Chapter 2

The costs and benefits of private and public transport

2.1 This chapter considers the economic, social and environmental benefits of public transport and seeks to relate them to major infrastructure projects.

2.2 Evidence before the committee suggested that the economic, social and environmental benefits of public transport in comparison to roads are well established nationally and internationally. They include increased equity and personal mobility in cities; reduced fuel consumption and congestion; decreasing air pollution; provision of economic and land use development opportunities; increased property values and a reduction of the city's urban footprint; as well as providing community well-being and health benefits.[1]

2.3 The International Association of Public Transport identified some of the benefits of public transport over individual transport modes. It argued that public transport:

- costs less to the community;
- needs less urban space;
- is less energy-intensive;
- pollutes less;
- is the safest mode;
- improves accessibility to jobs; and
- offers mobility for all.[2]

Economic costs and benefits

2.4 According to the Tourism and Transport Forum (TTF), the economic benefits of public transport include the:

- effective connection of wealth and labour to the marketplace;
- removal of productivity bottlenecks; and
- maximising opportunities for individuals, business and government to increase income and asset value.[3]

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1 Committee for Perth, *Submission 6*, p. 2; Committee for Melbourne, *Submission 27*, p. 3; Yarra Climate Action Now, *Submission 12*, p. 1; Transport Reform Network, *Submission 32*, Attachment 1, p. [2].

2 International Association of Public Transport, Introduction, http://www.uitp.org/Public-Transport/why-public-transport/index.cfm (accessed 5 March 2014).

3 Tourism and Transport Forum, *The Benefits of Public Transport*, May 2010, p. 1, http://www.ttf.org.au/Content/benefitsofpublictransport.aspx (accessed 5 March 2014).

2.5 Car-based transport costs individual commuters and their cities more that public transport. Heavily car-based cities spend an estimated 12 to 15 per cent of their wealth on transport services whereas public transport-based cities spend 5 to 8 per cent.[4] A national study of transportation costs revealed that the average commuter working in a CBD in one of Australia's major cities could save more than $5490 per year by leaving the car at home and commuting to work on public transport five days a week.[5]

2.6 Private transport costs rank as a major household expenditure item along with food and other household costs. CSSA noted that while the average Australian household spends $193 a week on transport (including the costs association with the purchase and maintenance of a private car), the Disability Support Pension for a single person currently provides $388.35 maximum a week while those on the Newstart Allowance receive a maximum of $257.80 a week.[6] The costs therefore of owning a private car for those on income support and their families are prohibitive.[7]

2.7 A recent study undertaken by UnitingCare Australia found that 53 per cent of respondents using its emergency relief and financial counselling services stated that transport and vehicle costs were among the top three items that they were unable to afford alongside food and energy/utilities.[8] In Melbourne, over $133.37 is spent per week on average on car transport while housing expenditure averages at $144 a week. As the City of Yarra noted, such high expenditure on car use contributes to household stress and 'detracts from liveability especially in newer outer suburbs where housing may be more affordable but car use is essential'.[9] In comparison, where good public transportation connections exist, a lower proportion of household budgets are invested in transport. According to the City of Yarra:

> This is a major social equity consideration as inner areas of metropolitan cities well served by public transport, are becoming the preserve of those on higher incomes leaving those on low incomes in public transport poor outer suburbs, paying far higher transport costs based on running private vehicles.[10]

2.8 Strong pressures from population increases combined with traffic congestion, freight bottlenecks, declining housing affordability and the sprawling nature of recent urban development impact on the productivity and liveability of a city.[11] Therefore the

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4 Australian Conservation Foundation, *Submission 13*, p. 2.

5 Australasian Railway Association, *Submission 7*, Attachment 2, p. [1].

6 Department of Human Services, Payment rates for Disability Support Pension and Payment rates for Newstart Allowance, www.humanservices.gov.au/ (accessed 31 October 2014).

7 Catholic Social Services Australia, *Submission 8*, p. 2.

8 UnitingCare Australia, *Submission 16*, p. [2].

9 City of Yarra, *Submission 30*, p. 5.

10 City of Yarra, *Submission 30*, p. 5.

11 Committee for Melbourne, *Submission 27*, p. [1].

efficient movement of people around Australia's cities, as the engine rooms for economic growth and innovation, is critical to productivity.[12] Submitters to the inquiry emphasised that in order to maximise productivity, urban regions must have adequate and integrated public transport infrastructure and services. Otherwise resident populations will not maximise their quality of life and Australia's cities may become less globally competitive.[13]

2.9 For reasons including its contribution to enhancing economic productivity and the national economy, many submissions to the inquiry supported the view that public transport is a matter of national significance. The City of Yarra argued that investment in Melbourne and Sydney's public transport systems was as vital to the national economy as investment in freight as the 'economic power houses of finance and tourism require this support to maintain their competitive edge in a globally challenging environment'.[14]

2.10 Therefore, the point was made that a lack of public transport funding can undermine the economic capacity of Australia's major cities to contribute to national productivity and hinder Australia's ability to compete globally.[15] As the majority of Australians live in urban areas, their ability to access employment, education, health and recreation are collectively of national significance.[16]

2.11 The department noted that:

> An effectively functioning public transport system can increase productivity for the economy as a whole by enhancing access to jobs, increasing business and freight movement efficiently, and through easing growing road congestion pressures.[17]

2.12 The Planning Institute of Australia made the point that the country's transport systems play a vital role in meeting the challenges associated with population growth and ensuring that Australia remains a prosperous nation.[18]

2.13 Another key factor is that efficient transport. Given the costs involved in private transport as well as other factors, an estimated 30 per cent of Australians do not own or use a car. For them, public transport provides the only means to access employment, education and services.[19] If this sector of the population were to be

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12 Department of Infrastructure and Regional Development, *Submission 11*, p. 3.

13 Committee for Perth, *Submission 6*, p. 2.

14 City of Yarra, *Submission 30*, pp 1–2.

15 Councillor Jackie Fristacky, City of Yarra, *Committee Hansard*, 18 February 2014, p. 46.

16 Mr David Rice, Sustainable Transport Coalition of Western Australia, *Committee Hansard*, 19 February 2014, p. 1.

17 Department of Infrastructure and Regional Development, *Submission 11*, p. 3.

18 Ms Emma de Jager, Planning Institute of Australia, *Committee Hansard*, 19 February 2014, p. 47.

19 City of Yarra, *Submission 30*, p. 4.

excluded from accessing employment, education and other opportunities for reasons of lack of efficient transportation, national productivity would inevitably suffer.

2.14 As the department explained:

> As transport infrastructure underpins the competitiveness and liveability in our major cities, then ensuring that our nation's public transport systems and infrastructure work as efficiently as possible will be key to combatting congestion, supporting clusters of economic activity and realising the gains of future job creation.[20]

2.15 With 53 per cent of Australia's economic activity taking place in Sydney, Melbourne and Brisbane and a further 15 per cent in Perth and Adelaide, efficient public transportation systems offer compelling benefits to the Australian economy, community and to the environment.[21]

Congestion

2.16 Congestion, and specifically road congestion that affects business travel and freight, is recognised as a productivity bottleneck. In 2010, estimates suggested that the avoidable cost of urban traffic congestion in Australian capital cities was $12.9 billion.[22] The Grattan Institute made the point that increasing congestion and limited access to public transport make it harder and more time-consuming for businesses to connect with customers, potential employees and each other. Therefore, poor transport links are a 'drag on our economy, especially when employers frequently cite a lack of skilled workers as a barrier to growing their business'.[23]

2.17 The Bureau of Transport and Regional Economies (BTRE) estimated that in 2005, the annual avoidable cost of congestion in Australia's capital cities (where the benefits to road users of some travel in congested conditions are less than the costs imposed on other road users and wider community) was $9.4 billion. The $9.4 billion comprised:

- $3.4 billion in private time costs;
- $3.6 billion in business time costs;
- $1.2 billion in extra vehicle operating costs; and
- $1.1 billion in extra air pollution damage costs.[24]

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20 Department of Infrastructure and Regional Development, *Submission 11*, p. 14; Infrastructure Australia, *Submission 2*, Attachment 1, p. 5.

21 Afzal Hossain and David Gargett, 'Public transport use in Australia's capital cities: Modelling and forecasting', Bureau of Infrastructure, Transport and Regional Economies, 2012, pp 1–2.

22 Tourism and Transport Forum, *The Benefits of Public Transport*, May 2010, p. 1, http://www.ttf.org.au/Content/benefitsofpublictransport.aspx (accessed 5 March 2014).

23 Grattan Institute, *Submission 5*, p. [2].

24 Bureau of Transport and Regional Economies, *Estimating urban traffic and congestion cost trends for Australian cities*, Working Paper No. 71, 2007, p. xv, http://www.bitre.gov.au/publications/2007/files/wp_071.pdf (accessed 21 January 2014).

2.18 STCWA pointed out that, assuming the extra vehicle operating costs are split between private and business travel in the same proportions as the time travel, Australian businesses bear 45 per cent of the cost of congestion in Australia's capital cities.[25]

2.19 The $9.4 billion in congestion costs exclude the public health and social costs associated with traffic congestion. As the Bus Industry Confederation (BIC) noted, congestion not only impacts national productivity but also the productivity and quality of life of individuals.[26] A study commissioned by ARA found that a 50 per cent reduction in congestion would give the average Brisbane and Perth commuter an extra 73 hours per year, the equivalent of almost two weeks annual leave.[27]

2.20 In terms of the comparative economic costs of public transport, the Rail, Tram and Bus Union (RTBU) argued that the transport infrastructure multiplier, which seeks to capture the economic benefits of transport infrastructure investment, demonstrates that public transport investment is effectively self-financing. According to RTBU, based on an investment of $100 million in transport infrastructure, the impact of significant multiplier benefits would be the equivalent of a $400 to $700 million increase in GDP. While the benefits of investment in public transport are maximised when local procurement opportunities and capabilities are fully utilised, the direct and related benefits of public transport to the economy provides for a return of four to seven times the initial investment. RTBU continued:

> For example, increased investment in public transport can assist many domestic industries supplying goods and services, which form part of the manufacturing supply chain. These include steel, aluminium, cement, plastics and glass and a range of related services such as design, engineering and project management. And by generating higher incomes it also boosts economic activity throughout the economy and lifts revenues to government.[28]

2.21 In 2011, research commissioned by RTBU found that the cost of *not* funding public transport infrastructure amounted to losses of $18 billion in additional income in NSW, almost $20 billion in Victoria and around $48 billion around the country. These losses were a result of lost productivity stemming from a failure to maintain 1984 relativities on investment in public transport infrastructure.[29]

2.22 According to the Tourism and Transport Forum (TTF), given the projected growth in urban traffic over the next decade, the avoidable cost of urban traffic congestion is expected to increase to over $20 billion if current trends in transport

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25 Sustainable Transport Coalition of Western Australia, *Submission 4*, p. 3.

26 Bus Industry Confederation, *Submission 17*, p. 5.

27 Australasian Railway Association, *Submission 7*, p. 6.

28 Rail, Tram and Bus Union, *Submission 33*, p. 9.

29 Rail, Tram and Bus Union, *Submission 33*, p. 13.

continue unabated.[30] Given these circumstances, the Moving People 2030 Taskforce observed that:

> Without significant reform, the compounded cost of every extra person on Australia's often at-capacity transport networks will impact on the employment opportunities, productivity and social well-being of the next generation.[31]

2.23 A survey conducted in Perth found that 71 per cent of companies recognised congestion in the CBD as having a negative impact on business productivity. Congestion resulted in staff commonly being late for work while delays brought about by congestion forced companies to have to pay additional costs of moving produce around the city.[32] Estimates suggest that at present, Perth commuters lose up to 14 million hours each year due to congestion.[33] Perth's traffic delays are second only to Sydney, which in turn, experiences more delays that most cities in the United States (US).[34]

2.24 Left unchecked, congestion in Perth is set to get worse given that its population of two million is projected to reach five million by 2050. Without investment in transport modes which reach Perth's metropolitan areas, congestion in the city is set to cost Perth $33 billion in economic and social costs over 2014–2031.[35] According to ARA, to halve Perth's current traffic congestion through road investment, $40 billion and 2000 lane kilometres would be required. In comparison, the same congestion reduction could be achieved with a 38 per cent lower investment of $25 billion in rail, resulting in the removal of an estimated 163,000 cars from Perth's roads during peak hour.[36]

2.25 Most commuting activity, and therefore congestion, takes place at peak hours. A 2013 study demonstrated that it may be through the relief of such congestion that transport improvements and especially UPT have their 'primary effect on economic productivity'.[37] This argument is based on evidence from various submitters which suggested that:

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30 Tourism and Transport Forum, *The Benefits of Public Transport*, May 2010, p. 1.

31 Moving People 2030 Taskforce, *Moving Australia 2013: A Transport Plan for a Productive and Active Australia,* 2013, p. 12.

32 The Hon. Alannah MacTiernan, Member for Perth, *Committee Hansard*, 19 February 2014, p. 16.

33 Australasian Railway Association, *Submission 7*, p. 6. That is despite the fact that an estimated 20 per cent of the distance travelled by commuters during peak period in Perth is on public transport. Department of Infrastructure and Regional Development, *Submission 11*, p. 3.

34 Committee for Perth, *Submission 6*, p. 3.

35 Australasian Railway Association, *Submission 7*, p. 6.

36 Australasian Railway Association, *Submission 7*, p. 6.

37 Tim Hazledine, Stuart Donovan and John Bollard, *The contribution to public transport to economic productivity*, NZ Transport Agency research report 514, January 2013, p. 7.

- passenger journeys on rail reduces congestion, safety and carbon emission costs, amounting to savings of $3.11 in Brisbane and up to $8.41 in Sydney per journey;[38]
- a typical bus is capable of removing 50 to 100 cars off the roads while a passenger train can replace up to 1000 cars, thereby reducing congestion as well as transport-related carbon emissions and road accidents;[39]
- at capacity, a two-track passenger railway can carry up to 25,000 passengers per hour in each direction, which is the equivalent of more than 20 lanes of freeway;[40] and
- one suburban train can remove 5 km of cars from congested roads while benefit-cost analysis indicates that for every $1 invested in passenger rail transport, $1.80 is returned to the economy.[41]

2.26 Professor Graham Currie, Professor of Public Transport at Monash University, made the point that the biggest costs of congestion occurred in areas surrounding central areas or CBDs rather than directly within them. He argued that 80 per cent of a given city is not in the centre and as a result, congestion relief in terms of public transport is necessary in the middle and outer suburbs.[42]

2.27 The department noted that if left unchecked, urban congestion will become a greater obstacle to economic growth and quality of life.[43] While in the short term, traffic will continue to be influenced by fuel prices, unemployment and recovery from the effects of the global financial crisis, in the longer term, it is most likely to grow at the same rate as the population. To this end, road traffic in Australia is estimated to rise by an aggregate from 55 billion kilometres travelled (VKT) per quarter in 2011 to more than 68 billion VKT per quarter in 2020. This rise represents an additional 4.5 per cent growth per year and a 24 per cent net increase in traffic with consequences for both congestion and infrastructure investment.[44]

2.28 Therefore, as the department noted:

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38 ARA noted that the social inclusion, reduced infrastructure maintenance costs and fuel security benefits that greater rail travel provides are not incorporated into these figures but would otherwise increase the benefits of rail travel. Australasian Railway Association, *Submission 7*, p. 4.

39 Australasian Railway Association, *Submission 7*, p. 4.

40 Tourism and Transport Forum, 'Position Paper: Public Transport and Climate Change', Tourism and Transport Forum, 2009.

41 City of Yarra, *Submission 30*, pp 5–6.

42 Professor Graham Currie, Monash University, *Committee Hansard*, 18 February 2014, p. 3.

43 Department of Infrastructure and Regional Development, *Submission 11*, p. 4; Moving People 2030 Taskforce, *Moving Australia 2013: A Transport Plan for a Productive and Active Australia*, 2013, p. 44.

44 Department of Infrastructure and Regional Development, *Submission 11*, p. 4.

> …any significant contribution that public transport can make to addressing modal share of anticipated traffic growth will also have a flattening effect on the escalation in road congestion costs.[45]

Space efficiency

2.29 A number of submitters made the point that transport solutions which created more road space for cars can simply encourage more traffic. Some argued that road-based congestion solutions were not viable in Melbourne for this reason, as well as the fact that it entailed the poor use of scarce inner-city land. According to the City of Yarra, the expansion of motor vehicle use in cities has led to over 30 per cent of land use devoted to vehicles.[46] It argued that accommodating an additional 200,000 people in the Melbourne CBD with car-based transport would require an additional 65 freeway lanes and 782 hectares of parking space. Such a solution would therefore be inefficient in terms of land use and far more costly than meeting the demand for travel by public transport modes.[47]

2.30 In comparison to road transport, Professor Peter Newman from Curtin University argued that public transport is far more space efficient:

> There is a kind of space productivity: about 800 people an hour can go down a suburban street; about 2500 an hour down a lane of freeway; about 5000 on a bus way; about 10,000 on a light rail; about 50,000 on a heavy rail – they are highly efficient in space terms. So more than 20 times the productivity, in space, terms if you have a railway, which is why cities everywhere are building railways.[48]

Social and health benefits of public transport

2.31 A number of submitters made the point that public transport assists Australians to access employment opportunities, education and professional development, health services, recreational facilities and provides opportunities to engage with and participate in local communities.[49] The social impacts of limited or no public transport include noise pollution, distance from neighbours, increased driving time and reduced opportunities for walking and other forms of recreation as well as social isolation.[50] These impacts have negative repercussions in terms of community wellbeing, social engagement and health which in turn impact national productivity and competitiveness as well as social cohesion.

2.32 By providing a communal access point to vital goods and services, it was submitted that public transport is a 'vehicle for social cohesion' between diverse

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45 Department of Infrastructure and Regional Development, *Submission 11*, p. 5.

46 City of Yarra, *Submission 30*, p. 2.

47 City of Yarra, *Submission 30*, p. 2.

48 Professor Peter Newman, Curtin University, *Committee Hansard*, 19 February 2014, p. 9.

49 Greater Shepparton City Council, *Submission 45*, p. [1].

50 Mr Cole Hendrigan, Curtin University Sustainability Policy Institute, *Committee Hansard*, 19 February 2014, p. 23; Australasian Railway Association, *Submission 7*, p. 5.

demographics in society.[51] Public transport provides for equal access, as the unemployed, elderly, disabled and those at risk of social isolation resulting from poor transport options have greater access to employment, education, health and community services.[52]

2.33 Some of the key considerations in relation to transportation infrastructure into the future relate to Australia's changing demographic and ageing population. Access to public transport for the elderly, many of whom cannot access private transport for reasons including affordability, is vital to the health and wellbeing of Australia's aged community. By 2030, one in five Australians will be over 60 years and the ratio of workers to retirees will have fallen as a consequence from 5:1 to 3:1.[53] This means that a smaller proportion of the population will have to fund the transport needs of the whole country. Therefore, the ageing of Australia's population will have a significant impact on the sustainability of the nation and how people move around it. Supporting mobility and social inclusion will become an increasingly important responsibility of public transport for these reasons. However, a decline in proportional income tax revenue brought about by this demographic shift will ensure that funding transport infrastructure will become a growing challenge.[54]

2.34 Lack of access to public transport can pose as a significant barrier for people seeking full participation in society and the economy, thereby curbing productivity and limiting life choices.[55] Therefore, the benefits of enhancing accessibility, mobility and encouraging economic participation of those without other transport options can be substantial.[56] In fact, public transport usage is high amongst the unemployed and those not engaged in the labour force. A 2011 study on public transport usage in Melbourne (zones 1 and 2) found that public transport patrons included 55 per cent of the city's unemployed, 38 per cent of those not in the labour force and 44 per cent of Melbourne's part-time workers.[57]

Health costs of car transport

2.35 Yarra Climate Action Now (YCAN) argued that the loss of sports grounds and passive recreation space resulting from the construction of new freeways which utilise public space will have a negative impact on community health and wellbeing

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51 Tourism and Transport Forum, *The Benefits of Public Transport*, May 2010, p. 1; Catholic Social Services Australia, *Submission 8*, p. 2.

52 Australasian Railway Association, *Submission 7*, p. 5; Catholic Social Services Australia, *Submission 8*, pp 2–3.

53 Australian Bureau of Statistics, *Australian Demographic Statistics 2010–2011*; Moving People 2030 Taskforce, *Moving Australia 2013: A Transport Plan for a Productive and Active Australia*, 2013, p. 16.

54 Moving People 2030 Taskforce, *Moving Australia 2013: A Transport Plan for a Productive and Active Australia*, 2013, p. 12.

55 UnitingCare Australia, *Submission 16*, p. [1].

56 Infrastructure Australia, *Submission 2*, Attachment 1, p. 7.

57 Catholic Social Services Australia, *Submission 8*, p. 2.

across metropolitan areas. It argued that Melbourne's East West Link project, as a case in point, will have adverse health impacts on the elderly and the young, given the close proximity of the road project to schools and aged care facilities.[58]

2.36 In terms of health effects, available evidence indicated that each additional hour spent driving a car increases the likelihood of obesity by six per cent.[59] According to the Australian Conservation Foundation (ACF), physical inactivity due to car dependence costs over $10 billion per year in direct health costs.[60] At the same time, a study by Medibank Private revealed that the Australian healthcare system could save $1.5 billion annually if more people were physically active.[61] STCWA drew on a study conducted in the US which found that car drivers who switched to using public transport dropped an average of five pounds in weight. The study found that an estimated 60 per cent of residents in a 'low-walkable' neighbourhood were overweight compared to 35 per cent in a 'high-walkable' neighbourhood.[62] The study concluded that commuting between home and school or work was an effective strategy to increase and maintain population-wide physical activity levels.[63]

2.37 In terms of health safety costs, road transport generates almost eight times the accident costs of rail.[64] Each year there are about 1450 fatalities and 30,000 serious injuries on Australia's roads.[65] The cost of road crashes on a cents per km basis is approximately 965 per cent higher than rail crash costs. As a result, if 1000 people transferred from cars onto rail, the road crash costs would be reduced by $650,000 to $760,000 per year depending on the city.[66]

2.38 ACF argued that as a result factors including road crashes and air pollution, health budgets suffer directly from inefficient transport systems. In 2005, air pollution from cars alone resulted in health costs from morbidity (cardio-vascular and respiratory diseases and bronchitis) and mortality of between $1.5 and $4 billion. ACF noted that if public transport use increased by 45 per cent there would be a 28 per cent

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58 Yarra Climate Action Now, *Submission 12*, p. 2.

59 Doctors for the Environment Australia, Submission to Senate Rural and Regional Affairs and Transport References Committee Inquiry into the investment of Commonwealth and State funds in public passenger transport infrastructure and services, *Submission 70*, p. 2, http://dea.org.au/images/uploads/submissions/submission70.pdf (accessed 21 January 2014).

60 Australian Conservation Foundation, *Submission 13*, p. 2.

61 Ms Emma de Jager, Planning Institute of Australia, *Committee Hansard*, 19 February 2014, p. 47.

62 Sustainable Transport Coalition of Western Australia, *Submission 4*, p. 2.

63 Ms Emma de Jager, Planning Institute of Australia, *Committee Hansard*, 19 February 2014, p. 47.

64 Australasian Railway Association, *Submission 7*, p. 4.

65 Bus Industry Confederation, *Submission 17*, p. 3.

66 Australasian Railway Association, *Submission 7*, p. 4.

decrease in exposure to photochemical smog, which would reduce the resulting air pollution human health impacts.[67]

Environmental benefits of public transport

2.39 The 2007 National Greenhouse Accounts ranked transport as a major source of greenhouse gas emissions related to the combustion of fossil fuels. Of transport:

> Road transport was the main source of transport emissions in 2007, accounting for 68.5 Mt CO_2-e or 11.5% of national emissions. Passenger cars were the largest transport source, contributing 41.9 Mt CO_2-e.[68]

2.40 In terms of environmental impact, during peak traffic periods, bus and rail are up to six times less greenhouse gas emissions intensive per passenger kilometre than private vehicles.[69] Rail-based freight transport uses one third of the fuel of road transport and is approximately four times as energy efficient as road-based freight transport.[70] Per passenger kilometre travelled, road produces more than 40 per cent more carbon emissions than rail.[71]

2.41 ACF noted the wider benefits of investment in green infrastructure including a reduction in air pollution, carbon sequestration, improved water quality and river flow. Other suggested benefits included reduced wastewater treatment costs, lower impact from natural disasters, reduced heat island effect in cities as well as health benefits including lower obesity where there more green space and non-car options are available.[72]

2.42 In light of these significant environmental benefits, ARA suggested amending cost-benefit-analysis evaluation methods to take the wider environmental, social and economic benefits of transport modes into account.[73] However, part of the challenge in determining such benefits are the complexities involved in costing them. As Ms Kate Roffey, CEO of the Committee for Melbourne expressed, 'How do you cost clean air versus dirty air?'[74]

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67 Australian Conservation Foundation, *Submission 13*, p. 2.

68 Australian Bureau of Statistics, 4613.0 – Australia's Environment: Issues and Trends, Jan 2010, Climate Change in Australia, January 2010, http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4613.0Feature+Article1Jan+2010 (accessed 5 March 2014).

69 Tourism and Transport Forum, 'Public Transport and Climate Change', Position Paper, Tourism and Transport Forum, Sydney, November 2009, p. 8, http://www.ttf.org.au/Content/ptclimatechange.aspx (accessed 5 March 2014).

70 City of Yarra, *Submission 30*, p. 5.

71 Australasian Railway Association, *Submission 7*, p. 4.

72 Australian Conservation Foundation, *Submission 13*, p. 2.

73 Australasian Railway Association, *Submission 7*, p. 7.

74 Ms Kate Roffey, Committee for Melbourne, *Committee Hansard*, 18 February 2014, p. 21.

Relative costs and benefits of current major infrastructure projects

This chapter now turns to an analysis of Melbourne's East West Link and Sydney's WestConnex. It considers the expected economic, social and environmental impacts of these two major infrastructure projects in light of the benefits of alternative public transport initiatives.

Melbourne's East West Link

2.43 The East West Link (EWL), which is an 18 kilometre cross-city road connection across Melbourne from the Eastern Freeway to the Western Ring Road, has raised concerns regarding the financial, economic and environmental impact of the project.

2.44 Stage one, the eastern section of the EWL, is expected to cost $6.8 billion to build with reports suggesting that Victorian taxpayers will contribute $2 billion.[75] Consistent with the Coalition's 5 September pre-election commitment to fund roads, not public transport, the federal government contributed $1.5 billion in the EWL.[76] In late June 2014 and under the terms of an MOU, $1 billion of Commonwealth funding was provided to the Victorian government in respect of stage two of the project in the form of a grant. The terms of the MOU stipulate the need for a cost/benefit analysis to be undertaken by Infrastructure Australia and the return of the funding to the Commonwealth if the project does not proceed.[77]

2.45 In a newspaper article, Kenneth Davidson stated that the financial, economic and environmental arguments in favour of the EWL are 'fallacious'.[78] According to the first major analysis of the EWL carried out by a group of ten transport planners and financial analysts, the entire project may end up costing Victorian taxpayers between $13.6 and $15.6 billion.[79] In a report titled 'Tunnel Vision or World Class Public Transport', the group stated:

> We argue that there are viable alternatives to improving Melbourne's transport that are less costly and can deliver results much more quickly than the EWL. These options avoid expensive and unnecessary infrastructure

75 Alison Savage, 'East West Link: Stage one to cost $6.8 billion, Victorian Government releases tunnel's final design', *ABC News*, 30 September 2014; http://www.abc.net.au/news/2014-09-30/east-west-link-cost-to-taxpayers/5778086 (accessed 2 October 2014); Richard Willingham, East West Link stage one to cost Victoria $2 billion, *The Age*, 30 September 2014, http://www.theage.com.au/victoria/east-west-link-stage-one-to-cost-victoria-2-billion-20140930-10ny7e.html (accessed 2 October 2014).

76 The Coalition's Policy to Deliver the Infrastructure for the 21st Century, September 2013.

77 Ms Lyn O'Connell, Department of Infrastructure and Regional Development, *Estimates Hansard*, 20 October 2014, p. 25.

78 Kenneth Davidson, 'East West Link: The case against this road gets even stronger', *Sydney Morning Herald*, 28 July 2014.

79 Professor Jago Dodson et al, *Tunnel Vision or World Class Public Transport?*, p. 2, http://mams.rmit.edu.au/eupxwm692zjq1.pdf (accessed 17 November 2014).

> construction and would ensure a more efficient use of public funds with fairer distribution of transport improvements across Melbourne.[80]

2.46 Another concern repeatedly raised in relation to the project is the lack of transparency accompanying EWL decision making and traffic modelling. As a case in point, the full business case for the project is yet to be made public. The Victorian government provided Infrastructure Australia with a 'short form business case' for stage one in June 2013. In this document, the Victorian government claimed the project had a benefit-cost ratio of 1:4 if wider economic benefits were included and 0:8 without wider benefits included.[81] However, according to the transport planners and financial analysts group, as the details of the modelling have not been released for public scrutiny, it is 'impossible to be sure what the final benefit-cost ratio is'.[82]

2.47 The City of Yarra, which advocating for rail to Doncaster as an alternative project, argued that the EWL is considered to be the 'wrong project, in the wrong place at the wrong time'.[83] Other witnesses held similar views. The City of Melbourne suggested that the traffic problem that the EWL is purported to address could be solved with the introduction of a congestion levy. Director of City Design at the City of Melbourne, Professor Robert Adams further argued that increasing the capacity of the rail system was a greater priority than the EWL.[84]

2.48 The group of ten transport planners and financial analysts suggested that the funds set aside for the EWL could be used for more effective transport options including a tripling of the *SmartBus* network to improve suburban public transport networks.[85] Similarly Professor Adams argued that funds saved from proceeding with the EWL could be reinvested into initiatives including a rapid bus network, which would be a more efficient investment given the number of commuters who would utilise those services.[86]

2.49 In terms of the social impact of the EWL, the City of Yarra argued that:

> The East-West Link project is proving to be a very divisive project socially. Communities from across Melbourne have expressed great concern that funding this one "mega" project will prevent the funding of many other

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80 Professor Jago Dodson et al, *Tunnel Vision or World Class Public Transport?*, p. 3.

81 Infrastructure Australia, Answer to question on notice from Senate Rural and Regional Affairs and Transport Legislation Committee Supplementary Budget Estimates Hearing, November 2013, http://www.aph.gov.au/~/media/Estimates/Live/rrat_ctte/estimates/sup_1314/infra/IA.ashx (accessed 6 August 2014).

82 Professor Jago Dodson et al, *Tunnel Vision or World Class Public Transport?*, p. 7.

83 City of Yarra, *Submission 30*, p. 4.

84 Professor Robert Adams, City of Melbourne, *Committee Hansard*, 18 February 2014, p. 13.

85 Professor Jago Dodson et al, *Tunnel Vision or World Class Public Transport?*, p. 14.

86 Professor Robert Adams, City of Melbourne, *Committee Hansard*, 18 February 2014, p. 13.

> smaller more worthy projects, which cumulatively would cost less, and deliver better distributed benefits to the greater Victorian community.[87]

2.50 In terms of environmental impact, Professor Adams noted that the proposed tunnel will damage an estimated nine hectares of parkland and impact the water system. While the city of Melbourne currently derives 20 per cent of its water from stormwater recapture, the East West Link tunnel will take out of commission one of the biggest water purification systems at Royal Park.[88]

2.51 Evidence suggested that the Doncaster rail project, which has been put forward as a viable alternative to the EWL, would attract an estimated 100,000 passenger trips per day when fully operational. According to the City of Yarra, this is equivalent to the number of people projected to be carried by cars in the competing East West tunnel.[89] It also noted that the EWL provides only limited value for freight movement given its limited industrial and commercial catchment, while likely to increase transport economic costs by inducing additional car-based congestion, greater emissions and undermining higher value land use in inner Melbourne.[90] Similarly, the Public Transport Users Association (PTUA) noted that, according to traffic modelling on the proposed motorway, traffic is likely to get worse on various key roads if the project proceeds.[91]

2.52 YCAN raised concern that the massive costs involved in the EWL will 'swallow all transport funding for decades' precluding any and all public transport development.[92] Furthermore:

> Spending the $14 billion earmarked for the East West Link on public transport would mean that every single item on the public transport wish-list (Doncaster Rail, Airport Link, Metro Rail, signalling upgrades, railway crossing upgrades) can be completed.[93]

Sydney's WestConnex

2.53 Sydney's 33-kilometre WestConnex motorway is the biggest transport project in Australia. It will link Sydney's west with the airport and the Port Botany precinct, and include the M4 extension and duplication of the M5 East to King Georges Road.[94] At approximately thirteen kilometres long, the WestConnex stage one tunnel between

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87 City of Yarra, *Submission 30*, p. 3.

88 Professor Robert Adams, City of Melbourne, *Committee Hansard*, 18 February 2014, p. 13.

89 City of Yarra, *Submission 30*, p. 4.

90 City of Yarra, *Submission 30*, p. 4.

91 Public Transport Users Association, *Submission 34*, p. 2.

92 Yarra Climate Action Now, *Submission 12*, p. 1.

93 Yarra Climate Action Now, *Submission 12*, p. 2.

94 WestConnex, http://www.westconnex.com.au/ (accessed 3 February 2014).

the M4 and St Peters will be the longest road tunnel in Australia, three times the size of Sydney's M5 East tunnel.[95]

2.54 Prior to the federal election, the Coalition committed $1.5 billion to the $11 billion project.[96] In May 2014, the federal government committed an additional $2 billion through a concessional loan to the NSW government to enable work on stage two of the project, which duplicates the M5 East, to begin in mid-2015. The concessional loan is expected to be underpinned by state guarantees.[97]

2.55 There are three stages of construction of the WestConnex:

- Stage 1: M4 East project – Homebush Bay Drive to Haberfield – estimated cost of $4.1 billion and expected to open in 2019;
- Stage 2: M5 East duplication from Beverly Hills to St Peters – estimated cost of $5.3 billion and expected to open in 2020; and
- Stage 3: M4 South from Haberfield to St Peters – estimated cost of $5.5 billion and expected to open in 2023.[98]

2.56 Concerns in relation to the WestConnex project have focused on the financial and social costs as well as the extent of transparency regarding the project. It came in for criticism in 2013 when the full business case was withheld from publication on commercial-in-confidence grounds and only limited traffic forecasts were made public.[99] According to newspaper reports, traffic projections upon which the business case relies were provided from two companies that supplied forecasts for toll roads in

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95 National Roads and Motorists Association, *WestConnex: getting it right*, July 2014, http://www.mynrma.com.au/images/About/20140710_WestConnex_Report.pdf (accessed 6 August 2014).

96 Liberal Party, 'Tony Abbott Press Release – Coalition affirms support for Sydney's WestConnex Project', 6 October 2012, http://www.liberal.org.au/latest-news/2012/10/06/tony-abbott-press-release-coalition-affirms-support-sydneys-westconnex; The Hon Tony Abbott MP, Prime Minister and The Hon Mike Baird MP, Premier of NSW, 'Funding Agreement to Fast-Track Construction of WestConnex', *Joint Press Release*, 16 May 2014, http://www.rms.nsw.gov.au/news/ministerial/news2014/downloads/140516_westconnex_funding_agreement.pdf (accessed 5 August 2014); Ms Lyn O'Connell, Department of Infrastructure and Regional Development, Senate Rural and Regional Affairs and Transport Legislation Committee, *Estimates Hansard*, 20 October 2014, p. 10.

97 Mr Mike Mrdak, Department of Infrastructure and Regional Development, Senate Rural and Regional Affairs and Transport Legislation Committee, *Estimates Hansard*, 20 October 2014, p. 8.

98 NSW Minister for Roads and Freight, 'Funding agreement to fast-track construction of WestConnex', *Media Release*, 16 May 2014, http://www.rms.nsw.gov.au/news/ministerial/news2014/140516_westconnex_funding_agreement.html (accessed 5 August 2014); Mr Mike Mrdak, Department of Infrastructure and Regional Development, *Estimates Hansard*, 20 October 2014, p. 57.

99 Jacob Saulwick, 'Drivers face $7.35 toll on new $11.5b WestConnex', *Sydney Morning Herald*, 20 September 2013.

Brisbane that ended in multibillion-dollar failures.[100] The accuracy of traffic forecasts in relation to the WestConnex will be essential in determining the success of the project. In October 2014, the department expressed the view that a significant amount about the project was publicly available with only some documents remaining withheld for commercial-in-confidence reasons.[101]

2.57 Nonetheless, media analysts have made the point that one of the problems with the WestConnex is that there is very little detail in the public domain about what the project entails, what it will do and what problems it is supposed to solve.[102] In July 2014, newspaper reports suggested that plans for the WestConnex were in a state of flux with the state government extending the release of detailed plans for the contentious M4 East section of the project under Parramatta Road into late 2015.[103] Concerns have been raised that there is no public assessment of the impact of the motorway on other local roads or details of how the project will fit in with the government's desire to increase housing development or boost the public transport system.[104]

2.58 In terms of the social and environmental impact of the project, Action for Public Transport (NSW) raised concern that the WestConnex and motorway-style projects like it form a barrier to safe pedestrian movement. It noted that they physically divide communities and sever important connections while also undermining public transport usage which is dependent on good pedestrian connectivity.[105] Other groups such as the NoWestConnex Action Groups continue to protest the project on the grounds that a tunnel is not a solution to the congestion along the Parramatta Road and that the project overall is a waste of tax-payers money.[106]

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100 Geoff Winestock, 'Query on WestConnex numbers', *Australian Financial Review*, 28 January 2014, http://www.afr.com/p/national/query_on_westconnex_numbers_FKWR86cFcpQBwzRcBZeAtJ (accessed 3 February 2014).

101 Mr Andrew Jaggers, Department of Infrastructure and Regional Development, Senate Rural and Regional Affairs and Transport Legislation Committee, *Estimates Hansard*, 20 October 2014, p. 36.

102 'Detailed planning, not slogans, needed to cure transport paralysis', *Sydney Morning Herald*, 7 July 2014, http://www.smh.com.au/comment/smh-editorial/detailed-planning-not-slogans-needed-to-cure-transport-paralysis-20140706-zsxtt.html (accessed 7 August 2014).

103 Sean Nicholls and Jacob Saulwick, 'Government bid to keep WestConnex documents secret', *Sydney Morning Herald*, 27 July 2014, http://www.smh.com.au/nsw/government-bid-to-keep-westconnex-documents-secret-20140727-zwf70.html (accessed 29 July 2014).

104 'Detailed planning, not slogans, needed to cure transport paralysis', *Sydney Morning Herald*, 7 July 2014.

105 Action for Public Transport (NSW), *Submission 21*, p. 2.

106 Jacob Saulwick, 'Sydney protest groups line up against road and rail projects', *Sydney Morning Herald*, 1 November 2014, http://www.smh.com.au/nsw/sydney-protest-groups-line-up-against-road-and-rail-projects-20141031-11e1u4.html (accessed 15 November 2014).

Recommendation 1

2.59 The committee recommends that public transport infrastructure should be considered as nationally-significant infrastructure, alongside private transport infrastructure such as road construction.

Recommendation 2

2.60 The committee recommends that wider economic costs and benefits, including social and economic connectivity, environmental factors, active lifestyle benefits, safety factors and avoided costs and benefits be factored into transport project analysis.