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# The Costs of Commuting: An Analysis of Potential Commuter Savings

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## FOREWORD

This report identifies and quantifies, where possible, the potential savings that commuters working in the CBDs of Australian and New Zealand capital cities could achieve by converting to public transport and leaving their cars at home or deciding not to purchase a second car, or not owning a car at all.

It is acknowledged that in real life scenarios, the commuter costs and potential savings identified in this report might be influenced by a range of other factors in addition to vehicle types and distance driven.

The intention of this report is to highlight the potential costs of commuting and in doing so, add to the public debate about the benefits of greater utilisation of public transport.

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This paper has been prepared and published by the Australasian Railway Association using publically available data sources as outlined in the methodology and reference list.

## EXECUTIVE SUMMARY

This report estimates the potential savings that Australian and New Zealand commuters can achieve if they decide to use public transport rather than a private vehicle to commute to work. These estimates are based on the potential savings commuters can achieve in Melbourne, Sydney, Brisbane, Adelaide, Perth, Hobart and Canberra as well as Auckland and Wellington.

After identifying the potential costs to commute by car in Australian and New Zealand cities, this report uses two scenarios to examine potential commuter savings. The first scenario estimates the potential savings that can be made from leaving the car at home and using public transport to commute to work. The second scenario estimates the potential savings that can be made by selling the car (similarly, choosing not to buy an additional car) and using public transport to commute to work. To investigate the potential commuter savings that can be made from these scenarios, information has been gathered on car running costs, public transport fares, parking costs and also population data that illustrates labour force size and movement in each capital city.

The report makes the following key findings:

- The average Australian commuter pays \$11,996.39 per annum in car ownership and running costs.
- The average New Zealander commuter pays \$11,852.98 per annum in car ownership and running costs.
- For those that decide to not own a car and commute with public transport instead, Australians on average can potentially save \$9,973.66 per annum.
- For those that decide to not own a car and commute with public transport instead, New Zealand commuters on average can potentially save \$9,065.78 each year.
- On average, if an Australian car owner decides to leave their vehicle at home and use public transport to commute to work, they can potentially save \$1,724.59 a year.
- On average, if a New Zealand car owner decides to leave their vehicle at home and use public transport to commute to work, they can potentially save \$2,119.03 a year.

The above potential savings increase further when additional costs not included in this study are incorporated.

A conservative estimate of \$1,000 per year for parking is included in the car costs. However, it must be noted that the cost of parking can vary significantly depending on location. The report found that parking costs in Australia can range from \$180 to \$750 a month in Australia's capital cities or \$2,160 to \$9,000 per year while institutions such as universities offer significantly cheaper parking rates ranging between \$190 and \$950 for an annual parking permit. According to Auckland Transport, monthly parking costs can vary from \$100 to \$410 per month meaning parking costs in Auckland can range from \$1,200 to over \$4,920 per year.<sup>i</sup>

Other costs such as toll road fees, non-compulsory car insurance, environmental and congestion costs were not included in the analysis. It must be highlighted that the use of toll roads, non-compulsory insurance and the environment costs associated with driving a private car to work every day can be substantial. Over the course of a

year, toll roads to commute to work can cost anywhere between \$855.60 and \$2,893.40. Thus, it can be assumed that the potential annual costs and therefore savings of a commuter who uses toll roads to commute to work could be significantly higher than identified in this study. Likewise, as non-compulsory car insurance rates vary significantly according to driver history, location and other factors, the report does not include this cost which also adds to the potential savings commuters that switch to public transport can achieve. Environmental costs are difficult to quantify and are an aspect which individuals should personally consider when deciding on their method of daily commute.

While not quantified in this paper, the broader benefits of travelling by public transport, should also be considered as a potential saving – the ability to use mobile technologies to work or read and the freedom to sleep or socialise while travelling by public transport provide an added benefit in productivity or “use of time” that is not achievable driving.

This report does not comment on the current stock of public transport infrastructure or services. It must be noted that a commuter’s transport mode of choice will be greatly influenced by the services provided by public transport operators. Shifting from private vehicle use to public transport is made more feasible when the public transport services provided are efficient, cost effective, safe and comfortable. Complementary services such as park-and-ride services can also play an important role in providing quality public transport alternatives. By providing high quality cost effective services, public transport can not only serve as a cheaper alternative for commuting, but can also be the method of choice for commuters.

# INTRODUCTION

## Australia

A large proportion of the Australian labour force is heavily centred in Australia's capital cities. Of a workforce totalling approximately 9.8 million, around 56 per cent of Australian workers are based in capital cities. Sydney and Melbourne are home to a large share of Australia's workforce totalling 1,747,388 in Sydney and 1,621,070 in Melbourne or combined, almost 35 per cent of Australia's total workforce.<sup>ii</sup>

For many workers in Australia, getting to and from work means commuting and the car remains the most favoured method of commuting to work in Australia. Of the 9.8 million workforce, 60 per cent (5,943,948) drive to work (this does not include those that carpool to work, which amounts to 523,749). In all cities, the most populous commuting destination is the central business district (CBD), or areas nearby. For car drivers in the larger cities in particular, these commutes can be time-consuming and costly. These frustrations continue to grow in the larger cities as the cities themselves grow closer to capacity, causing gridlock on the roads and longer commute times. According to the *Bureau of Infrastructure, Transport and Regional Economics (BITRE)*, by 2020, road congestion will cost Australia \$20.4 billion annually through lost productivity as a result of time wasted in traffic.<sup>iii</sup> Furthermore, fuel costs have increased substantially over last two decades, placing greater pressure on individual living costs.

Collectively, Sydney, Melbourne, Perth, Brisbane and Adelaide CBDs produce 12.3 per cent of Australia's total economic output by employing 10.6 per cent of the population.<sup>iv</sup> With only 0.6 per cent of the population living in these CBDs, public transport links in to, out of and within city centres is vital to maintaining and improving Australia's national productivity.

## New Zealand

New Zealand has a total workforce of 2.3 million.<sup>v</sup> Like Australian cities, New Zealand has a strong commuter population. Auckland's CBD has low employment self-sufficiency, with workers residing in their area of work making up only 10 per cent of the total numbers employed. As a result, flows into the CBD from other parts of the region are high, placing pressure on the transport network, particularly on the immediate approaches to the CBD.

Wellington exhibits a strong culture of public transport use. Indeed, Wellington has New Zealand's highest number of public transport boardings per person per year – 72 trips per capita were made on public transport in Wellington in 2013, compared with 47 in Auckland and 20 in Canterbury.<sup>vi</sup> Despite these figures, like Australian cities, the most popular method of getting to work is the car, with 39,756 workers driving a car to work. However, this figure is 3 per cent lower than in 2006. Interestingly, walking or jogging to work is becoming more popular, with greater proportions of the working population choosing these methods to get to work. The use of trains and buses has remained relatively steady since 2006.

## Australasia

It is no surprise then that across the major cities of Australia and New Zealand we are witnessing a growing interest in improving mass transport networks, as commuters attempt to minimise living costs and avoid over congested roads.

Over the last 10 years, the state governments of Australia have invested in planning and construction to improve passenger transport networks in capital cities. Growth in Australasian passenger networks is consistent with international trends which show passenger networks becoming vital pieces of city infrastructure across the world. In Europe, 65 cities built new or expanded light rail systems between 1980 and 2007 and 160 European cities now have light rail. In Asia, India is building metros in 14 cities, while China is building light rail in 82 cities. (Newman et al. 2012).<sup>vii</sup>

# METHODOLOGY

## Commuters Areas Travelled To and From

In an attempt to identify the number of commuters in any given city, this report classifies commuters as those that travel outside their statistical area of residence to work.

For Australian cities, statistical areas have been defined by the Australian Bureau of Statistics (ABS). This report uses the ABS' Greater Capital City Area (GCCSA) to determine areas of residence and work. It is understood that this approach will overlook those that travel large distances within their statistical area.

This report localises its analysis by using specific areas in which workers commute to and from to get from their home to work. This report uses data from the ABS 2011 national census to identify popular commuter routes within Australia's capital cities. The report uses this information to estimate the potential costs and savings based on these popular commuter routes.

Specific information on commuter journeys in New Zealand could not be sourced. To accommodate, this report uses the rail networks as a guide for commuter journeys to and from work. We compare the costs of driving to the costs of using public transport from various points on the rail networks in Auckland and Wellington.

## Distance Travelled

Distance travelled refers to the distance travelled by car. To calculate this, Google Maps has been used to identify the most direct route and quantify the kilometres required to travel to work by car.

## Car Type

The car types chosen for this study represent a range of sizes. The sizes are roughly split into four groups; small, sedan, SUV and 4WD. The top cars of these categories as identified by drive.com.au have been used. These models include:

- Small Car - Mazda 2;
- Sedan – Mazda 6, Holden Commodore;
- SUV – Ford Territory; and
- 4WD –Toyota Land Cruiser.

The New Zealand Automobile Association do not specify the costs of individual car models, instead estimate costs of car categories such as small cars, compact cars, medium cars and large cars.

## Fixed and Running Costs

To identify and analyse the fixed and running costs of cars, reports produced by the automobile clubs or associations of each jurisdiction have been used. These include the National Roads and Motorists' Association (NRMA) for New South Wales, the Royal Automobile Club of Victoria (RACV), the Royal Automobile Club of Queensland (RACQ), the Royal Automobile Association of South Australia (RAA), the Royal Automobile Club (RAC), the Royal Automobile Club of Tasmania (RACT) and the New Zealand Automobile Association (AA).

With the exception of the NRMA, car operating cost calculations are all very similar. The overall car operating costs are separated into fixed costs and running costs. The fixed costs include elements such as registration, CTP insurance, stamp duty, depreciation and forgone interest (the interest that could have been earned without the purchase of a vehicle), and is presented as a weekly cost. Running costs incorporate the items which increase in cost as the distance driven increases and includes fuel costs, tyre costs, and service/repair costs.

This study assumes that commuters work full time, which is 5 days a week for 46 weeks. For this reason the weekly fixed car ownership costs are multiplied by 52 weeks and the running costs are multiplied by 46 weeks. We acknowledge that four weeks annual leave is not an absolute representation of the workforce, with occupations such as teaching allowing for more annual leave. Furthermore, assuming that everyone works full-time and travels to work every day is not entirely robust, however, it provides a consistent measure to identify the potential annual commuting costs and savings for this study.

### Whole of Life Cost (WOL) (NSW-NRMA)

As noted above, NSW differs from other jurisdictions in its costings. The NRMA uses a cost method labelled the Whole of Life cost (WOL) of a car. This method does not separate fixed costs from running costs, instead it estimates the WOL cost of a car based on a car travelling 15,000km annually. This is problematic as the WOL cost estimation for cars travelling long distances produces some unrealistic numbers, suggesting the cost of a car is far more than it really is. To overcome this, the report separates annual fuel costs from the WOL costs, and estimates fuel consumption based on distanced travelled. It must be noted that the results provided for NSW may still over estimate actual car costs. It is for this reason that the analysis provided will have to be used with caution, as some costs may not reflect actual costs.

## Public Transport Costs and Ticketing

Public transport costs have been estimated drawing information from passenger rail websites in each capital city. For cities that do not operate a passenger rail network, such as Hobart and Canberra, prices from the relevant bus service providers has been used. Where available, the cost of an annual public transport ticket has been used, such as V/Line's services in Victoria. For states that use a zonal system, such as Transport for NSW's 'Opal' system or Transperth's SmartRider system, weekly costs were estimated, keeping in mind that these initiatives often offer bonuses such as discounted fares or free travel after a certain amount of trips. More information on the price of public transport is explained within the analysis of the individual cities.

## Parking Costs

For those who pay for their own parking, parking costs can add immensely to the overall cost of driving to work. Using an online private and commercial parking website, namely findapark.com.au, parking costs can range from \$180 to \$750 a month in Australia's capital cities for a monthly lease. Similar prices for monthly parking leases were exhibited in Auckland. According to Auckland Transport, monthly parking can range from \$100 to \$410 per month meaning parking costs in Auckland can range from \$1,200 to over \$4,920 per annum. Institutions such as universities, on the other hand, price parking at a cheaper rate and can range between \$190 and \$950 for an annual parking permit.<sup>viii</sup> Taking a conservative figure we estimate a cost of \$1,000 per year for parking. This annual amount is added to the total cost of commuting to work by car.

## Currencies

This report does not seek to compare costs between cities or countries, rather it is an analysis of potential savings commuters in each city can make by using public transport. As such, cost information for Australian cities is in Australian Dollars and cost information for New Zealand cities is in New Zealand Dollars.

## Costs not included

Additional commuter costs such as tolls costs have not been accounted for in this study.

### Toll Road Costs

Toll costs have been excluded as it is not reasonable to assume that all drivers pay for tolls. Instead, these costs should be applied by the individual to evaluate their personal costs in driving to work.

Similar to parking costs however, toll road fees can add immensely to the cost of driving to work. Using Sydney Motorways as an example, toll fees for roads such as the M2 Motorway can range from \$1.86 to \$6.29 each way, depending on the destination. Other roads such as the Eastern Distributor can result in a fee of \$6.36 each way, and crossing the Sydney Harbour Bridge during peak times will cost \$4.00 each way<sup>ix</sup>. Similarly, Auckland's Northern Gateway Toll Road charges car drivers \$2.20 each way. Over the course of a year, using toll roads to get to work can result in an annual cost of anywhere between \$855.60 and \$2,893.40. These costs also needs to be factored in for those that have to pay road toll fees.

### Non-compulsory Car Insurance Costs

The report acknowledges that many car owners opt to buy additional insurance for their vehicle. However, given that additional insurance is not compulsory and vary significantly according to a number of factors, these costs have not been included in this study. Those who purchase additional vehicle cover should consider these costs when analysing their annual commuting costs.

## Environmental and Congestion Costs

There are significant external costs to society associated with driving a car to work. These costs are not added to the costs of commuting analysis, however, one should give reasonable thought to these costs when choosing to drive to work.

According to the True Value of Rail Report (2011), road travel produces 40 per cent more carbon pollution than rail travel per passenger kilometre. Further, road transport generates almost eight times the amount of accident costs as rail transport does. For society as a whole, every passenger journey made on rail rather than road in Australia's four largest cities, between \$3 and \$8.50 can be saved in congestion, safety and carbon emission costs. At an individual commuter level, a 25km commute will produce up to 3.1 tonnes of greenhouse gases over the course of a year. In other words, every litre of petrol saved reduces greenhouse emissions by 2.5kg.<sup>x</sup>

## Savings scenarios

To calculate the potential savings commuters can achieve, this report uses two scenarios.

First, this report estimates the potential savings of someone who decides to keep the car at home and use public transport to commute to work every day. This scenario is relevant to those who currently drive every day and wish to understand the potential savings of keeping the car at home and commuting to work via public transport instead.

The second scenario estimates the potential savings of someone who does not own a vehicle, and only travels to work by public transport. This scenario is relevant to commuters who may be considering purchasing a car to drive to work, purchasing an additional household car, or selling their current car in order to use public transport instead.

# KEY FINDINGS

## Australia

Public transport offers Australians great potential to save on their commuting costs over the course of a year. Figures 1 and 2 below, which have been obtained using the results of individual cities, show that the general Australian commuter has the potential to make considerable savings by using public transport to travel to work.

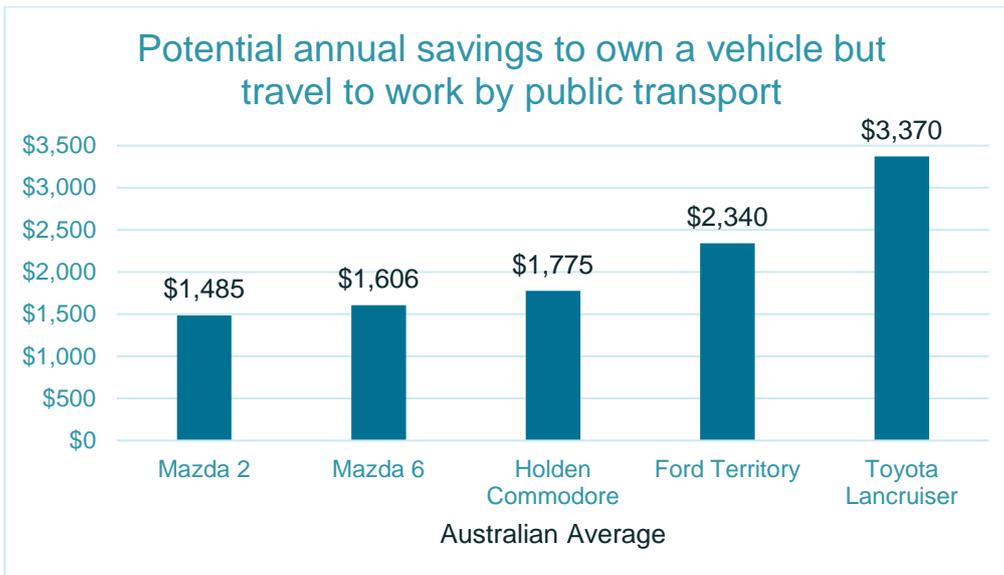
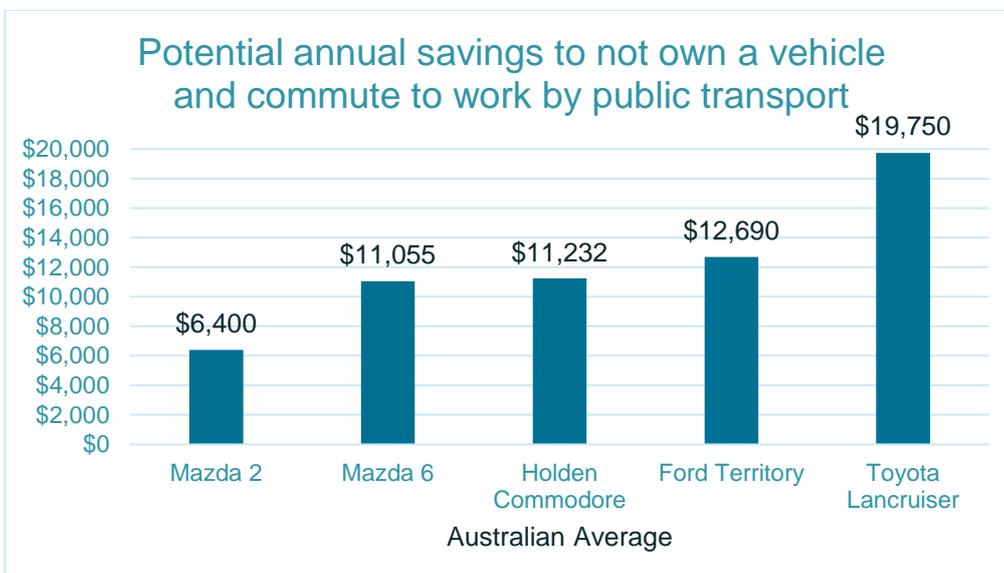


Figure 1: Potential annual savings to own a vehicle but travel to work by public transport

The results outlined above show generalised potential savings for Australian commuters driving various types of vehicles. Figure 1 shows that those who own a small car such as a Mazda 2 and choose to leave it at home and use public transport to commute, on average can potentially save around \$1,500 annually. In the case of those that drive a family car, such as a Holden Commodore, on average they can potentially save around \$1,775 annually. Those that drive a larger SUV, such as a Ford Territory, on average can potentially save \$2,300 annually by leaving the car at home and commuting to work with public transport. The median shows that these potential savings are highly variable, and depend largely on the distanced required to travel, and the price of public transport in the city. It must be remembered that a conservative figure for parking costs of \$1000 is included and the costs of toll roads are not included in these costs. Therefore a commuter who uses toll roads and/or pays more for parking stands to save significantly more.



*Figure 2: Potential annual savings to not own a vehicle and commute to work by public transport*

Figure 2 shows that those who choose not to own a car, and use public transport entirely to commute, the potential savings can be substantial. On average, those that sell (or choose not to buy) a Mazda 2, and instead use public transport to commute can potential save \$6,400 annually. This figure increases with larger sized cars. For example the potential savings from selling a family car, such as a Holden Commodore, and using public transport can potentially be around \$11,000 annually, or \$12,600 for a larger SUV, such as a Ford Territory. The median shows very similar results for the potential savings when selling a car (or choosing not to buy an additional car) and using public transport commute to work.

As outlined in the methodology, these savings come before adding various other costs incurred by a large number of commuters around Australia such as toll road costs. Parking costs in Australia are highly variable and can range from \$180-\$750 per month, depending on certain circumstances. Taking a conservative estimate, a \$1,000 parking cost has been incorporated to the cost for commuters driving each year.

Although not included in the analysis, toll road charges can also be quite expensive for those that use them to get to work. Although this report does not explicitly include toll costs, these costs should be taken into consideration by those that travel on toll roads to get to work. For Sydney commuters, toll road charges can range from \$1.86 each way to \$6.19 each way, depending on the road. These costs can potentially add up to annual toll road costs ranging from \$856 to above \$2,800.

Non-compulsory car insurance is another cost that must be factored in by individual commuters. Although not compulsory, car insurance is another cost incurred by commuters, which can be saved when using public transport.

The various added costs mentioned above make using a private vehicle to get to work even more expensive. Public transport provides commuters with a cost effective method to get to work, one that provides considerable potential savings to everyday commuters.

## New Zealand

Commuters in New Zealand also stand to make considerable savings by using public transport to commute to work. The potential savings are shown in Figures 3 and 4 below.

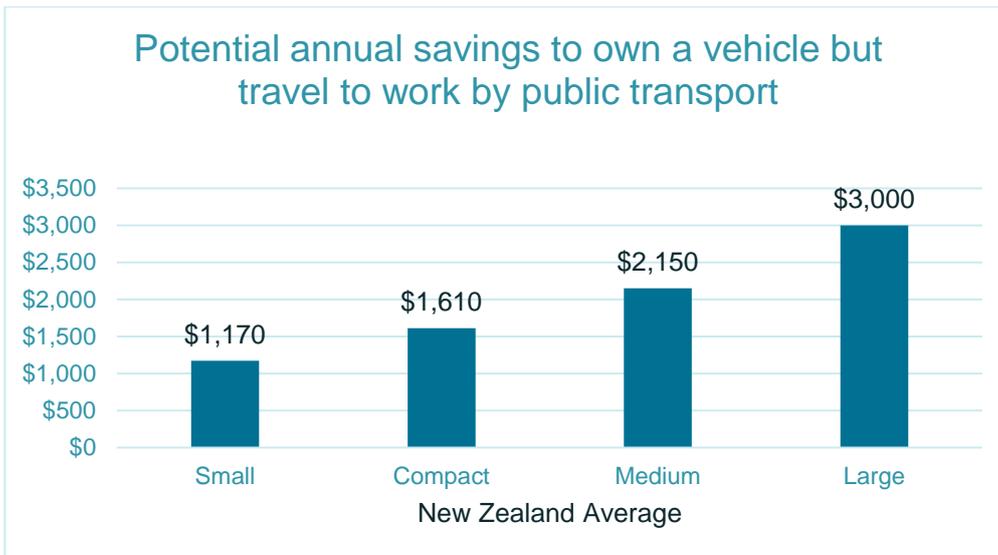


Figure 3: Potential annual savings to own a vehicle by transport to work by public transport

The results above show a generalised calculation of potential savings for New Zealand commuters. Figure 3 highlights the potential savings commuters can make when they leave the car at home and use public transport to commute to work. New Zealand commuters that own a small car can potentially save an average of \$1,174 annually, if they choose to leave the car at home and commute by public transport. For those that own medium and large cars, the potential savings a commuter can make exceeds \$2,000 annually, and can even reach \$3,000 for large car owners. The median highlights a high variability of potential savings.

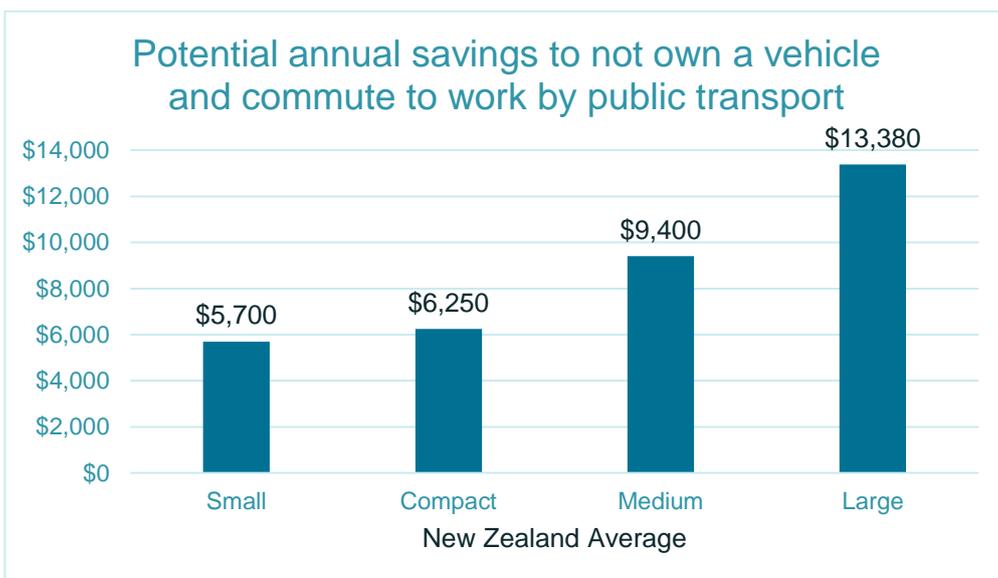


Figure 4: Potential annual savings to not own a vehicle and commute to work by public transport

For those that choose to sell their car (or choose not to buy an additional car) the potential savings over the course of a year are quite substantial. Figure 4 shows that, for those New Zealanders that sell (or choose not to buy) a small car, one can potentially save around \$5,700. These potential savings rise up to around \$9,400 for a medium car and above \$13,000 for a large car, illustrating the potential for substantial savings when using public transport.

These savings come before adding various other costs incurred by a large numbers of commuters around New Zealand such as toll road costs. Taking a conservative estimate, parking costs have been incorporated at \$1,000 per annum to commuters driving costs each year. However, parking costs in New Zealand are highly variable. According to Auckland Transport, monthly parking can range between \$100 to \$410 per month depending on certain circumstances.

Although not included in the analysis, toll road charges can also be quite expensive over the course of the year. According to New Zealand Transport Agency, the Northern Gateway Toll Road charges \$2.20 each way.<sup>xi</sup> Over the course of a year, this toll charge could amount to \$1,012, if used twice every day for a year.

Non-compulsory car insurance is another cost that must be factored in by individual commuters. Although not compulsory, car insurance is another cost incurred by commuters, which can be saved when using public transport.

## Key Findings at a Glance

The results in Table 1 below show the annual average costs and potential savings this study identifies for each city, and also at the national level.

LOCATIONS	COMMUTER COSTS		POTENTIAL SAVINGS	
	Average total Annual Car Costs (Fixed and variable)	Average annual Public Transport Costs	Scenario 1: Own a vehicle but travel to work by public transport	Scenario 2: Do not own a vehicle and commute to work by public transport
<b>Australia</b>	<b>\$11,996.39</b>	<b>\$2,022.73</b>	<b>\$1,724.59</b>	<b>\$9,973.66</b>
Melbourne	\$12,661.39	\$1,882.97	\$3,667.98	\$10,778.42
Sydney	\$12,611.64	\$1,840.00	\$1,791.63	\$10,771.64
Brisbane	\$14,003.74	\$3,628.08	\$1,735.21	\$10,375.66
Adelaide	\$12,359.14	\$1,762.80	\$1,840.71	\$10,596.34
Perth	\$12,419.76	\$2,283.84	\$1,514.32	\$10,135.92
Hobart	\$9,711.93	\$1,398.40	\$788.61	\$8,313.53
Canberra	\$10,207.10	\$1,363.00	\$733.66	\$8,844.10
<b>New Zealand</b>	<b>\$11,852.98</b>	<b>\$1,659.50</b>	<b>\$2,119.03</b>	<b>\$9,065.78</b>
Auckland	\$11,227.79	\$1,427.00	\$1,199.04	\$9,800.79
Wellington	\$12,478.17	\$1,892.00	\$3,039.02	\$10,586.17

Figure 5: Key Findings at a Glance

The results shown in Table 1 highlight the national average potential saving that Australian and New Zealand commuters can achieve. The results were obtained by estimating the commuting costs of various commuter routes within the capital cities of Australia and New Zealand. For brevity, the report will only illustrate the costs of two commuter routes per capital city.

Australians as a whole stand to save, on average, \$1,7254.59 if they leave the car at home and use public transport to commute to work. Similarly, the average New Zealand commuter can potentially save \$2,119.03.

For those that decide to not own a car and use public transport instead, Australians on average stand to save \$11,736.55. New Zealand commuters who decide not to own a car and instead to public transport could potentially save \$9,065.78.

Not counted in these costs are the costs using toll roads and also the environment costs associated with driving a private car to work on a daily basis. As highlighted in the methodology, commuters who regularly incur the costs of toll roads and parking stand to make higher savings by switching to public transport.

# MELBOURNE

## Statistical Snapshot

According to the national census conducted in 2011, around 1.6 million people work in Melbourne. Of this 1.6 million, over 500,000 workers commute to areas outside their usual place of residence. Amongst the workers commuting outside their statistical area, a vast majority commute to inner Melbourne for work.

The map displayed shows the most popular commuter routes in Melbourne. Like all cities, the vast majority of commuters travel to the inner city. Other popular bi-directional commuter routes include North-West to West, North-East to North-West and Outer-East to South-East.

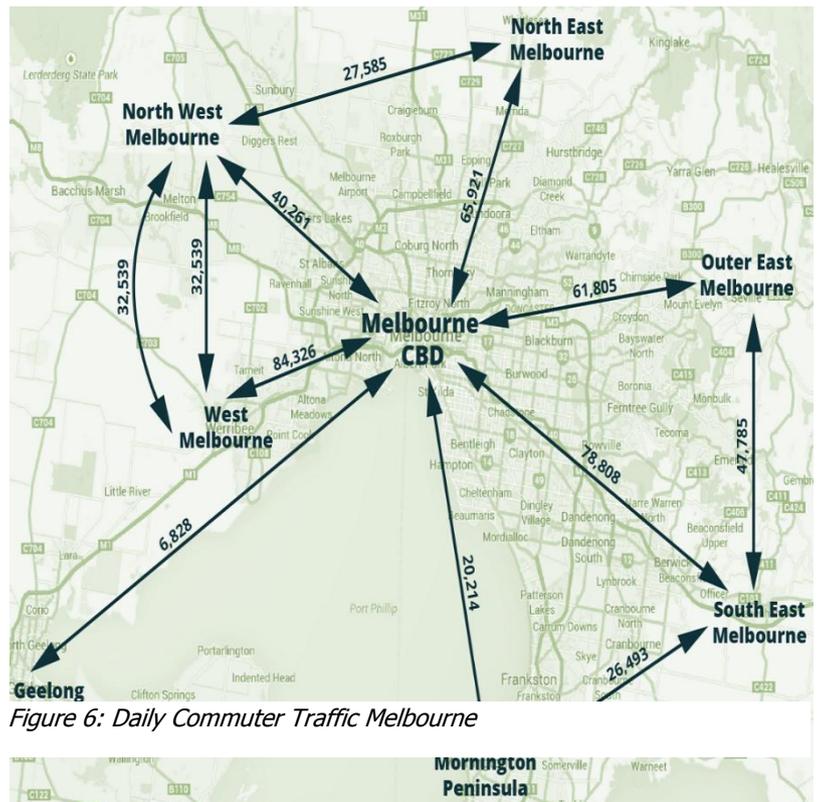


Figure 6: Daily Commuter Traffic Melbourne

## Public Transport Snapshot

Melbourne operates a metropolitan rail service via a franchise agreement with the Victorian State Government. Metro Trains Melbourne (MTM) operates a fleet of 203 six-carriage trains across 830 kilometres of track, which covers more than 45 million kilometres per year servicing more than 230 million customer journeys. The Metro train network has 15 lines, 218 train stations.<sup>xii</sup>

Melbourne also operates a regional line that runs throughout Victoria, and links up with Melbourne's outer suburbs. V/Line, the regional rail operator, operates 86 railway stations and runs more than 1400 train services per week.<sup>xiii</sup>

## Driving Costs

According to the RACV, the fixed costs incurred from owning a small car, such as a Mazda 2, amount to \$4,577.04 per annum, while the fixed costs incurred from owning a larger family car, such as a Holden Commodore amount to \$9,066.20. On top of this are the running costs, which differ depending on how far one travels per year. The RACV includes tyres, fuel and servicing in the running costs. According to the RACV, the running costs for a small car amount to 17.54 cents per kilometre, while the running costs of a larger family car amount to 17.59 cents.

Using the two most popular commuting routes in Melbourne as examples, those being West Melbourne to Inner Melbourne and South East Melbourne to Inner Melbourne, this report estimates the total driving costs for these commuters.

The West Melbourne to Inner Melbourne daily roundtrip commute is 48.2km. This commute results in annual parking and running costs of approximately \$2,944.48 for a small car and \$2,950.03 for a larger family car. When added to the fixed car ownership costs along with the costs of parking, the total annual driving costs are \$7,521.52 and \$12,016.23 respectively.

The distance of the South East Melbourne to Inner Melbourne daily roundtrip is 125.6km. This commute results in annual parking and running costs of approximately \$6,066.96 for a small car and \$6,081.40 for a larger family car. Adding in parking costs, annual driving costs are \$10,644.00 and \$15,147.60 respectively.

## Transport Costs

The public transport costs used in this report are derived from the annual ticket prices provided by V/Line. Using the commuter examples of West Melbourne and South East Melbourne to the inner city, the price of an annual train ticket is approximately \$1,666.00 and \$1,700.00 respectively.

## Potential Savings

Using the commuter examples of West Melbourne and South East Melbourne to the inner city, the potential savings are as follows. A commuter travelling from West Melbourne to the city who leaves the car at home and uses public transport will incur only the fixed cost of the car, that being \$4,577.04 for a small car and \$9,066.20 for a larger family car, plus the costs of buying an annual train ticket, which is approximately \$1,666.00. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$6,243.04 for a small car and \$10,732.20 for a larger family car. The potential savings for those that use public transport from West Melbourne to inner Melbourne and leave the car at home would be \$1,278.48 for a small car and \$1,284.03 for larger family car each year.

A commuter travelling from South East Melbourne to the inner city who leaves the car at home and uses public transport will incur the cars fixed cost, plus the cost of purchasing an annual train ticket which is approximately \$1,700.00 therefore, by leaving the car at home and using public transport, the total cost incurred will be \$6,277.04 for a small car and \$10,766.20 for a larger family car. The potential savings for those that choose to use public transport from South East Melbourne to the inner city and leave the car at home would be \$4,366.96 for a small car and \$4,381.40 for a larger family car.

The savings for those that sell their car, or choose not to buy an additional car, are more substantial. Those commuting from West Melbourne to the inner city can potentially save \$5,855.52 in one year by selling or not buying a small car, or \$10,350.23 by selling or not buying a family car.

Those commuting from South East Melbourne to the inner city can potentially save \$8,944.00 per annum by selling or not buying a small car, or \$13,477.60 by selling or not buying a family car.

In all circumstances examined, commuters can potentially save by choosing to use public transport to commute to work. The potential for savings depends on one's circumstances such as the vehicle they own and the distance they travel to work.

# SYDNEY

## Statistical Snapshot

According to the 2011 census, around 1.7 million people work in Sydney. Of this figure, over 500,000 commute to areas outside their area of residence.

The map displayed shows the most popular commuter routes in Sydney. Like most cities, many commuters travel to the inner city. Most of these commuters travel from the Eastern Suburbs, North Sydney, Parramatta and Sutherland. However a substantial number of commuters commute from as far away as the Illawarra, Outer South West and Baulkham Hills.

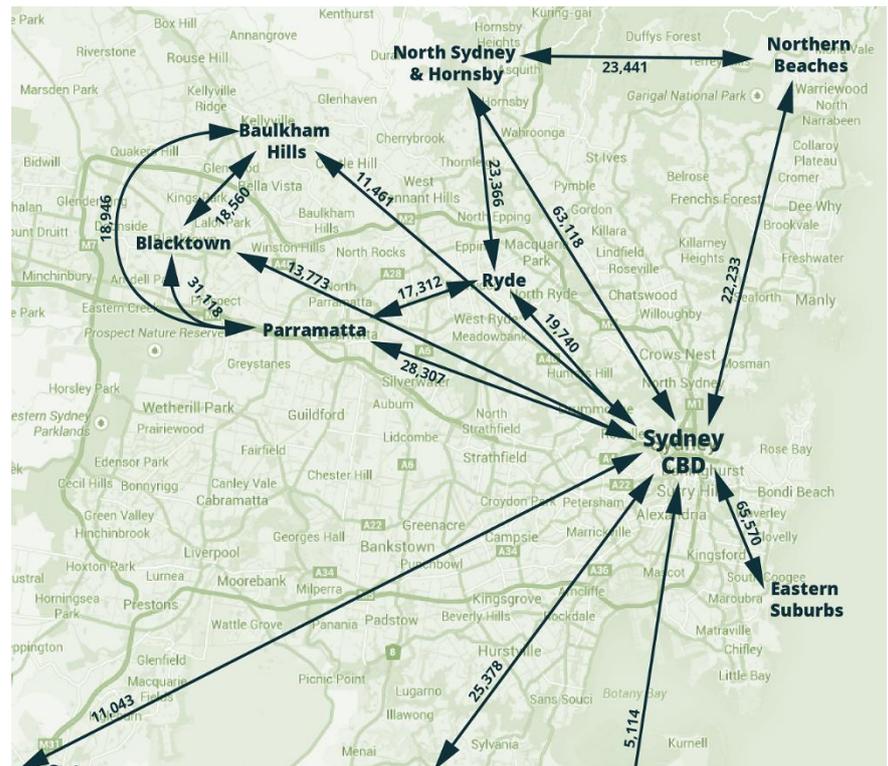


Figure 7: Daily Commuter Traffic Sydney

## Public Transport Snapshot

Sydney boasts a vast passenger transport network, spanning most areas of the greater city region and has the capacity to transport a vast sum of Sydney commuters, resulting in major savings for those travelling from different areas to work.

Sydney Trains, the inner city operator, currently provides 1 million customer journeys per weekday across 176 stations.<sup>xiv</sup> Furthermore, Sydney’s network is growing, with substantial investment in new infrastructure projects announced in the 2014-2015 Budget.

Along with the Sydney Trains’ inner city network, NSW TrainLink provides rail services to those outside Sydney, such as the Illawarra.

The NSW State Government has recently made major commitments to the expansion of this network which promises to provide world class services for Sydney-siders. These commitments include the \$8.3 billion North West Rail Link, the South West Rail Link, and the newly announced Sydney light rail network which is estimated to provide \$4 billion in benefits through improved public transport, productivity and land renewal.

## Driving Costs

Unlike other automobile associations in Australia, the NRMA does not separate the costs of owning a vehicle into fixed and running costs. Instead, the NRMA provides a 'Whole of Life' (WOL) cost which estimates the cost of owning a vehicle by combining various car costs into one variable. It is possible to separate the fuel costs from the other operating costs, which allows this report to estimate the driving costs for different areas in Sydney. It must be noted that the WOL makes all costs variable including registration costs, which means the further one drives, the greater the WOL. Effectively, this means a commuter who drives to the city from the Illawarra pays a higher registration fee than a person who drives to the city from Sutherland. This however is not the case in reality, and therefore, these estimations need to be used with caution.

For those driving a small car, such as a Mazda 2, the annual WOL cost is approximately \$5,464.16, while those driving a larger family size car, such as a Holden Commodore, can expect the annual WOL cost to be around \$9,643.92. On top of these costs, we are only able to separate the fuel costs. A driver of a small car can expect to pay approximately 12 cents per kilometre for fuel. A driver of a larger family sized car can expect to pay approximately 15 cents per kilometre.

This report estimates the total running costs for two of the more popular commuting routes of Sutherland to Sydney CBD and Northern Sydney to Sydney CBD.

The Sutherland to Sydney CBD daily roundtrip is 61kms. To drive to work on a daily basis using a small car would require approximately \$2,627.86 to cover the costs of fuel and parking. The parking and fuel costs added to the annual WOL cost for a small car results in an annual cost of \$8,092.02. For those driving a larger family sized vehicle, the annual parking fuel costs are approximately \$3,130.97, resulting in an annual driving cost of \$12,774.89.

The distance of North Sydney to Sydney CBD daily roundtrip is 35kms. To drive to work on a daily basis using a small car would require approximately \$1,936.29 to cover the costs of the fuel and parking. The parking and fuel costs added to the annual WOL cost for a small car results in an annual cost of \$7,400.45. For those driving a larger family sized vehicle, the annual fuel costs are approximately \$2,225.65, resulting in an annual cost of \$11,869.57.

## Transport Costs

NSW is currently rolling out its opal card payment system for public transport. Under the Opal scheme, fares are charged on the basis of distance travelled. The price of an annual ticket will vary depending on how far one commutes to work. The prices of an annual train ticket from Sutherland and North Sydney to the inner city is approximately \$1,729.60 and \$1,214.40 respectively.

## Potential Savings

Using the commuter examples Sutherland and North Sydney to the inner city, the potential savings are as follows. A commuter travelling from Sutherland to the inner city who leaves their car at home and uses public transport will incur only the fixed costs of the car, that being \$5,464.16 for a small car and \$9,643.92 for a family car, plus the costs of buying an annual train ticket, which is approximately \$1,729.60. By leaving the car at home and using public transport, the total cost incurred will be \$7,193.76 for a small car and \$11,373.52 for a family car. This results in savings of \$898.26 for small car drivers and \$1,401.37 for larger car drivers.

A commuter travelling from North Sydney to the inner city who leaves the car at home and uses public transport will incur the car's fixed cost, plus the cost of purchasing an annual train ticket which is approximately \$1,214.40. By leaving the car at home and using public transport, the total cost incurred will be \$6,678.56 for a small car and \$10,858.32 for a family car. This results in savings of \$721.89 for small car drivers and \$1,011.25 for larger car drivers.

The savings for those that sell their car, or choose not to buy an additional car, can be even more substantial. Those commuting from Sutherland to the inner city can potentially save \$6,362.42 annually by selling or not buying a small car, or \$11,045.29 by selling or choosing not to buy a family car.

Those commuting from North Sydney can potentially save \$6,186.05 by selling or not buying a small car, or \$10,655.17 by selling or not buying a family car.

# BRISBANE

## Statistical snapshot

As of the 2011 census, Brisbane had a working population of 643,000. Of this figure, around a third, or 211,281 commuters, travel outside their usual area of residence to work. By far, the destination most commuted to is the inner city, with 145,599 commuting to the inner city on a daily basis. The next most commuted to destination is Brisbane West with 12,750 daily commuters. The graph shows the areas where Brisbane commuters travelling to the inner city, commute from.

## Public Transport Snapshot

Queensland Rail operates the Brisbane passenger rail services. Queensland Rail is expanding its network and service coverage to meet increasing demand. The city network extends throughout South East Queensland, offering services throughout Brisbane and the surrounding suburbs. Rapid population growth in South East Queensland (SEQ) in recent years, combined with economic and environmental factors, has increased customer reliance on public transport. Patronage on Queensland Rail City services reached 55 million customers in 2013.

The Citytrain network comprises the SEQ network. Across the SEQ network, Queensland Rail has 146 stations, carrying approximately 150,000 passengers per day.

A light rail network was opened on the Gold Coast in mid-2014, adding an alternative mode of public transport to the area. The light rail network is estimated to reduce local greenhouse emissions by 114,000 tonnes in the first ten years of operation, while generating approximately 6,300 direct and indirect jobs<sup>xv</sup>. The Queensland government has also announced the BAT Tunnel, a major tunnel project for inner-Brisbane, providing a critical bus and rail link in Brisbane’s transport network by creating new major transport hubs across the city and inner city suburbs.

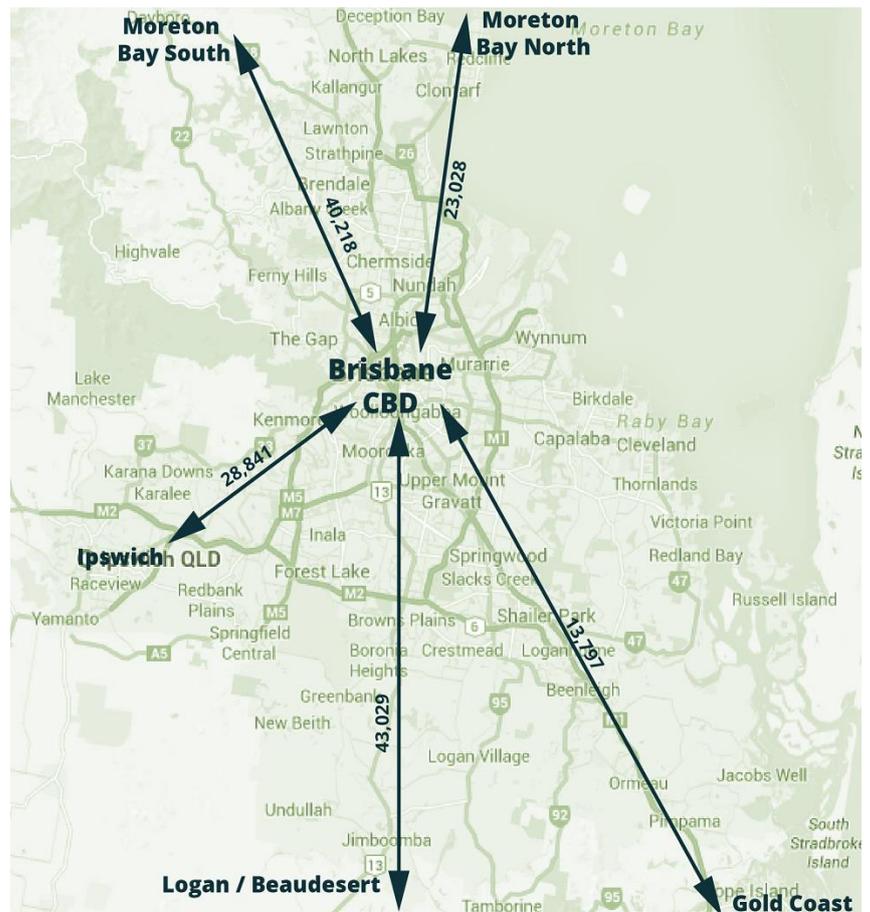


Figure 8: Daily Commuter Traffic Brisbane

## Driving Costs

According to the RACQ, the annual fixed costs incurred from owning a small car, such as a Mazda 2, amount to \$4,916.60, while the annual fixed costs incurred from owning a larger family car, such as a Holden Commodore amount to \$9,471.28.

On top of this are the running costs, which differ depending on how far one travels per year. The RACQ includes tyres, fuel and servicing in the running costs. According to the RACQ, the running costs for a small car amount to 17.55 cents per kilometre, while the running costs of a larger family car amount to 19.87 cents.

Using the two most popular commuting routes in Brisbane as examples, those being Logan to Inner Brisbane and Moreton Bay South to Inner Brisbane, this report estimates the total driving costs for these commuters.

The Logan to Inner Brisbane daily roundtrip commute is 137.4km. This commute results in annual parking and running costs of approximately \$6,546.15 for a small car and \$7,277.76 for a larger family car. Added to the annual fixed costs along with parking costs, these commuters spend \$11,462.75 and \$16,749.04 for a small car and larger family car respectively.

The distance of the Moreton Bay South to Inner Brisbane daily roundtrip is 120km. This commute results in annual parking and running costs of approximately \$6,843.80 for a small car and \$7,482.56 for a larger family car, resulting in total annual costs of \$10,760.40 and \$15,953.84 respectively.

## Transport Costs

Public transport costs in Brisbane vary, depending on where one commutes to and from. Brisbane operates on a swipe card system which prices journeys using a zonal system, where the further the destination, the greater the number of zones one has to travel through and therefore pay for.

Using the commuter examples of Logan and Moreton Bay South to the inner city, the price of an annual train ticket is approximately \$3,836.16 and \$2,712.96 respectively.

## Potential Savings

There are two avenues in which a commuter can save on commuting costs. The first is by leaving the car at home, and using public transport. The second is by selling the car, or choosing to not buy an additional car, and using public transport exclusively.

Again using the commuter examples of Logan and Moreton Bay South to the inner city, the potential savings are as follows.

A commuter travelling from Logan to the inner city who leaves the car at home and uses public transport will incur only the fixed cost of the car, that being \$4,916.60 for a small car and \$9,471.28 for a larger family car, plus the costs

of buying an annual train ticket, which is approximately \$3,836.16. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$8,752.76 for a small car and \$13,305.88 for a larger family car. The potential savings for those that use public transport from Logan to the inner city and leave the car at home would be \$2,709.99 for a small car and \$3,443.16 for a larger family car.

A commuter travelling from Moreton Bay South to the inner city who leaves the car at home and uses public transport will incur only the fixed cost of the car, that being \$4,916.60 for a small car and \$9,471.28 for a larger family car, plus the costs of buying an annual train ticket, which is approximately \$2,712.96. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$7,629.56 for a small car and \$12,182.68 for a larger family car. The potential savings for those that use public transport from Moreton Bay South to the inner city and leave the car at home would be \$3,130.84 for a small car and \$3,771.16 for a larger family car.

The savings for those that sell their car, or choose not to purchase a second car and use public transport instead can potentially save on the fixed costs of owning a car less the cost of annual transport. Those commuting from Logan to the inner city can potentially save \$7,626.59 by selling or not buying a small household car, or \$12,912.88 by selling or not buying a larger family car.

Those commuting from Moreton Bay South to the inner city can potentially save \$8,047.44 by selling or not buying a small car, or \$13,240.88.

## ADELAIDE

### Statistical Snapshot

According to the national census conducted in 2011, around 517,000 people work in Adelaide. Of this figure, 215,000 workers commute to areas outside their usual place of residence. Like all cities, a vast majority of commuters travel to the inner city. The graph shows the number of commuters travelling to inner Adelaide from various suburbs. Other popular bi-directional commuter

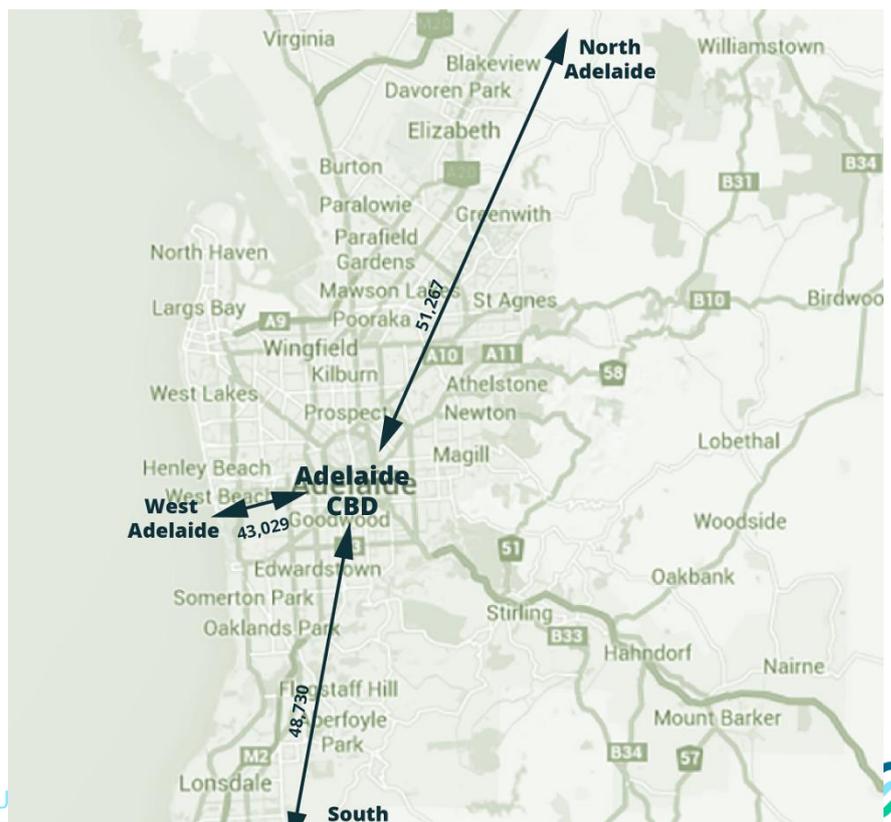


Figure 9: Daily Commuter Traffic Adelaide

routes include Adelaide South to/from Adelaide West and Adelaide North to/from Adelaide West.

## Public Transport Snapshot

The South Australian Department of Planning, Transport and Infrastructure operates the passenger rail network in Adelaide. Four Rail Lines are operated in the Adelaide Metro Network:

- Gawler Central Line – servicing Northern suburbs
- Outer Harbor/Grange Line – servicing North Western suburbs
- Belair Line – servicing South Eastern suburbs
- Seaford Line – servicing Southern suburbs

Public transport growth is being supported by significant investment in public transport revitalisation with \$2.6 billion planned to be invested between 2008-9 and 2017-18 on train, tram and bus infrastructure. Rail Revitalisation is the centrepiece of the 10-year, \$2.6 billion investment in public transport.

## Driving Costs

According to the RAA South Australia, the annual fixed costs incurred from owning a small car, such as a Mazda 2, amount to \$4,897.36, while the annual fixed costs incurred from owning a larger family car, such as a Holden Commodore amount to \$9,922.92.

Added to this cost are running costs, which vary depending on how far one travels per year, and also the parking costs. The RAA includes fuel, tyres and servicing costs in its total running costs. According to the RAA, the running costs for a small car equals 18.38 cents per km and 20.70 cents per km for a larger car.

Using the two most popular commuting routes in Adelaide; Adelaide south (Seaford) to Adelaide Central and Hills, and Adelaide North (Salisbury) to Adelaide Central and Hills, this report estimates the total running costs for these commuters.

The distance of the Salisbury to Inner Adelaide daily roundtrip is 43.2 km. This commute results in annual parking and running costs of approximately \$2,826.24 for a small car and \$2,858.03 for a larger car. Adding the running costs and parking costs to the fixed car ownership costs results in total annual car commuter costs of \$7,723.60 and \$12,780.67 respectively.

The Seaford to Inner Adelaide daily roundtrip is 71.8 km. This commute results in annual parking and running costs of approximately \$4,035.27 for a small car and \$4,088.12 for larger car, resulting in total annual costs of \$8,932.63 and \$14,010.76 respectively, with parking costs included.

## Transport Costs

Adelaide has a flat fare ticketing system. As a result, commuters in Adelaide pay \$1,762.80 for an annual commuter pass for the train network regardless of the distance they travel.

## Potential Savings

Using the commuter examples of Seaford and Salisbury to the inner city, the potential savings are as follows. A commuter travelling from Seaford to the inner city who leaves their car at home and uses public transport will incur only the fixed cost of the car plus the costs of buying an annual train ticket. For someone who owns a small car this cost will be \$6,660.16, whilst the owner of a family car will incur a cost of around \$11,685.44. The potential savings made from leaving the car at home and commuting to work would be approximately \$2,272.47 for the driver of a small car, or \$2,325.32 for the driver of a family car.

The costs incurred for those leaving the car at home and commuting from Salisbury to the inner city are approximately \$6,660.16 for small car owners and \$11,685.44 for family car owners. Therefore, those that leave the car at home can make the potential savings of around \$1,063.44 if owning a small car, or \$1,095.23 if owning a family car.

The savings that can be potentially made by those that sell their car, or similarly choose not to purchase an additional car can be even more substantial. For someone from Seaford who sells their small car and uses public transport instead to get to the inner city for work, a potential saving of \$7,169.83 could be made, or \$12,247.96 if owning a family car. For those that commute from Salisbury, these savings could potentially amount to \$5,960.80 for small car owners, or \$11,017.87 for family car owners.

# PERTH

## Statistical Snapshot

As of the 2011 census, Perth has a working population of around 724,000. Of this figure, 308,000 commuted outside their usual area of residence to get to work. Central Perth was the most popular commuter destination, with 159,000 commuters travelling to central Perth to get to work.

## Public Transport Snapshot

Transperth's integrated public transport network is centrally managed, planned, marketed, ticketed and coordinated by the Transperth division of the Public Transport Authority of Western Australia (PTA).

Transperth has a range of contracted service providers including Transperth Train Operations (a separate division of PTA), three contracted bus companies, one contracted ferry operator and numerous ancillary contracts such as cleaning, maintenance and ticketing. A common fare structure applies across the Transperth integrated bus, train and ferry service network based on a zonal system with concentric bands. Passengers are able to transfer between services and modes without the need to purchase another ticket or without extra charge.

At 30 June 2014, TTO operated a fleet of 243 railcars which can be coupled in configurations of two and four or three and six car sets. The network consists of 70 stations over five lines. These lines include the Joondalup line, the Fremantle line, the Midland line, the Armadale line with a spur to Thornlie and the Mandurah line.

## Driving Costs

According to the RAC Western Australia, the fixed costs incurred from owning a small car, such as a Mazda 2, amount to \$4,520.88, while the fixed costs incurred from owning a larger family car, such as a Holden Commodore amount to \$9,728.16.

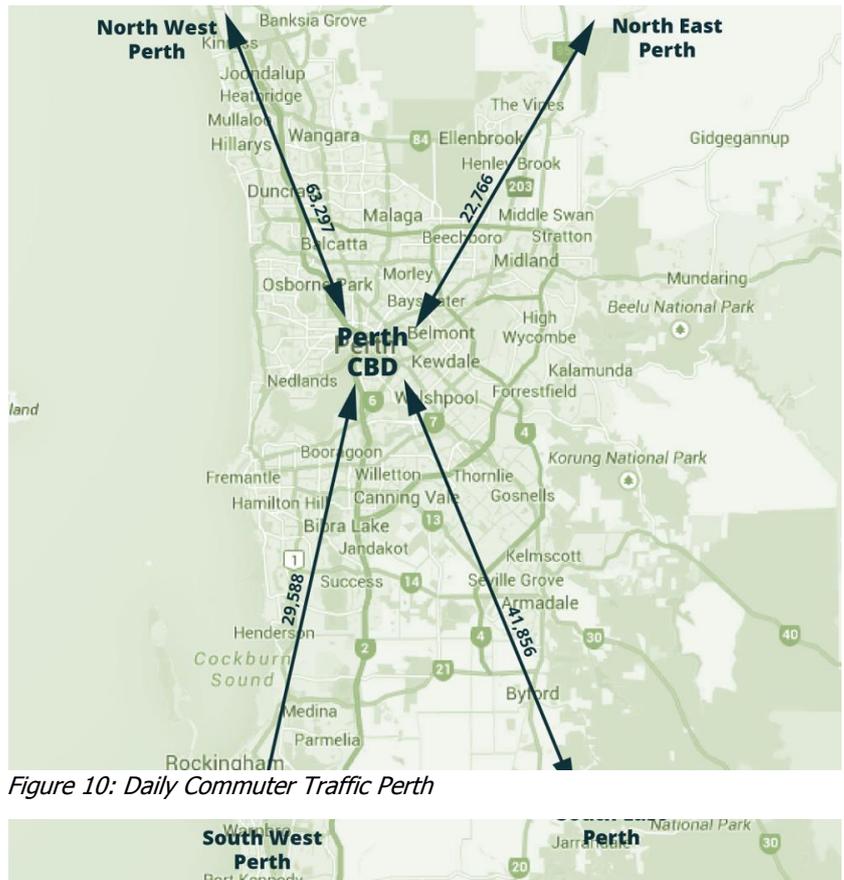


Figure 10: Daily Commuter Traffic Perth

On top of this are the running costs and parking costs. The RAC includes fuel, tyres, and servicing in the running costs. According to the RAC, the running costs for a small car amount to 17.13 cents per kilometre, while the running costs of a larger family car amount to 19.22 cents per kilometre.

Using the two most popular commuting routes in Perth as examples, those being South West to Central Perth and North West to Central Perth, this report estimates the total running costs for these commuters.

The distance of the South West to Central Perth daily roundtrip is 30.2 km. This commute results in annual parking and running costs of approximately \$2,189.71 for a small car and \$2,334.73 for a larger family, resulting in total annual costs of \$6,710.59 and \$12,062.89 respectively when parking costs are included.

The distance of the North West to Central Perth daily roundtrip is 39.4 km. This commute results in annual parking and running costs of approximately \$2,552.14 for a small car and \$2,741.34 for a larger family car, resulting in total annual costs of \$7,073.02 and \$12,469.50 respectively when parking costs are included.

## Transport Costs

Public transport costs in Perth vary depending on where one commutes to and from.

Using the above examples of South West Perth and North West Perth, the price of an annual train ticket is approximately \$1,584.00 and \$2,270.40 respectively.

## Potential Savings

Using the two commuter examples of South West Perth to the inner city and North West Perth to the inner city, the potential savings are as follows. A commuter travelling from South West Perth to the inner city who leaves the car home and uses public transport will incur only the fixed cost of the car, that being \$4,520.88 for a small car and \$9,728.16 for a family car, plus the cost of buying an annual train ticket, which is approximately \$1,584.00. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$6,104.88 for a small car and \$11,312.16 for a family car. This results in potential savings of \$605.71 for small car drivers and \$750.73 for larger car drivers.

A commuter travelling from North West Perth to the inner city who leaves the car at home and uses public transport will incur only the fixed cost of the car, that being \$4,520.88 for a small car and \$9,728.16 for a family car, plus the cost of buying an annual train ticket, which is approximately \$2,270.40. Therefore, by leaving at home and using public transport, the total cost incurred will be \$6,791.28 for a small car and \$11,998.56 for a family car. This results in potential savings of \$281.74 for small car drivers and \$750.73 for larger car drivers.

The savings for those that sell their car, or similarly choose not to buy an additional car, are substantial. Those commuting from South West Perth to the inner city can potentially save \$4,126.59 annually by selling or choosing not to buy a small car, or \$9,478.89 annually by selling or choosing not to buy a family car.

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Those commuting from North West Perth to the inner city can potentially save \$3,802.62 annually by selling or choosing not to buy a small car, or \$9,199.10 annually by selling or choosing not to buy a family car.

Again, it must be noted that other costs that are specific to an individual such as, toll costs and car repair costs should be added in order to calculate the true potential savings of using public transport to commute to work.

# HOBART

## Statistical Snapshot

The 2011 national census found that around 90,000 people worked in Hobart. Of this 90,000, around 44,000 workers commute to areas outside their usual place of residence. A vast majority of these commuters travel to inner Hobart to work.

## Public Transport Snapshot

In Tasmania the State Government operates a Government Business Enterprise known as Metro to undertake public passenger bus services in the major urban areas. Hobart does not have a passenger rail network, instead it operates a bus network. Buses operate on various routes around Hobart and the surrounding areas.

## Driving Costs

According to the RACT, the fixed annual costs incurred from owning a small car, such as a Mazda 2, amount to \$4,492.80, while the fixed costs incurred from owning a family car, such as a Holden Commodore amount to \$8,785.40.

On top of these fixed costs are the running costs, which differ depending on how far one travels each year. The RACT includes tyres, fuel and servicing in its running costs. According to the RACT, the running costs for a small car amount to 19.78 cents per kilometre for a small car, while the running costs for a family car amount to 19.43 cents.

Using two popular commuting routes in Hobart, those being Glenorchy to the inner city and Huntingfield to the inner city, this report estimates the total driving costs for these commuters.

The distance of the Glenorchy to inner Hobart daily roundtrip is 15 km. This commute results in annual parking and running costs of approximately \$1,691.51 for a small car and \$1,679.27 for a family car, resulting in total annual costs of \$6,184.31 and \$10,464.67 respectively.

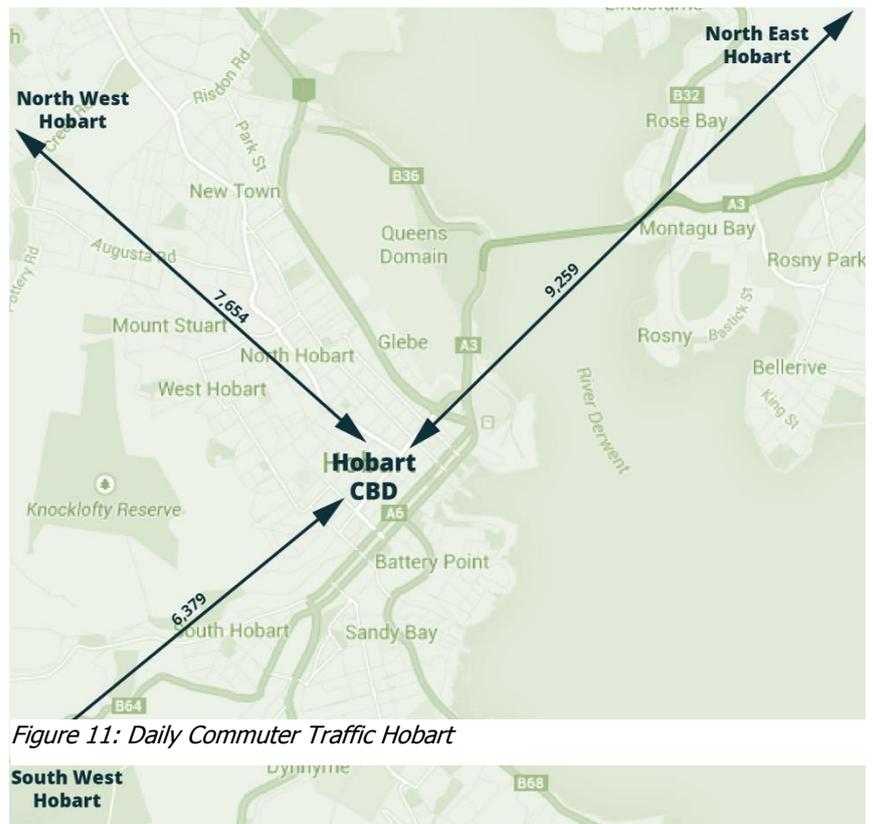


Figure 11: Daily Commuter Traffic Hobart

The distance of the Huntingfield to inner Hobart daily roundtrip is 29 km. This commute results in annual parking and running costs of approximately \$2,301.13 for a small car and \$2,278.11 for a family car, resulting in total annual costs of \$6,793.93 and \$10,063.51 respectively.

## Transport Costs

Using the commuter examples of Glenorchy and Huntingfield to inner Hobart, the annual cost of bus fares is approximately \$1,104.00 and \$1,545.60 respectively.

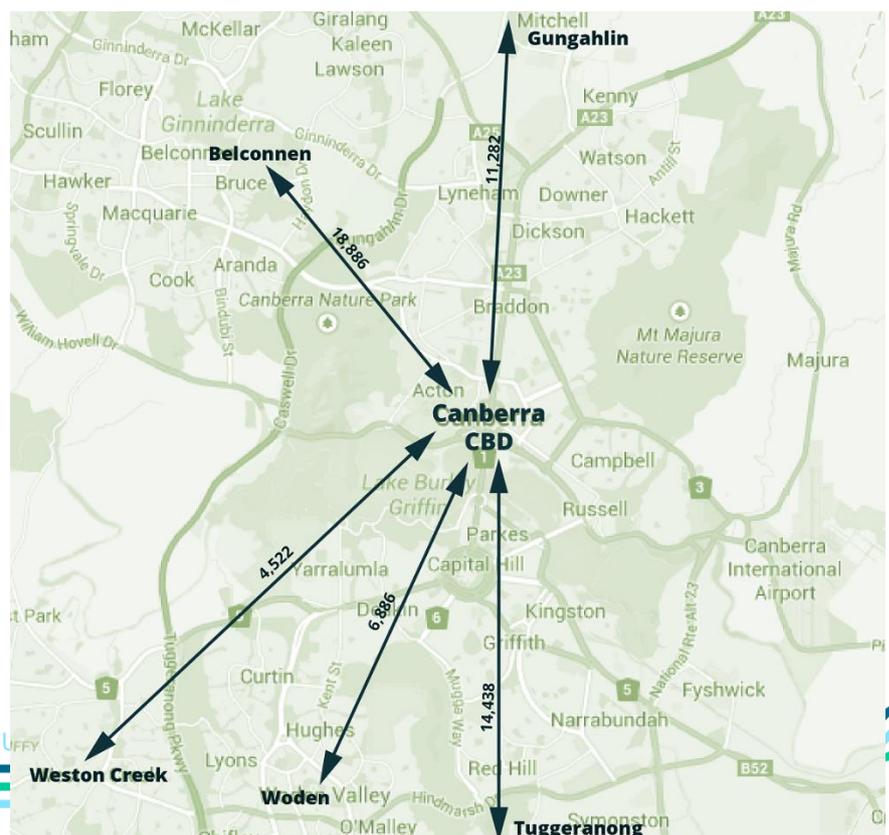
## Potential Savings

A commuter travelling from Glenorchy to the inner city who leaves the car home and uses public transport will incur only the fixed cost of the car, that being \$4,492.80 for a small car and \$8,785.40 for a family car, plus the annual cost of buying bus tickets ticket, which is approximately \$1,104.00. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$5,596.80 for a small car and \$9,889.40 for a family car. This results in potential savings of \$587.51 for small car drivers and \$575.27 for larger car drivers.

A commuter travelling from Huntingfield to the inner city who leaves the car at home and uses public transport will incur only the fixed cost of the car, that being \$4,492.80 for a small car and \$8,785.40 for a family car, plus the annual cost of buying bus tickets, which is approximately \$1,545.60. Therefore, by leaving the car at home and using public transport will incur a total cost of \$6,038.40 for a small car and \$10,331.00 for a family car. This results in potential savings of \$755.53 for small car drivers and \$732.51 for larger car drivers.

The savings for those that sell their car, or choose not to buy an additional car, can be substantial. Those commuting from Glenorchy to the inner city can potentially save \$5,080.31 annually by selling or choosing not to buy a small car, or \$9,360.67 annually by selling or choosing not to buy a family car and commuting by bus.

Those commuting from Huntingfield to the inner city can potentially save \$5,248.33 annually by selling or choosing not to buy a small car, or \$9,517.91 annually by selling or choosing not to buy a family car.



## CANBERRA

## Statistical Snapshot

The working population of Canberra is approximately 197,000. Approximately 82,000 commute to central Canberra to work, which includes both the CBD and areas immediately south of Lake Burley Griffin.

## Public Transport Snapshot

Canberra's public transport consists of a bus network which services the city. Bus services are provided to all major areas of Canberra and also suburban areas.

*Figure 12: Daily Commuter Traffic Canberra*

A new light rail project, which is currently in the design phase, is planned to run between the Northern suburbs and the City Centre. It is expected that the light rail network will be expanded in the future to accommodate the suburbs in other directions.

## Driving Costs

The ACT does not have its own automobile association. Similar to last year's report, this report has deemed that car costs in the ACT are most like those of Victoria, hence this report uses the RACV running costs guide to measure the operating costs in the ACT.

According to the RACV, the fixed costs incurred from owning a small car, such as a Mazda 2, amount to \$4,577.04, while the fixed costs incurred from owning a larger family car, such as a Holden Commodore amount to \$9,066.20. On top of this are the running costs, which differ depending on how far one travels per year. The RACV includes tyres, fuel, servicing and repairs in the running costs. According to the RACV, the running costs for a small car amount to 17.54 cents per kilometre, while the running costs of a larger family car amount to 17.59 cents per kilometre.

Two of the most popular commuting routes in Canberra are Belconnen to the city centre and Tuggeranong to the city centre.<sup>1</sup> The distance of the Belconnen to city centre daily roundtrip is 18.2km. This commute results in annual parking and running costs of approximately \$1,734.22 for a small car and \$1,736.32 for a family car, resulting in annual costs of \$6,311.26 for a small car and \$10,802.52 for a family car.

The distance of the Tuggeranong to city centre daily roundtrip is 43.8km. This commute results in annual parking and running costs of approximately \$2,766.98 for a small car and \$2772.02 for a family car, resulting in annual costs of \$7,344.02 for a small car and \$11,838.22 for a family car.

<sup>1</sup> The City Centre of Canberra represents the immediate suburbs both north and south of Lake Burley Griffin.

## Transport Costs

Canberra's public transport network currently consists of a bus system only, which transports passengers around Canberra's suburbs. The bus system runs on a swipe card system called 'MyWay'. A commuter can expect to pay \$2.84 per trip under 90 minutes (which includes all direct trips). Subsequently, the annual public transport cost for a commuter would be approximately \$1,363.20.

## Potential Savings

Using the two commuter examples of Belconnen and Tuggeranong to the city centre, the potential savings are as follows. A commuter travelling from Belconnen to the inner city who leaves the car at home and uses public transport will incur only the fixed cost of the car, that being \$4,577.04 for a small car and \$9,066.20 for a family car, plus the costs of buying an annual bus ticket, which is approximately \$1,363.00. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$5,940.04 for a small car and \$10,429.20 for a family car. This results in potential savings of \$371.22 for small car drivers and \$373.32 for larger car drivers.

A commuter travelling from Tuggeranong to the inner city who leaves the car at home and uses public transport will incur the car's fixed costs, plus the cost of purchasing an annual bus ticket which is approximately \$1,363.00. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$5,940.04 for a small car and \$10,429.20 for a family car. This results in potential savings of \$1,403.98 for small car drivers and \$1,409.02 for larger car drivers.

The savings for those that sell their car, or similarly choose not to buy an additional car, can be far more substantial. Those commuting from Belconnen to the inner city can potentially save \$4,948.26 annually by selling or not buying a small car, or \$9,439.52 annually by selling or choosing not to buy a family car.

Those commuting from Tuggeranong to the inner city can potentially save \$5,981.02 annually by selling or not buying a small car, or \$10,475.22 annually by selling or choosing not to buy a family car.

# AUCKLAND

## Statistical Snapshot

Auckland’s CBD has low employment self-sufficiency, with workers residing in the area making up only 10 per cent of the total numbers employed. This results in larger flows into the CBD from other parts of the region, placing greater pressure on the transport network, particularly on the immediate approaches to the CBD. While the main sources of workers are from the Isthmus and the southern areas of the North Shore, the high level of employment and the specialised skills required mean that some workers are drawn from across the region.<sup>xvi</sup>

Since 2001, public transport use has increased 50 per cent compared to an overall increase in commuting of 23 per cent. Rail patronage has increased quickly, but buses have accounted for the majority of public transport trip growth. The largest increases in public transport patronage occurred after 2006, with bus usage increasing by 19 per cent and rail by 67 per cent.<sup>xvii</sup> Meanwhile, active modes have increased by 13 per cent since 2006. Alongside this growth in public transport use, the share of users of private vehicles has fallen from 75 per cent in 2006 to 74 per cent in 2013. However, this decline reflects a fall in trips by private vehicle passengers rather than by drivers. Importantly, the share of private transport drivers has remained constant at 70 per cent, showing limited impact, at the regional level, in reducing the numbers of private vehicles used for commuting.

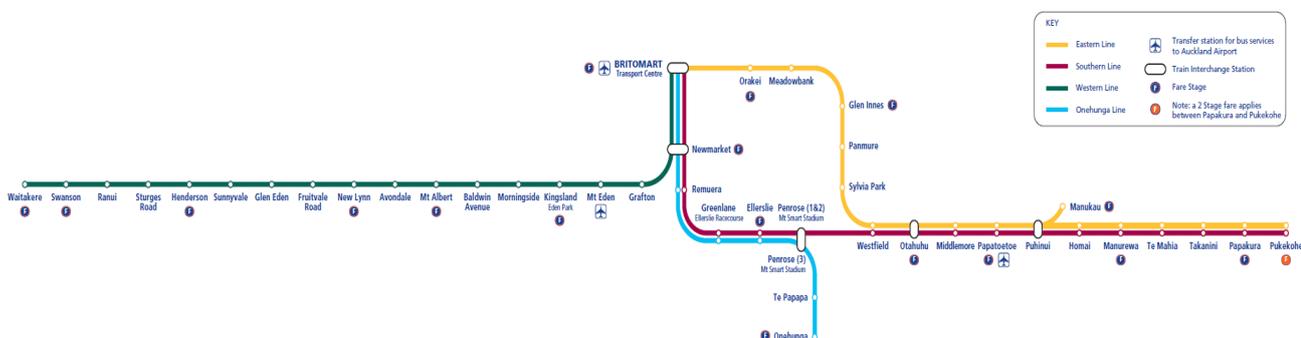


Figure 13: Passenger Rail Network Map Auckland

## Public Transport Snapshot

Transdev Auckland operates a mixed fleet of trains – and this year has started incorporating electric trains (3-car EMUs) into the Rolling Stock Allocation Plan. To date (November 2014), the Onehunga and Manukau lines are running electric trains although the whole network has now been electrified. Services on the remaining lines are a mixture of diesel multiple units and locomotive-hauled train sets. A total of 57 train sets has been ordered by Auckland Transport with approximately half delivered to date. The older diesel fleet is maintained by KiwiRail Maintenance and managed by Transdev Auckland.

## Driving Costs

According to the New Zealand Automobile Association (AA), the fixed costs of owning a small car amount to \$4,532.00, while the fixed costs incurred from owning a large car amount to \$10,367.00

On top of this are the running costs, which differ depending on how far one travels per year. The New Zealand AA includes fuel, tyres, servicing and maintenance in its running costs. According to the New Zealand AA, the running costs for a small car amount to 20.6 cents per kilometre, while the running costs of a large car amount to 33.2 cents per kilometre.

Using two commuter routes of Waitakere to inner Auckland and Pukekohe to inner Auckland, this report estimates the total driving costs for these commuters.

The distance of the Waitakere to inner Auckland daily roundtrip is 48 kilometres. This commute results in annual parking and running costs of approximately \$3,274.24 for a small car and \$4,667.28 for a large car, resulting in total annual costs of \$7,806.24 and \$15,032.28 respectively when added to the fixed car ownership costs.

The distance of the Pukekohe to inner Auckland daily roundtrip is 100 kilometres. This commute results in annual parking and running costs of approximately \$5,766.43 for a small car and \$8,681.82 for a large car, resulting in total annual costs of \$10,298.43 and \$19,048.82 respectively.

## Transport Costs

Auckland operates on a zoned system to charge for public transport use, where the more zones a passenger travels through the greater the transport fare. Using the two commuter examples of Waitakere and Pukekohe to the city centre, the annual costs of commuting via public transport would be \$3,128.00 and \$3,864.00 respectively.

## Potential Savings

A commuter travelling from Waitakere to the inner city who leaves the car at home and uses public transport will incur only the fixed cost of the car, that being \$4,532 for a small car and \$10,367 for a large car, plus the costs of buying an annual train ticket, which is approximately \$3,128.00. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$7,660.00 for a small car and \$13,495.00 for a large car. This results in potential savings of \$146.24 for small car drivers and \$1,537.28 for large car drivers.

A commuter travelling from Pukekohe to the inner city who leaves the car at home and uses public transport will incur the car's fixed costs, plus the cost of purchasing an annual train ticket which is approximately \$3,864.00. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$8,396.00 for a small car and \$14,231.00 for a large car. This results in potential savings of \$1,902.43 for small car drivers and \$4,817.82 for large car drivers.

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The savings for those that sell their car, or similarly choose not to buy an additional household car, can be far more substantial. Those commuting from Waitakere to the inner city can potentially save \$4,678.24 annually by selling or not buying a small car, or \$11,904.28 annually by selling or choosing not to buy a large car.

Those commuting from Pukekohe to the inner city can potentially save \$6,434.43 annually by selling or not buying a small car, or \$15,184.82 annually by selling or choosing not to buy a large car.

# WELLINGTON

## Statistical Snapshot

In Wellington, the most popular method of getting to work is the car, with 39,756 workers driving a car to work. However, this figure is 3 per cent lower than in 2006. Interestingly, walking or jogging to work is becoming more popular, with greater proportions of the working population choosing these methods to get to work. The use of trains and buses has remained relatively steady since 2006.

### Wellington Network Map



Figure 14: Passenger Rail Network Map Wellington

## Public Transport Snapshot

Tranz Metro provides urban passenger rail operations and maintenance services in Wellington New Zealand under contract to Greater Wellington Regional Council. Tranz Metro operates four lines and carries over 11 million passengers per annum, running over 2,100 services per week.

## Driving Costs

According to the New Zealand Automobile Association (AA), the fixed costs of owning a small car amount to \$4,532.00, while the fixed costs incurred from owning a large car amount to \$10,367.00. On top of this are the running costs, which differ depending on how far one travels per year. The New Zealand AA includes fuel, tyres and servicing and maintenance in its running costs. According to the New Zealand AA, the running costs for a small car amount to 20.6 cents per kilometre, while the running costs of a large car amount to 33.2 cents.

Using two commuter routes of Wakanāe to inner Wellington and Johnsonville to inner Wellington, this report estimates the total driving costs for these commuters.

The distance of the Wakanāe to inner Wellington daily roundtrip is 131 kilometres. This commute results in annual parking and running costs of approximately \$7,456.86 for a small car and \$11,406.21 for a large car. Added to the fixed costs identified above, this results in total annual costs of \$10,989.86 and \$21,773.21 respectively.

The distance of Johnsonville to inner Wellington daily roundtrip is 19 kilometres. This commute results in annual parking and running costs of approximately \$1,939.36 for a small car and \$2,513.92 for a large car, resulting in total annual costs of \$6,471.36 and \$12,880.92 respectively.

## Transport Costs

The annual cost of public transport from Wakanāe and Johnsonville to inner Wellington is approximately \$3,585.60 and \$1,306.80 respectively.

## Potential Savings

Using the two commuter examples of Wakanāe and Johnsonville to the city centre, the potential savings are as follows. A commuter travelling from Wakanāe to the inner city who leaves the car at home and uses public transport will incur only the fixed cost of the car, that being \$4,532 for a small car and \$10,367 for a large car, plus the costs of buying an annual train ticket, which is approximately \$3,585.60. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$8,117.60 for a small car and \$13,952.60 for a large car. This results in potential savings of \$3,871.26 for small car drivers and \$7,820.61.

A commuter travelling from Johnsonville to the inner city who leaves the car at home and uses public transport will incur the car's fixed costs, plus the cost of purchasing an annual train ticket which is approximately \$1,306.80. Therefore, by leaving the car at home and using public transport, the total cost incurred will be \$5,838.80 for a small car and \$11,673.80 for a large car. This results in potential savings of \$632.56 for small car drivers and \$1,207.12 for large car drivers.

The savings for those that sell their car, or similarly choose not to buy an additional car, can be far more substantial. Those commuting from Wakanāe to the inner city can potentially save \$8,403.26 annually by selling or not buying a small car, or \$18,187.61 annually by selling or choosing not to buy a large car.

Those commuting from Johnsonville to the inner city can potentially save \$5,164.56 annually by selling or not buying a small car, or \$11,574.12 annually by selling or choosing not to buy a large car.

## CONCLUSION

In estimating the costs of commuting and the potential savings that can be made from using public transport as an alternative, the report found the following potential savings:

- The average Australian commuter pays \$11,996.39 per annum in car ownership and running costs.
- The average New Zealander commuter pays \$11,852.98 per annum in car ownership and running costs.
- For those that decide to not own a car and commute with public transport instead, Australians on average can potentially save \$9,973.66 per annum.
- For those that decide to not own a car and commute with public transport instead, New Zealand commuters on average can potentially save \$9,065.78 each year.
- On average, if an Australian car owner decides to leave their vehicle at home and use public transport to commute to work, they can potentially save \$1,724.59 a year.
- On average, if a New Zealand car owner decides to leave their vehicle at home and use public transport to commute to work, they can potentially save \$2,119.03 a year.

These findings show that many commuters from Australia and New Zealand stand to save considerably if they switch between driving a private vehicle to work and using public transport. These savings will play a large role in easing the economic strain on Australian and New Zealand household living costs. Further, these savings allow workers to spend their income on activities they enjoy, rather than having to pay large amounts of money to simply get to and from work daily.

Not only can commuters save immensely from using public transport, the surrounding community stands to benefit greatly. Using public transport helps lower environmental damage substantially. It also plays a major role in alleviating inner city congestion. In weighing up how to commute to work, commuters should be aware of these benefits and the improvements to the community they bring.

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