and summarised (pages 18-25).

1.0 Introduction

This paper is an update of the 1995 Briefing Paper *Sydney, Transport and Ecologically Sustainable Development*. The conclusion of the 1995 Paper was that: there had been considerable investment in roads in Sydney, but that traffic congestion was still a major problem; it was increasingly important to plan cities in a form to reduce car dependency; and that the convenience of the private car can, it seems, only be overcome with an efficiently operating public transport system.

This Paper reviews the institutional context of transport reform over the last five years or so. The Paper is restricted in its discussion to land based transport.

2.0 The Institutional Context

2.1 Roads, Transport and the Environment

Ownership and control of the road systems lies with the States and Territories. This has led to many different types of vehicle regulations and standards across the States, creating problems, especially for freight operators, when travelling interstate. The National Road Transport Commission (NRTC) was formed in 1991 to overcome these barriers to more efficient road transport by introducing nationally consistent transport policies and laws.

The NRTC's aims for road transport are to:

- make it more innovative, efficient and safer;
- make transport regulation more consistent and effective; and
- reduce road transport's environmental impacts.

The NRTC makes recommendations to a Council of Australia's nine Transport and Roads Ministers. Once approved, the NRTC coordinates the introduction of reforms on the ground by transport and other agencies and the transport industry. Funding of the NRTC is contributed by all governments with the States contributing 65 percent according to vehicle registrations, and the Commonwealth Government contributing 35 percent.¹

The impact of the motor vehicle on the environment is well documented. Minimising this impact is now an important role for the Transport Ministerial Council. However, because of the role of the Ministerial Council, it is increasingly difficult for NSW to 'go it alone' in regulating vehicle use and standards.

Both the NRTC and the National Environment Protection Council (NEPC) have statutory roles related to the environmental performance of motor vehicles. In 1998 the two organisations formed the Motor Vehicle Environment Committee. In March 1999 this Committee released the National Strategy to Combat Environmental Impacts of Motor Vehicles. The Strategy has as its objective the following: To minimise the impact of

¹ See the National Road Transport Commission's website at:
<http://www.nrtc.gov.au>.

motor vehicles on the environment by:

- ensuring continual improvement in motor vehicle technologies;
- optimising the environmental performance of the existing fleet;
- promoting appropriate measures to manage transport demand.

To achieve these objectives the Committee will develop strategies to:

- reduce emissions from motor vehicles to achieve acceptable air quality, including ambient air quality and 'near road' air quality;
- ensure that vehicle noise levels do not exceed generally accepted community standards;
- minimise greenhouse gas emissions from all vehicles, having regard to the National Greenhouse Strategy; and
- minimise the impact on land and waters of the motor vehicle waste stream.²

2.2 Australian Vehicle Emission Standards

The Federal Office of Road Safety, part of the Federal Department of Transport and Regional Development, develops and guides national policy for road user and motor vehicle design safety. The Office has two sections: the Road User Branch of the Office concentrates on research and public education involving the human aspects of road crashes and covers all areas of road safety behaviour; the Motor Transport Branch is primarily concerned with the establishment of cost effective safety and emission standards, as well as developing national standards for the transport of dangerous goods and vehicle fuel efficiency.³ However, with the formation of the Motor Vehicle Environment Committee as described above, this Committee now has responsibility for the review of vehicle emission standards, and has released a discussion paper on this subject which is explained in section 2.3 of this Paper.

Australian Design Rules (ADRs) set the standards that each vehicle model is required to comply with before their supply to the market. ADRs are set for both safety standards and emissions, with four ADRs setting limits on exhaust and/or evaporative emissions. The relevant environmental ADRs are as follows:

ADR 28 - External Noise of Motor Vehicles

The function of this ADR is to define limits on external noise generated by motor vehicles in order to limit the contribution of motor traffic to community noise.

ADR 30 - Diesel Engine Exhaust Smoke Emissions

The function of this Australian Design Rule is to limit the opacity of diesel engine exhaust

² National Road Transport Commission, National Environment Protection Council, Motor Vehicle Environment Committee, *The Strategy Part 1*, 1999, at 3.

³ See Internet site: <http://www.dot.gov.au/programs/fors/overview.htm>

smoke emissions.

ADR 36 - Exhaust Emission Control for Heavy Duty Vehicles

The function of this Australian Design Rule is to limit exhaust emissions` from the propulsion engine of heavy duty motor vehicles in order to reduce air pollution.

ADR 37 - Emission Control for Light Vehicles

The intention of this Australian Design Rule is to limit fuel evaporative emissions and exhaust emissions. The revised ADR 37/01 applied to new model passenger cars fitted with spark ignition engines from the beginning of 1997. This revised ADR introduced catalyst technology to help control the emissions of ROCs, NOX, and carbon monoxide.⁴

ADR 39 - External Noise of Motor Cycles

The function of this Australian Design Rule is to specify requirements relating to external noise emitted from motor cycles in order to limit the contribution by these vehicles to community noise.

ADR 70 - Exhaust Emission Control for Diesel Engine Vehicles

The function of this Australian Design Rule (ADR) is to reduce air pollution, by limiting the hydrocarbons, carbon monoxide, oxides of nitrogen, and particulates emitted to the atmosphere from the exhaust system of motor vehicles fitted with a diesel engine. ADR 70 took effect in 1995-96. This ADR is additional to ADR 30/00 which limits exhaust smoke emissions from such vehicles.

2.3 Motor Vehicle Emission Standards

In November 1997 the Prime Minister the Hon John Howard MP released a statement about Australia's response to climate change. Included in the Statement was a commitment to implement an Automotive Industry Environment Strategy, involving the following elements:⁵

- mandatory, model specific, fuel efficiency labelling;
- harmonised noxious emissions standards with international standards by 2006;
- a 15% fuel efficiency improvement target by 2010 over business as usual through negotiation with automotive companies;
- bringing forward the phase out of leaded petrol, taking equity considerations into account;
- development of a basic network of compressed natural gas refuelling stations in selected metropolitan areas.

In regard to this section of the Briefing Paper, the most notable element of the strategy was

⁴ NSW EPA, *New South Wales State of the Environment*, 1997, at 75.

⁵ *Safeguarding the Future: Australia's Response to Climate Change*. Statement by the Prime Minister of Australia, The Hon John Howard MP, 20 November 1997.

the commitment by the Prime Minister to harmonise noxious emission standards with international standards by 2006. In September 1998 the Motor Vehicle Environment Committee released a discussion paper on a review of Australia's motor vehicle emission standards. The Committee noted a number of options, and called for public comment until 8 January 1999. The options canvassed are listed below.⁶

Option 1 - Do Nothing

The Committee noted that the evidence indicates that air quality parameters will continue to improve in the short to medium term, although maintenance of the emission ADRs in their current form would not be acceptable in the long term for the following reasons:

- increases in overall vehicle use are expected to negate the benefits from these ADRs, leading to predictions of worsening of vehicle related air quality in major urban areas early next century;
- motor vehicles are significant sources of hydrocarbons, nitrogen oxides and particulates;
- there is a high level of community concern over air quality and an expectation that steps will be taken to improve the situation;
- health studies suggest that no safe level has yet been determined for exposure to particulates and current levels of air quality are having significant health effects.

Option 2 - Introduce New Standards based on United Nations Economic Commission of Europe Regulations.

When considering the introduction of new standards, the following factors need to be taken into account:

- Which standards should be considered;
- The relative stringency of the candidate standards;
- The timing of the introduction of the proposed standards;
- The impact of fuel parameters on in-service compliance with new standards;
- The costs and benefits of adopting particular standards.

The Committee notes that emission ADRs have always been based on overseas standards, and that the introduction of a unique Australian standard is not desirable due, among other things, to the international nature of the car industry. Thus the only realistic option is to adopt an appropriate overseas standard, which includes standards from: the United States Environment Protection Agency; the United Nations Economic Commission for Europe (UN ECE); and the Japanese standard.

It was noted by the Committee that the US EPA has set the pace for international petrol emission standards over the last 20 years or so. However, during the 1990s the UN ECE

⁶ Motor Vehicle Environment Committee, *Review of Australia's Vehicle Emission Standards, Public Comment Document, Executive Summary*, September 1998.

standards have been significantly strengthened to the point where they are at least as stringent at the US EPA tests. The Committee concluded that the preferred option is for the ADRs to adopt the UN ECE standards, which would also be in line with the move by the Australian Government to harmonise all the ADRs with the ECE regulations as far as possible. The UN ECE standards have been progressively more stringent over time, and are frequently referred to as, 'Euro 1', 'Euro 2', 'Euro 3', and 'Euro 4' standards. These refer to the standards that apply from 1992, 1996, 2000 and 2005 respectively.

The timing of the introduction of a new standard for an ADR is often contentious. Vehicle manufacturers prefer a lead time of at least several years, and compliance costs would also be reduced if the introduction of new standards were timed to coincide with major model changes, next expected in Australia on average around the year 2002/3. The Study noted the idea that new models released into the market would be required to comply with any new ADRs by an agreed date. Existing models would be allowed to remain on the market for a year or more after that date without complying with the new ADR. The Committee then noted the following three options in regard to introducing a new ADR, not likely to take effect before 2002:

- 1/ Adopt the version of the UN ECE standard which is now in place (Euro 2 - ie, 1996 standard) in 2002;
- 2/ Adopt the version of the standard which will be in place by 2000 (Euro 3) perhaps with later application date; or
- 3/ A combination of options

The Committee also recognised the relationship between fuel properties (for both petrol and diesel) and exhaust emissions. In regards to petrol the important factors are petrol volatility and octane rating. Petrol volatility is an indication of how fast a fuel evaporates. The fuel that evaporates from the fuel tank of vehicles can be discharged into the air, contributing to photochemical smog. The volatility of commercial grades of unleaded petrol in Australia are considerably higher than that of the test fuel that is used to certify the vehicle under ADR 37/01. Research has shown that many Australian vehicles are not meeting evaporative emission standards once they are in service. It has also been demonstrated that reductions in fuel volatility can significantly reduce evaporative emissions from vehicles. The Committee concluded that emission standards are likely to continue to be exceeded in-service with current and future vehicles, unless fuel volatility is reduced.

Octane rating is a measure of the ability of a fuel to resist engine knock, with a higher number indicating higher resistance. It is argued by some that if the octane demand of a vehicle engine exceeds that of the fuel it is using, the vehicle will not be operating at optimum efficiency. The average octane rating of Australian ULP is 91.6 RON, in line with the ADR 37/01 test fuel. However, the Euro 2 standards specify a test fuel of minimum 95 RON, with most, but not all, regular ULP in Europe also having a minimum of 95 RON. The Committee concluded that there was no evidence available to demonstrate that a vehicle certified to the UN ECE Euro 2 standard, on 95 RON, would have worse emissions when that vehicle is operated on a commercial fuel of less than 95 RON.

Worldwide, the issue of particulate emissions from diesel vehicles is an increasing problem. In regards to diesel, the contribution of sulfur in diesel fuel to particulate emissions has been clearly documented. Lower sulfur content in the diesel fuel directly reduces sulphate particulate emissions and emissions of sulfur dioxide, which is converted to sulfate particles in the atmosphere. To comply with Euro 2 type standards, many light duty diesel vehicles will require new anti-pollution control equipment, namely oxidation catalysts. The trouble is that the sulfur content of the fuel is regarded as having an adverse impact on the effective operation of the oxidation catalysts used on some diesel engine vehicles. The average sulfur content of Australian diesel is currently 0.15%, with a range of 0.0 - 0.5%. In many countries, to enable compliance with tighter particulate restrictions for diesel vehicles, sulfur content of diesel fuel has been reduced to a maximum of typically 0.05%. The Committee noted that while substantial reductions in particulate emissions can be obtained without reducing sulfur levels down to the 0.05% level, compliance with Euro 2 type standards cannot be achieved at higher sulphate levels.

Option 3 - Introduce New Standard(s) based on United States or Japanese Requirements.

The Committee concluded that adopting the US EPA or Japanese standards would seriously conflict with the Government's objectives to harmonise vehicle emission standards with the UN ECE standards. The Strategy noted that the available evidence does not support an argument that Australia's environment would be compromised with the adoption of the UN ECE standards. However, there is an argument for permitting the US94 heavy duty standards as an alternative to the principal UN ECE standards.

The Committee also canvassed alternative and complementary vehicle emission reduction strategies, with the most feasible being a wider use of alternative fuels. The most significant of these are liquefied petroleum gas (LPG) and natural gas. There are currently no emission standards in Australia for vehicles powered by these two fuels. In principle, it was agreed that all vehicles within the scope of ADRs should be required to meet the same emission standards regardless of the fuel they are designed to operate on. The UN ECE regulations are currently undergoing amendments to incorporate emission standards for vehicles powered by the above two alternative fuels. It would therefore seem appropriate to adopt these requirements for LPG and natural gas vehicles in any revised ADR.

The cost of making new cars complying with the Euro 2 standard has been estimated by the NSW Environment Protection Authority at \$250-650 per vehicle. For diesel vehicles the overall cost to comply with Euro 2 standards is estimated as between \$1,300 and \$10,000 per vehicle. In regard to fuel costs there are also some factors to consider. As discussed, the need for high octane petrol fuel has yet to be finally determined. In relation to fuel volatility, the NSW EPA estimates the cost of reducing summertime petrol fuel volatility by 9 kilopascals in the Greater Sydney Region as less than 0.2 cents/litre. In regard to removing sulfur from diesel, the Australian Institute of Petroleum has indicated that installation of appropriate equipment at all eight Australian refineries would cost in the order of \$700 million, with varying cost impacts on each refinery. As Euro 3 standards

were not finalised when the Committee was writing their review, costs for complying with Euro 3 standards were not estimated.

The health cost of all diesel related air emissions is estimated at between \$400 - \$600 million per annum. The implementation of improved vehicle standards, with resultant improvements in air quality, is expected to lead to reductions of vehicle related air pollution costs. While the benefits of new vehicle standards will take some years to have a significant impact due to the low turnover of the Australian vehicle fleet, the benefits of reduced volatility of petrol and low sulfur diesel would produce immediate impacts across the fleet as vehicles of all ages will produce lower emissions.

In the end the Motor Vehicle Environment Committee made the following eight recommendations.⁷

- 1/ Amend ADR 37/01 as soon as possible to incorporate UN ECE Euro 2 and Euro 3 levels as an alternative standard.
- 2/ Introduce three new ADRs, one for 'light duty' vehicles, one for 'heavy duty' vehicles and one for smoke emissions, which align with the UN ECE emission regulations as follows: The light duty vehicle standard will adopt Euro 2 level; the heavy duty vehicle will adopt Euro 2 level; and the smoke standard will adopt UN ECE regulation 24/03.
- 3/ Require the heavy duty and smoke ADRs to accept the equivalent US EPA 1994 standards as alternatives to the principal standards.
- 4/ Require the three new ADRs to allow compliance with later versions of the nominated standards, provided they are demonstrated to be no less stringent than the version specified in the ADR.
- 5/ Adopt the emission standards in the above nominated ECE and US standards which apply to vehicles operating on all of the fuels nominated in the standard, currently petrol, diesel, LPG and natural gas.
- 6/ Introduce the three new ADRs to take effect from 2002 for new models, and 2003 for all models.
- 7/ Reduce the sulfur content of commercial diesel fuel to 0.05% and the volatility of petrol by 5-10 kPa to coincide with the introduction of the revised standards.
- 8/ Note the decision in the European Community to set new vehicle emission and fuel standards for 2000 (Euro 3) and 2005 (Euro 4), and that this report has not analysed the impacts of moving to those standards. Consider the process for later adoption of these standards, bearing in mind the statement by the Prime Minister to harmonise with international standards by 2006.

⁷ Motor Vehicle Environment Committee, *Review of Australia's Vehicle Emission Standards, Public Comment Document, Executive Summary*, September 1998, at 23.

2.4 Discussion of the Motor Vehicle Environment Committee Emission Standards Report

In trying to meet 'world's best practice', the Motor Vehicle Environment Committee recommended implementing emission controls in the year 2002 that are six years behind the best practice benchmark. It is also likely that if adopted, the Euro 2 standard will be in place in Australia for at least another two to three years after implementation. Then another review period and 'lead time' of up to another four years may see the introduction of Euro 3 or Euro 4 standards. It is therefore possible that under this timetable, in the year 2006 when the Prime Minister committed Australian emission standards to be harmonious with international standards, Australia will by then be ten years behind that standard.

It is important to note that in order to meet the Prime Minister's commitment to harmonise Australian emission standards with international standards by 2006, then 'Euro 4' standards will need to apply to ADRs. The Motor Vehicle Environment Committee Strategy document only goes as far as 'Euro 3' standards, and could provide no costings for either implementation of either Euro 3 or Euro 4 standards. The Committee was seriously hampered by the unavailability of this data.

A significant problem in terms of reducing vehicle emissions of the Australian fleet is its low turnover rate. The impact of new ADRs can take many years for maximum effect. It could therefore be argued that policies that reduce emissions from the entire fleet, not just new vehicle models, should therefore be 'fast tracked'. As an example, the NSW Government has already negotiated with petrol companies to reduce the volatility of petrol over summer months in Sydney. Other alternatives include fast tracking the reduction in the sulfur content of diesel fuel, to reduce particulate emissions.

The price of different fuels, and hence vehicle running costs, can also have an influence on the type of vehicle purchased. During the 1998 Federal election the Coalition Government promised to drop the diesel fuel excise from 43 to 18 cents per litre. If this goes ahead, the use of alternative fuels such as LPG and natural gas to power vehicles seems certain to be reduced. The gas industry is reported to have stated: "The flow-on effects of the diesel excise reduction will be significant. One result will be the demise of the gaseous transport fuel industry and the collapse of the Government's policy to encourage the use of compressed natural gas in Sydney and Melbourne."⁸

2.5 Roads - an Overview of Expenditure

Presently the Commonwealth's direct road funding responsibilities are the construction and maintenance of the 18,700 km National Highway System, Roads of National Importance and the Black Spot road safety program. The Commonwealth Government also supplements State expenditure on arterial and local roads through general revenue assistance.

⁸ "Cheaper diesel threat to clean air" in *The Sydney Morning Herald*, 4 March 1999.

In 1996-97 the total amount of road-related expenditure by the Commonwealth, State, Territory and local governments was \$6.2 billion. Revenue collected by the Commonwealth, State and Territory governments from a selection of motor vehicle taxes and charges in the same year was \$13.9 billion.⁹

NSW, Victoria and Queensland account for most of the road related expenditure in Australia. Including Commonwealth grant money, they spent \$2.2 billion, \$1.1 billion and \$1.6 billion respectively in 1996-97. Australian Land Transport Grants, amounting to \$801.2 million in 1996-97, are the largest single source of road funds provided by the Commonwealth to the States.¹⁰

The Commonwealth and State and Territory governments levy taxes and charges on motor vehicle users. The total amount raised in 1996-97 was \$13.9 billion, of which \$8.6 billion (62 percent) was from Commonwealth petroleum products excise duty. State and Territory governments raised \$2.1 billion (15 percent) from vehicle registration fees. Stamp duty on vehicle registration fees raised \$1.1 billion, and fuel franchise fees raised \$1.6 billion.¹¹

In NSW the Roads and Traffic Authority manages the operations, maintenance and enhancement of 17,620 km of State roads, including National Highways. It also manages 2,971 km of Regional and Local roads in unincorporated areas where there is no local council. The RTA also assists local councils in managing 18,429 km of Regional roads, and to a limited extent, Local roads, through funding and other support. Total roads program expenditure by the RTA for 1997-98 was \$2,055 million, of which \$1,377 million was spent on the maintenance and development of the State road network. Expenditure was funded by the State which contributed \$1,591 million, the Commonwealth contributed \$244 million for National Highways in NSW, \$75 million for Roads of National Importance, \$12 million for accident blackspot treatments and \$8 million under the *Interstate Road Transport Act 1985*. In NSW, motor vehicle tax raised \$675 million, fuel levies raised \$512 million, and RTA revenue raised \$234 million.¹²

More information on roads in NSW will be presented in section 4.0 of this Paper.

3.0 A Brief History of Rail in Australia

⁹ Commonwealth of Australia, Bureau of Transport and Communication Economics, *Public Road Related Expenditure and Revenue in Australia 1998*, Information Sheet 11 1998.

¹⁰ Commonwealth of Australia, Bureau of Transport and Communication Economics, *Public Road Related Expenditure and Revenue in Australia 1998*, Information Sheet 11 1998, at 2.

¹¹ Commonwealth of Australia, Bureau of Transport and Communication Economics, *Public Road Related Expenditure and Revenue in Australia 1998*, Information Sheet 11 1998, at 3.

¹² Roads and Traffic Authority, *Annual Report 1997-98*.

Australia's first railway opened between Sydney and Parramatta in 1855. By 1871, there were railways in all six of the colonies, all of which were centred on the capital city and extending out into the rural hinterland as far as financial pressures allowed or political and economic needs dictated. In each colony the railway system was isolated and largely self-contained, for economic as well as political reasons. Because the major need was to link rural areas with the capital cities, inter-colonial connections were not a high priority. Railway lines tended to run perpendicular from the coast rather than parallel. However, by 1889 there were physical connections between Queensland and NSW, NSW and Victoria, and Victoria and South Australia. Only the last of these was achieved without a change of gauge.¹³

As early as 1897 the railway commissioners of NSW, Victoria and South Australia met to consider the possibility of adopting a standard gauge. They agreed in principle that a standard gauge was desirable, and agreed that the NSW gauge of 1,435 mm should be the standard. Gauges in the other two colonies were wider than in NSW, and the NSW gauge was chosen as the standard because it is easier and cheaper to convert a wider gauge track to a narrower one than a narrow to a wide gauge. The Commissioners predicted a time length of five years to standardise the gauge between the three colonies. Of course, nothing came of the Commissioners' initiative.¹⁴

Throughout the early 1900s the railways of the different States continued to grow, thus making the future job of standardising gauges even more expensive and troublesome. From the 1920s a series of Royal Commissions, Acts and Agreements were initiated and ignored to standardise the railways. Finally, in 1958, an agreement between the Commonwealth, Victoria and NSW provided for the construction of a new standard gauge railway between Albury-Wodonga and Melbourne, and the line opened for traffic in 1962. In 1961 the Commonwealth and Western Australia agreed to convert the line between Kalgoorlie and Perth to standard gauge. This left only the Broken Hill to Port Pirie section to be converted before a standard gauge line would run from coast to coast. By 1970, through freight and passenger services between Sydney and Perth were able to run on standard gauge.¹⁵

Through the late 1950s and 1960s, numerous railway reviews from all of the State systems reached broadly similar conclusions: the railways were in crisis. The main problems cited by the reports included: competition from highway transport; redundant and under-utilised trackage; unsuitable and uneconomic freight rates; excessive passenger service; high labour

¹³ Stevenson, G. *Rail Transport and Australian Federalism*. Centre for Research on Federal Financial Relations. The Australian National University. Research Monograph No 48, at 5.

¹⁴ Stevenson, G. *Rail Transport and Australian Federalism*. Centre for Research on Federal Financial Relations. The Australian National University. Research Monograph No 48, at 15.

¹⁵ Stevenson, G. *Rail Transport and Australian Federalism*. Centre for Research on Federal Financial Relations. The Australian National University. Research Monograph No 48, at 20.

costs; obsolete equipment; and the burden of debt and interest charges. The situation was exacerbated by the fact that none of these problems were isolated and all were mutually reinforcing.¹⁶

Upon gaining office in 1972, Prime Minister Whitlam offered to begin negotiations with the States towards the transfer of the State railway systems to the Commonwealth. The concept was to form a truly national railway, with urban systems remaining with the States. Victoria and Queensland refused to begin discussions. Stevenson notes that NSW, the third non-ALP State Government in office at the time, was more hesitant. Exploratory discussions were held with NSW until 1975. Of the three ALP States, Western Australia was the least enthusiastic. Finally, agreements were reached with Tasmania and South Australia only to transfer ownership of the railways, along with their debt, to the Commonwealth. During 1975, the Commonwealth Commissioner of Railways was replaced with a collective body known as the Australian National Railways Commission.¹⁷

The decade that followed the dismissal of the Whitlam Government was a period of rapid change, both for Australian National and the State owned railway systems. The common theme of change was one of transition from public services to commercial enterprises. The change was largely a response to the alarming financial performance of the railways and their drain on government budgets.

In 1991 the National Rail Corporation was incorporated to take over interstate freight. The shareholders of the Corporation are the Commonwealth, NSW and Victorian governments. The Australian National Railway Commission retained responsibility for the inter-state standard gauge tracks, the inter-state passenger trains (Indian Pacific, the Ghan and the Overland), and the South Australian intrastate freight. The Corporation commenced commercial operations in April 1993. An agreement between the shareholders and the other Australian mainland States specified a five year establishment period during which the company would take over all of the interstate rail freight business conducted by the five separate state-based rail authorities. During the establishment phase, which finished on 31 January 1998, the shareholders provided equity worth \$406.5 million. The Commonwealth contributed \$295.8 million, NSW \$75.6 million and Victoria \$35.1 million. After this time the company was to be commercially viable without any more top-ups for operating losses by its shareholders. The company purchases access to track owned by five government-owned rail infrastructure owners. In NSW, that is the Rail Access Corporation. The National Rail Corporation is legally prevented from carrying intrastate freight without the permission of the relevant State government. To date, only Victoria and NSW have given

¹⁶ Stevenson, G. *Rail Transport and Australian Federalism*. Centre for Research on Federal Financial Relations. The Australian National University. Research Monograph No 48, at 32.

¹⁷ Stevenson, G. *Rail Transport and Australian Federalism*. Centre for Research on Federal Financial Relations. The Australian National University. Research Monograph No 48, at 60.

their approval.¹⁸

The articles of association of the National Rail Corporation allow shareholders to sell their equity in the company upon the expiry of the establishment period. In November 1996 the Commonwealth Government announced its intention to sell its shareholding and appointed consultants to conduct a scoping study, which was completed in September 1997. It is expected that the sale process will continue when the shareholders have agreed how to proceed further.¹⁹

During 1996 the Commonwealth Government commissioned JR Brew to review the operations of Australian National Railways and the National Rail Corporation. The Brew report recommended, among other things, that:²⁰

- a national track access and infrastructure body should be established in conjunction with the appropriate states;
- Australian National Railways be sold; and
- the National Rail Corporation be established as a commercial structure for competitive freight operations with access to the national track.

In November 1997, Australian National Railways was sold to three different private investors. Intrastate rail operations in South Australia were sold for \$57.4 million, the Tasmanian rail operation sold for \$22 million, and the passengers services the Ghan, Indian-Pacific and The Overlander were sold for \$16 million. To make the sales possible, the Commonwealth had to assume debts of more than \$1 billion.²¹

In November 1997 the Australian Transport Council signed an Intergovernmental Agreement for the establishment of a company (Australian Rail Track Corporation) to manage access and infrastructure development on the interstate rail network, and provide access to operators through a single organisation. Subsequently, in February 1998 the Australian Rail Track Corporation was launched. According to the Commonwealth Department of Transport and Regional Development, the decision to establish the Corporation was a move to extract the Commonwealth from direct involvement in rail operations and towards getting the operational environment right, making the industry more

¹⁸ National Rail Corporation, *Annual Report 1997-1998*, at 6.

¹⁹ National Rail Corporation, *Annual Report 1997-1998*, at 2.

²⁰ House of Representatives Standing Committee on Communications, Transport and Microeconomic Reform, *Tracking Australia. An Inquiry into the role of rail in the national transport network*. July 1998 at 13.

²¹ "Australian National sale acid test for privatisation." in *The Australian Financial Review*, 7 October 1998.

conductive to private investment.²² The Corporation was established as a Government Business Enterprise and is expected to manage access to the standard gauge interstate track for all operators on a commercial basis.

In March 1999 the Productivity Commission released a draft report on reform of the rail industry.²³ The Commission noted that Government owned railways showed significant productivity improvements from 1989/90 to 1996/97. Despite these improvements, the Commission observed that many railways are still losing money or are barely commercial, even after the inclusion of payments by governments for non-commercial activities. Other impediments observed include:²⁴

- inadequate investment in rail infrastructure has been a particular problem;
- governments, as shareholders, do not demand or enforce the same degree of commercial discipline as that placed on the private sector, with the end result that the customer focus on government owned railways is poor;
- competitive neutrality does not exist between transport nodes or between government and private railways;
- implementation of regulatory reform has been slow, which acts as a barrier to the entry of new train operators.

The Commission concluded that increasing the commercial focus of the railways is the key to improving productivity and facilitating the investment required to consolidate rail's position in the transport market. It also concluded that alternatives to government provision have an important role to play in the rail industry. Alternatives include: contracting out services; franchising; and privatisation.

Other important reforms noted by the Commission include competitive neutrality, both within the rail industry and between road and rail. In regard to the latter, government decision making in relation to investment, taxes and charges, access regimes, safety regulations and operating standards can all affect competitive neutrality between road and rail transport. It was noted by the Commission that heavy vehicle charges do not cover the full cost of road usage, including direct and indirect costs such as pollution. Other problems identified include the diesel fuel excise, which if current reform proposals go ahead, will be reduced. This may have a differential impact on rail and road transport. The Commission recommended that the Commonwealth Government should establish an inquiry to address the institutional arrangements for road provision, including planning, funding, investment and road charging. A resolution to the debate on the diesel fuel excise is also called for - if it is a road user charge, it should not be levied on the rail industry. If

²² House of Representatives Standing Committee on Communications, Transport and Microeconomic Reform, *Tracking Australia. An Inquiry into the role of rail in the national transport network*. July 1998 at 13.

²³ Productivity Commission, *Progress in Rail Reform Draft Report*, March 1999.

²⁴ Productivity Commission, *Progress in Rail Reform Draft Report*, March 1999, at xxvi.

it is a general charge, further consideration of the appropriate level of road user charges is required.²⁵

3.1 NSW Railways - A Contemporary History

Spriggs notes that in its entire 143 year history, the NSW railways have never been able to service its own debts. In 1980, when financial losses were mounting to several million dollars per day, the Wran Labor Government introduced legislation to constitute the State Rail Authority (SRA). The Wran Government released the new Authority from much of its debt. Within 10 years, the SRA had accumulated another \$3 billion in debt without making any significant dent on its crucial infrastructure upgrades. In the late 1980s, the SRA was the worst performing of the NSW Government Trading Enterprises, losing up to \$3 million per day.²⁶

With the election of the Greiner Coalition Government in 1988, reform of the railways was high on the action agenda. A Commission of Audit and an independent consultant review both found the following: the SRA had to stop spending money at the pace it was; that it employed far too many people which created a huge burden on running costs; and that the organisational structure had created an engineering oriented, not customer focussed, operation.²⁷

Again, the Government of the day agreed to write off past debt (of \$2.5 billion), and a new *Transport Administration Authorities Act* called for the SRA to identify community service obligations (CSOs). These are non-economic services maintained for social or political reasons. The SRA must then negotiate with the Department of Transport for reimbursement of CSO costs. The new management of the SRA agreed to reduce the number of employees, introduce corporate planning and allow a review by an external agency at frequent intervals to determine if the SRA was keeping pace with world's best practice. Consultants Booz Allen Hamilton completed their first report shortly after, and concluded that \$2.6 billion needed to be spent just to bring the railways up to scratch.²⁸

²⁵ Productivity Commission, *Progress in Rail Reform Draft Report*, March 1999, at xxxi. See Recommendations 9.2 and 9.3.

²⁶ Spriggs, S *Transforming the NSW Railways: Focusing on Economic Performance and Results*. Centre for Corporate Change, Australian Graduate School of Management, Paper No 083, 1997, at 2.

²⁷ Spriggs, S *Transforming the NSW Railways: Focusing on Economic Performance and Results*. Centre for Corporate Change, Australian Graduate School of Management, Paper No 083, 1997, at 3.

²⁸ Spriggs, S *Transforming the NSW Railways: Focusing on Economic Performance and Results*. Centre for Corporate Change, Australian Graduate School of Management, Paper No 083, 1997, at 5.

The SRA was divided into new business units: Freight Rail, which originally contained CountryLink but which was subsequently separated into its own unit; and CityRail, responsible for the suburban passenger service.

Following these reforms, significant achievements were made. Over four years, staff numbers were reduced by 33%. CityRail improved employee productivity by 39%, and Freight Rail's productivity improved by 56%. The real cash operating cost of running the SRA was reduced by a cumulative \$1.2 billion (in 1991/92 terms) over the four years 1988/89 - 1991/92. The cost of running the railways was reduced from \$1952 million in 1988/89 to \$1520 million in 1991/92. However, Countrylink only improved its productivity by 0.2 %.²⁹

With the election of the Carr Labor Government in 1995, further reforms were introduced with the *NSW Transport Administration Amendment (Rail Corporatisation and Restructuring) Act 1996*. On 1 July 1996 the reforms began with the separation of infrastructure and train management functions of the former State Rail Authority, and establishing freight services under a separate corporation. From mid 1996, the State Rail Authority became responsible for the operation of all passenger services of the CityRail and Countrylink business units and retained those assets essential to its business, including rolling stock and stations. All rail freight services were established under a separate Freight Rail Corporation. The Railway Services Authority was established to supply goods and services to the rail industry, including infrastructure such as signals and track. In addition, the Rail Access Corporation was formed and has ownership of the essential public rail infrastructure in NSW and is responsible for providing open access to accredited rail operators under the NSW Rail Access Regime.

Rail Access Corporation

Upon its creation, the Rail Access Corporation undertook a strategic review. Three core businesses became apparent: coal operations, the urban network, and interstate and intrastate freight. The review made it clear that operating in a mature market offered little immediate scope for higher revenues. Profitability could only be achieved through a reduction in operating costs, with the greatest potential from the Infrastructure Works and Maintenance Program (IWMP). Expenditure of around \$800 million per year is spent on the IWMP. In its initial year most work has been carried out by the incumbent supplier, the Government owned Railway Services Authority. A priority for the Corporation is to introduce contestability into the IWMP according to the following schedule:³⁰

²⁹ Spriggs, S *Transforming the NSW Railways: Focusing on Economic Performance and Results*. Centre for Corporate Change, Australian Graduate School of Management, Paper No 083, 1997, at 28.

³⁰ Rail Access Corporation, *Annual Report 1996-1997*.

% track km	June 1997	June 1998	June 1999	June 2000
RSA Agreement	98.7%	67%	60%	0%
Contestable	1.3%	33%	40%	100%

To day three infrastructure maintenance bundles have been let under the contestability process. The East Hills and Waterfall-Bomaderry parcels were both let to the company Fluor Daniels and the Richmond-Blacktown line was let to Rail Infrastructure Alliance, which is a joint venture between the then Railway Services Authority and Thiess Contracting.³¹ The Railway Services Authority was unable to secure any of the contracts in its own right.

The above maintenance contestability timetable was placed in jeopardy when, after representations from unions, outsourcing of rail maintenance work was suspended by Government direction for 16 months.³² Contestability of maintenance work will recommence in July 1999, and the Corporation states that it is still on track to achieve a 30% real reduction in maintenance costs by 2000/01. During 1997/98, track maintenance expenditure was reduced by \$50 million, whilst key indicators for infrastructure reliability and safety were increased. By the end of 1998/99, the Corporation will have accumulated savings of \$296 million compared to 1996/97. Currently the Rail Access Corporation manages 8,500 km of track, supports some 2,500 inter and intrastate passenger and freight journeys each day, and has a maintenance schedule of around \$450 million and a capital works program of about \$338 million during 1998/99.³³

Reflecting increased competition in the railways, four new operators were granted access to the NSW rail network during 1997/98. The Corporation notes that competition is beginning to deliver results, with interstate freight rates reduced by 10% in 1997/98, and export coal haulage rates reduced by as much as 17%. The Corporation made a profit of \$118.3 million and returned a \$88.2 million dividend to the State during 1997/98.³⁴

Railway Services Australia

Originally in mid 1996 the Railway Services Authority of NSW was established as a statutory body. However, with the enactment of the *Transport Administration Amendment (Railway Services Authority Corporatisation Bill) 1998* on 1 July 1998 it became a State-owned Corporation and changed its name to Rail Services Australia. The Government hopes that the corporatisation of the Authority will enable it to compete even more

³¹ NSWPD, 8 April 1998, at 3862.

³² "Off the rails over maintenance tenders." in *The Australian Financial Review*, 16 April 1998.

³³ Rail Access Corporation, *Annual Report 1997-1998*, at 11.

³⁴ Rail Access Corporation, *Annual Report 1997-1998*, at 5.

effectively in the industry to win contestable railway maintenance contracts.³⁵ Staff numbers in the Corporation have been reduced from 6,733 in June 1996 to 5,740 in June 1998 and corporate overhead costs have been reduced by \$45 million from 1996/97 to 1997/98. Accumulated savings of \$155 million over two years has been achieved from infrastructure maintenance and the Corporation has secured \$153 million worth of new private and public sector infrastructure maintenance work.³⁶

State Rail Authority of NSW

The State Rail Authority is comprised of two divisions, CityRail and Countrylink. Passenger revenue for the Authority in 1997/98 was \$434.1 million, up \$22.8 million from the year before. Government funding of the Authority totalled \$917.6 million, made up of: Community Service Obligations of \$495.5 million, which covers concessions and other pricing support and non-commercial operations; and capital and other contributions of \$422.1 million including redundancy funding of \$50.3 million. Government funding was down \$3.5 million compared to the year before. Year 2001/02 targets for the organisation as identified in the latest Annual Report include:³⁷

- decrease government funding by 5% each year;
- increase passengers per employee by 25%;
- maintain CityRail on-time running at 92%;
- improve Countrylink on-time running from 87% to 90%;
- reduce crime on system by 50%.

FreightCorp

FreightCorp hauls a wide range of bulk commodities and general products, including coal, grain, minerals, cement, petroleum and shipping containers. Services have been expanded to include a 'one stop shop' for freight transport solutions, including short haul road operations. The FreightCorp coal operation covers the Hunter Valley, the Illawarra and Southern Highlands, and the western coal fields centred on Lithgow. Grain haulage extends from the northwest of NSW to the extensive grain areas of the southwest of the State. A wide range of containerised products are carried to ports, including cotton from the northwest of the State and oranges and wine from the Riverina.

FreightCorp hauls a significant volume of the State's export commodities. For instance, of the 69.1 million tonnes of coal hauled in 1997/98, only 1.3 million tonnes were for domestic use, with the rest exported. Similarly, 6.8 million tonnes of grains were hauled in the same period, of which 5.2 million were for export. It is apparent that the success of the FreightCorp business relies heavily on international commodity markets, and most

³⁵ NSWPD, 8 April 1998, at 3861.

³⁶ NSWPD, 8 April 1998, at 3862.

³⁷ State Rail Authority of NSW *18th Annual Report 1997/98*.

importantly the coal market. In addition, the success or not of the grain crop also has an impact on FreightCorp's financial success. In regards to coal, FreightCorp reports that the Central Hunter Valley coal producers paid 25% less in rail freight rates in 1997/98 than they were two years ago, saving the producers in excess of \$40 million in 1997/98. The Chairman of FreightCorp notes that its costs are still higher than best international practice but will continue to be lowered through efficiency improvements under current plans.³⁸

4.0 NSW and Future Transport Requirements

The 1995 Parliamentary Library Briefing Paper *Sydney, Transport and Ecologically Sustainable Development* chronicled a list of planning and transport studies for Sydney from 1948. It is evident that had the majority of the studies been implemented, Sydney would have a very different transport structure than what it has now. For instance, many of the provisions outlined in the Sydney Area Transportation Study of 1974 are only now been implemented or costed for implementation.

In response to the potential for increased air pollution in Sydney, in early 1998 the NSW Government released an air pollution control strategy called *Action for Air*.³⁹ Objective 1 of the strategy document was to integrate air quality goals and urban transport planning. The strategy committed the Government to two targets relating to the use of vehicles, known as vehicle kilometres travelled. The targets are:

- to achieve zero growth in per capita VKT by 2011;
- to achieve zero growth in total VKT by 2021.

The Government then directed transport agencies to develop an integrated transport plan to achieve the above goals, delivered to the Government by November 1998. In late November 1998, the Government released two documents: *Action for Transport 2010, an Integrated Transport Plan for NSW*; and *Action for Transport 2010, an Integrated Transport Plan for Sydney*. These two strategies are summarised below.

4.1 Action for Transport 2010, an Integrated Transport Plan for NSW⁴⁰

This is a 47 page document that is divided into two main sections. The first 31 pages provide a general description of transport achievements under the current Government and prospective projects until the year 2010. Both transport activities around the State and within Sydney are described, and include topics such as: care for environment; reducing car dependency; improving air quality; improving access for rural communities; and giving the community value for money. The balance of the document describes transport initiatives in eight major regions of the State. These are summarised below.

³⁸ FreightCorp, *Annual Report 1997/98*.

³⁹ Environment Protection Authority, *Action for Air*, February 1998.

⁴⁰ NSW Government, *Action for Transport 2010. An integrated transport plan for New South Wales*, 1998.

Blue Mountains and Central West

- the majority of people travel to work by car, although 4000 people commute daily by train daily from the Blue Mountains to Sydney;
- an XPT service runs from Bathurst and Orange to Sydney daily, with Countrylink coaches servicing the local area;
- road has taken the primary share of the freight market
- roads are generally narrower than current standards and traffic volumes warrant, did suffer damage in 1998 floods, but are generally in good condition;
- as part of a 12 year strategy, the Penrith to Orange route will have \$360 million spent on it to: widen the highway to four lanes between Penrith and Katoomba; mostly three lanes between Katoomba and Mt Victoria; and other works.
- assisted by a \$100 million grant from the Federal Government, widen sections of the Mitchell Highway, Castlereagh and Mid Western Highways;
- the Rail Access Corporation is establishing a new container transport terminal at Bathurst;
- the Government has carried out initial investigation of the potential for re-opening disused rail lines between Kandos, Mudgee and Gulgong.

Hunter and the Central Coast

- this region is continuing to grow with strong residential development on the Central Coast in particular;
- more than 46,000 people travel outside the region to work, mostly from the Central Coast to Sydney, though there has also been a strong increase in local jobs;
- train travel times from the Central Coast will be improved with the creation of a high speed rail link between Sydney, Hornsby and Gosford and eventually Newcastle. Stage 1 of the link, between Hornsby and Warnervale, will be completed by 2007, and allow extra services by CityRail. Stage 2 from Warnervale to Newcastle will begin in 2010;
- \$10 million will be spent by the Rail Access Corporation to improve efficiency of the rail network to service export coal producers;
- improvements to the New England Highway are funded by the Federal Government as a National Highway;
- improvements to the Golden and Pacific Highways will also improve road freight efficiency.

Illawarra and the South Coast

- population growth is growing in the region, with seasonal influxes of people due to tourism;
- much new residential and job growth in Wollongong has been out of major centres and away from the main transport infrastructure. This makes it difficult to get to work without a car and threatens air quality;
- the Government will electrify the rail line from Dapto to Kiama;
- a new high speed rail link will be built between Sydney and Wollongong prior to 2010;

- the freight links to Port Kembla are hampered by the steep terrain of the Illawarra Escarpment;
- the development of the Princes Highway is the highest priority for the Government in the region. By 2010 the Government will spend \$200 million on building a four lane divided road to Kiama.

New England

- the population of the area is concentrated in Tamworth and Armidale, although young people are leaving the region seeking jobs;
- the region produced 20% of all NSW agricultural produce in 1995/96;
- the Government is committed to maintaining rail networks in the region, including investigating the possible re-opening of disused rail lines.
- rail freight continues as an important resource for the local economy;
- road freight routes, including access to railheads, will need to be improved.
- the New England Highway is the major north-south road through the region and is the principal inland route for interstate road freight. The upgrading and maintenance of the Highway is Federally funded. However, cuts to the Federal National Highway funding have led to a serious deterioration in road quality on the Highway.

North Coast

- the North Coast is the State's fastest growing region;
- agriculture remains dominant in much of the region, although tourism is significant throughout the region, creating high seasonal employment;
- the majority of people travel to work by car, and low population densities and dispersed settlement patterns limit the effectiveness of public transport;
- in 1996 the State and Federal Governments launched a ten year program to upgrade the Pacific Highway, with the State contributing \$1.6 billion and the Commonwealth \$600 million;
- the development of east-west routes in the region is a priority and will be State funded;
- the upgrading of the rail line between Sydney and Brisbane will improve train freight links and Countrylink services.

South Western NSW

- strong population growth is expected in the major centres of Wagga Wagga, Albury and the Southern Highlands;
- away from the ACT the influence of agriculture is strong, whilst tourism is significant in the Snowy Mountains;
- the majority of people travel to work by car. The region's strong agricultural and tourism sectors generate substantial demand on local and regional roads;
- more than 2000 trucks use the Hume Highway every day;
- the State government would like to see the Hume Highway become four lanes all

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- the way to the Victorian border;
 - a private sector proposal for a Very High Speed Train from Canberra to Sydney would benefit the region. While not a priority for the State Government, the Government will support the project on the basis that the Commonwealth should take the lead role and there should be no cost to NSW taxpayers;
 - the upgrading of the Main Southern Railway will improve freight line and improve passenger service reliability.

Western NSW

- agriculture is the dominant industry in most areas of the region, with mining important in some areas;
- population growth is centered in Dubbo and the Central Macquarie region;
- in 1995 the Government restored the weekly Countrylink rail service to Griffith and Broken Hill;
- rail freight plays a crucial role in the movement of produce, with millions of tonnes of wheat transported for export;
- the Government wants to continue to encourage the use of the rail track network by private sector rail companies;
- roads will be targeted for widening, strengthening and sealing, with five identified routes selected for upgrading.

Sydney

- the plans for Sydney will be detailed in the next section.

4.2 Action for Transport 2010 an Integrated Transport Plan for Sydney⁴¹

The Strategy presents a ten point action plan to improve transport in the Sydney region. The Strategy first presents a series of challenges that the Government and community face to improve transport. These challenges include:

- in 1996 Sydney's population reached 3.9 million, it is expected to reach 4.3 million by 2011 to 2016;
- Sydney's outer suburbs now account for more than 50% of the city's population, with more growth expected;
- employment growth has centred around North Ryde, Chatswood, Parramatta and outer suburbs, yet these areas are poorly serviced by public transport;
- between 1981 and 1991 Sydney's population grew by 12% but this was overtaken by the growth in car ownership (14%) and car use (up 20%). There are 4.1 million cars in NSW with half of these in Sydney. By 2021 there will be an extra 1 million cars registered;
- Sydney's air quality is under threat from more cars travelling further;

⁴¹ NSW Government, *Action for Transport 2010. An integrated transport plan for Sydney*, 1998.

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- there has been a rise in the percentage of people travelling to work by car, despite an absolute increase in the numbers of people using buses and trains. In addition, public transport has not kept pace with Sydney's growth;
 - by 2006 Sydney's population growth will mean that the current CityRail network will reach capacity;
 - freight movement is hampered by traffic congestion and delays, while a priority freight line through Sydney is essential to provide a reliable service;
 - in 1997, 212 people were killed and 2977 seriously injured on Sydney roads.

Upon implementation, the plan will create 28,000 jobs in NSW, including 19,000 in Sydney, and Premier Carr described it as "the biggest transport construction program since the Sydney underground rail line was built in the 1920s."⁴²

The ten point action plan to improve transport is summarised below.

1/ Getting the best out of the Sydney system

This section focuses on the maintenance and refinement of the transport system. Highlights include:

- opening the Transport Management Centre by mid 1999, which will control traffic better with the use of 320 cameras monitoring traffic conditions. The Centre will cost \$28 million and operate 24 hours a day, 7 days a week;
- refurbish all CityRail non-Tangara rolling stock by 1999;
- refurbish Circular Quay by 2000, costing \$20.5 million;
- introduce electronic tolling on the Harbour Bridge and Tunnel, Eastern Distributor by 2002 and Cross City Tunnel by 2004;
- refit the Manly ferries, replace the Jet Cats and the First Fleet catamarans by 2010;
- in 1998/99 budget \$123.3 million allocated to train and station maintenance, and each year more than \$610 million of the road budget spend on maintenance.

2/ Improving Sydney's Air Quality

This section referred back to the air quality strategy *Action for Air*. Highlights include:

- halt the growth in per capita vehicle kilometres travelled by 2011;
- implement the vehicle emissions program by 2000;
- buy 150 low emission compressed natural gas buses for Sydney Buses by 2000;
- continue to develop diesel emission testing.

3/ Reducing car dependency

The action plan notes that the purpose of the Strategy is to encourage more people to use public transport, not their cars, which will require significant behavioural change. The Strategy presents a series of infrastructure works to help reduce the need to travel by car (which are explained in later points). This section also notes that integrated transport solutions are required, such as including priority bus lanes in new road developments. This section also notes that the prices charged for public transport compared to the price for

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Media Release, "Carr Government unveils the future of Sydney transport." Premier of NSW November 23 1998.

driving cars and parking should encourage people to make choices that help reduce traffic congestion and improve air quality. The Government has also committed to establish a Travel Demand Task Force to promote discussion in the community on transport issues.

4/ Meeting the needs of our growing suburbs

This section notes that future urban development in Sydney must be integrated with the expansion of the city's public transport services and infrastructure. The Government will discourage freestanding and isolated retail and entertainment facilities. The following targets for developing new greenfield sites have been developed: minimum 15 dwellings per hectare; maximum five kilometres from an existing or proposed bus or train service; minimum 15 minute frequency for local public transport in peak periods.

5/ Getting more people on public transport

This section introduces a range of new infrastructure works as well as programs for improving customer safety on public transport and improving access to passenger related information. The strategy includes the construction of seven new bus transitways, which will be dedicated bus only routes with sheltered stops, electronic timetable boards, video surveillance and seating. By 2010 90 kilometres of bus transitways will have been constructed in Western Sydney, connecting Liverpool, Parramatta, Blacktown and Castle Hill. The proposed bus only transitways are as follows, with the completion date in brackets:

- Liverpool to Parramatta (2003)
- Parramatta to Strathfield (2002)
- St Marys to Penrith (stage 1 2003, stage 2 2008)
- Parramatta to Blacktown (2004)
- Blacktown to Castle Hill (2009)
- Blacktown to Wetherill Park (2006)
- Parramatta to Mungerie Park (2010)

A new railway is also planned to be built between Parramatta and Chatswood at a cost of \$1.4 billion, to be operational by 2006. This link will provide extra capacity to the CityRail network and renew the focus on Parramatta as Sydney's second city. The line is expected to be used by 18 million passengers per year by 2010. The new airport line linking Central station to the airport and linking to the East Hills line is expected to open during the year 2000. Five new stations are being built as part of the project, providing opportunities for urban consolidation around these transport nodes. Track upgrades on the East Hills line will also improve services to the Liverpool and Campbelltown area. Plans are also indicated to: improve the rail service on the Richmond line to Riverstone; extend the light rail westward to Lilyfield; and a new privately built rail between Bondi Junction to Bondi Beach. Between 2010 and 2120 the following railway works are proposed: construct a new line between Hurstville and Strathfield, complete stage 2 of the Hornsby to Newcastle rail upgrade; a new line from Chatswood to Dee Why; a new line line between Bondi Junction

and Maroubra; and an extension of the North West line from Castle Hill to Rouse Hill.

6/ Safeguarding our environment

This section includes community concerns about the environment, which are taken into account in the planning and construction of all new transport infrastructure. In addition, over the next five years as part of its road building program the Government has committed \$404 million to protect the environment, including noise control measures, landscaping and water quality control works.

7/ Making space for cyclists and walkers

The Government has committed itself to developing *Bike Plan 2010* to provide a masterplan for the construction of a bike network for Sydney by 2010. The bike network will include the expansion of off-road bike paths by 300 km, including next to new infrastructure projects such as the bus only transit ways. Building the cross-city tunnel between Sussex and William streets in the Sydney CBD by 2004 will allow major pedestrian improvements on the surface.

8/ Preventing accidents and saving lives

The Government is preparing a detailed document called *Road Safety 2010*, to be released soon. Blackspot locations in Sydney with high accident histories will be targeted. In 1997 30% of all road fatalities involved pedestrians, so the Government will work with local councils to develop Pedestrian Access and Mobility Plans to enhance pedestrian safety.

9/ Making freight more competitive

Demand for freight, and particularly road freight, are expected to increase significantly in Sydney over the next ten years. The city's road and rail networks are inadequate to meet this demand. Currently less than 15% of freight in Sydney goes by rail. The Government would like to increase that percentage significantly over the next ten years by making rail more competitive, and is developing a freight strategy to achieve this. A major limitation on the freight rail market is the lack of priority rail freight track. Currently freight trains passing through Sydney are limited by peak hour commuter services. The development of a rail freight network will require the assistance of the Federal Government, which has already provided commitments to assist in the development of freight and Olympic passenger lines at Flemington Junction. The National Rail Corporation has chosen Chullora as the location of its Sydney terminal, and \$60 million will be spent by the Corporation on the site to prepare it for larger freight trains.

The Government has a six part strategy for the development of the city's road freight network. These are:

- completing the Sydney Orbital, which is a route around Sydney which links up with key inter-state highways. The Eastern Distributor, the M5 East, the Western Sydney Orbital and a link between the M2 and the Gore Hill freeway all parts of this orbital strategy;
- high standard City West link, for heavy vehicles from Darling Harbour and the CBD to Parramatta Road and the M4;
- upgrading Metroad 7, which is the Cumberland Highway between Horsley Drive

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- and Merrylands Road, widening to six lanes;
 - improving Route 45, key improvements will be made along the route between Pennant Hills Rd and Princess Highway, which services the Chullora rail freight terminal and the industrial areas of Silverwater;
 - upgrading Metroad 3, between the M2 at North Ryde and the Princes Highway at Blakehurst;
 - improving the Southern Arterial, which services the Botany and airport region.

10/ Giving value for money

The Government notes that the investment outlined in *Action for Transport* will need to come from a productive partnership between all levels of government and the private sector. The Minister for Transport the Hon Carl Scully MP notes that the NSW Treasury has approved the level of expenditure required to fund the projects as outlined in the strategy, including on average \$300 million per year on rail until the year 2010. Funding for the bus transitways will come out of the existing road budget. The strategy notes that the State Government is committed to keeping public transport fares affordable, and that it is negotiating with the Federal Government to fund projects of national importance as outlined in the plan.

The *Action for Transport* plans were met with both support and some scepticism in the community. One newspaper editorial noted that the plan was the 13th transport vision for Sydney since 1970, and that most of those visions also coincided with a State election.⁴³ The then Opposition spokesman on transport Michael Photios MP dismissed the plan as a 'pre-election stunt from fantasy land.'⁴⁴ Mr Jeff Angel of the Total Environment Centre welcomed the announcement of the plan, but noted that to be credible, the Government will have to urgently gazette a planning instrument to give legal force to the new transport corridors.⁴⁵

5.0 Conclusion

In a city the size of Sydney, and with a relatively small population spread across the rest of the State, transport is always going to be a challenge for governments and communities. Large cities have problems of congestion, whilst regional areas have problems of maintaining expensive infrastructure and services for an often declining population. For transport systems to work, the right institutional structures need to be in place. This Paper has focussed on some of those institutional structures, and highlighted where further action needs to take place.

Commentators often disparage public transport systems because they have often not had the required government investment in them to make them efficient and entice people out of their cars. If current proposed levels of investment in the NSW transport system go ahead,

⁴³ "Vision thing" in *The Sydney Morning Herald*, 25 November 1998.

⁴⁴ "Carr's poll-driven transport vision" in *The Sydney Morning Herald*, 24 November 1998.

⁴⁵ "Carr's poll-driven transport vision" in *The Sydney Morning Herald*, 24 November 1998.

then some of these problems may well be alleviated. It will be interesting to see if the community will support these investments and choose public transport as their mode of choice.