

Amanda Bresnan

ACT Greens MLA

A Better Transport Solution for Gungahlin and Wider Canberra

June 2011



Amanda Bresnan MLA

ACT Greens Transport Spokesperson

GPO Box 1020 Canberra ACT 2601 Tel: 02 6205 0130

Email: bresnan@parliament.act.gov.au

Pictures: Light rail in Strasbourg, France (Pop: 640,000) and Bus Rapid Transit in York, Canada (Pop: 890,000)

A Better Transport Solution for Gungahlin and Wider Canberra

Imagine a future where it is easy and fast to take public transport around Canberra. Imagine being able to avoid the growing battle with traffic, the fight for car parking, and the expensive running costs of that second car.

It might seem far from reality right now, but this scenario is attainable for Canberra. Creating a transport system that is convenient and sustainable will not only start to ease traffic pressure now, it will serve Canberrans well into the future.

Unfortunately all the indications are that the ACT isn't heading in the right direction with its transport planning and investment. The Government is focused on automobile-based transport planning, illustrated by the \$144 million of ACT money it has committed to building a new freeway through the Majura Valley. Claiming that this is a solution to traffic and transport problems for the people of Gungahlin and the North of Canberra is a false promise. The reality is that this vision of freeways and car travel is an outdated and disproven as an approach to planning successful cities. It is an approach that will only cement Canberra's traffic woes, without bringing the promised solutions.

The ACT Greens want to see real transport solutions – solutions that will contribute to a convenient, sustainable and equitable Canberra. We believe that instead of building a new four lane Majura freeway, the ACT Government should make a strategic upgrade to the existing Majura Road, and invest in a rapid, high capacity public transport network. That is the real solution for bringing convenient, effective and sustainable transport to North Canberra.

A Sensible Upgrade to Majura Road...

Naturally, roads play an important role in Canberra as part of our overall transport network. Majura Road is a busy single lane route, and it needs some improvements. It is currently used by many commuters as well as freight traffic, carrying around 16-18,000 vehicles a day. However, the Government's proposal is to build an entire new four-lane freeway through the Majura valley for a cost of \$288 million.

Targeted upgrades can be made to the existing Majura Road for significantly less than the cost of a new Majura freeway, and with much less impact on ecosystems and existing land use. These upgrades should focus on key intersections where collisions occur, as well as key areas of congestion. These are primarily at the southern end of the road. Possible improvements include:

- Upgrading of intersections where locals need to access properties, to make entry and exit safer (for both residents and commuting traffic);

- Upgrading of the intersections where collisions tend to occur – such as the intersection at Fairbairn Avenue and Majura Road. Traffic accident data suggests that a large proportion of collisions on the Majura Road route occur at these busy intersections;
- Cooperation with the Federal Government to improve the safety of the access to the Australian Federal Police facility on Majura Road;
- A short stretch of extra lane to assist traffic at peak time bottlenecks, such as at the Southern Majura Road roundabouts; and
- Lighting for vehicles (including trucks) using the road at night.

Where safety is an issue on Majura Road, the ACT Government can also access funding from the Federal Government through the Black Spot Program and the Roads to Recovery Program. In addition, the ACT has its own black spot funding program.

This is a modest upgrade compared to the Government's proposed multimillion dollar freeway, but **two important factors make it a better solution**. Firstly, the considerable savings achieved by the upgrade approach can be invested into quality public transport solutions specifically designed to serve the busy, growing areas of Gungahlin. Secondly, the alleged benefits of building a freeway are illusory (as discussed further below), and so will not bring the solutions that Canberra commuters want and deserve.

...Combined with a High Quality Public Transport Network

A high speed, high capacity public transport route from Gungahlin to Civic – and beyond – would have the best effect on solving the transport problems facing Gungahlin and Canberra.

Gungahlin is now one of the most densely developed parts of Canberra. Many cars travelling on Majura Road are driving from Gungahlin to the large employment centres of Russell, Campbell, Barton and Civic. With these cars carrying one or maybe two people, it is easy to see why the roads quickly become congested.

Public transport such as light rail or prioritised high capacity buses can carry hundreds of passengers to these destinations in a single trip. When a prioritised service is provided, the trip will be faster than driving. This new route would attract commuters who may formerly have driven on Majura Road, freeing up its capacity for those people with no choice but to drive.

The Government has costed the Majura freeway at \$288 million. Yet that same amount of money would fund the entire cost of a light rail system between Gungahlin and Civic as well an improved public transport network to connect to the light rail routes (detailed below).

What would this high speed, high capacity transit service look like?

Light rail or buses running on a prioritised route can provide a much more rapid, regular, and reliable service than the one currently serving Gungahlin.

High speed transit would follow a fast ‘trunk’ route between Gungahlin, Civic and the Parliamentary Triangle, similar to the route used currently by the ACTION *Red Rapid* service. However, it would run on a separated, prioritised route, making it faster. It would connect seamlessly to more frequent services into the Gungahlin suburbs.

A trunk route: There are numerous options for a high speed transit route from Gungahlin to Civic and beyond. One option is to run the route from Anthony Rolfe Avenue in Gungahlin Town Centre to Alinga Street/ Northbourne Avenue in Civic (following a similar route to the *Red Rapid* via Flemington Road, Federal Highway and Northbourne Avenue). An advantage of the Anthony Rolfe Avenue terminus is that it can accommodate a dedicated public transport lane, and it runs close to new medium density development. An alternative terminus is Gungahlin Marketplace, the current terminus of the *Red Rapid* route.

From Civic, the high speed transit route would continue to the Parliamentary Triangle, to form a high speed trunk through to the dense employment destinations of Russell and Barton. There are also sensible options for extending the route beyond Barton to Kingston and Fyshwick, as well as from Russell to the Airport. This trunk route is similar to a section of the light rail network that has been envisioned for Canberra.ⁱⁱⁱ

Some benefits of a high speed public transit route

Faster commuting times and decreased congestion for Canberra’s commuters.

Increased liveability of Canberra, including a reduction in pollution and an increase in community and social equity.

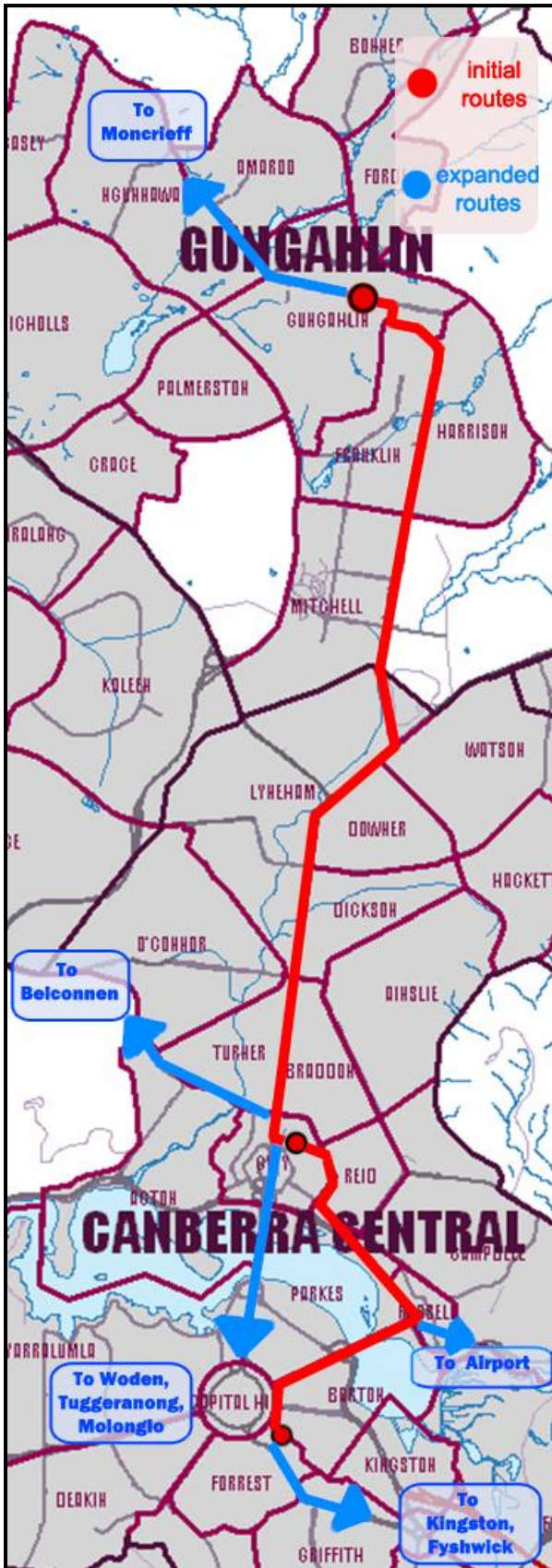
Economic benefits: Transit enhances the economic efficiency of a city, it attracts urban development, and investment in transit is estimated to have double the economic benefit to a city than investment in freeways.ⁱ

Resilience to the problems of *climate change and peak oil*.

Better use of land in Canberra, allowing more mixed use development and increased residential density, while still maintaining amenity and accessibility.

Improved safety: Public transport is much safer than driving.ⁱⁱ Increasing the percentage of people that use public transport to travel around Canberra is the best way to improve road safety.

Possible high speed, high capacity transit network: initial routes and extensions



At the Gungahlin end, the trunk could be extended beyond Gungahlin Town Centre – to Moncrieff for example, which is the current edge of Gungahlin development. This would form a high quality public transit corridor through Gungahlin, which would also serve suburbs such as Ngunnawal, Casey, Amaroo as well as the upcoming suburb of Moncrieff. This is a fast growing area of Gungahlin that would benefit greatly from this service.

Well connected and easy connections: Buses from the broader Gungahlin area would feed into the high speed, high capacity trunk route. These feeder buses would also be frequent, and coordinated with the trunk route timetable. Transfers from the feeder buses would be quick, simple and no extra cost. The terminus points of the trunk route would be easily accessible to pedestrians and cyclists, and contain suitable bike parking. The same connections would be in place for the return trip.

Fast & prioritised: The high speed transit from Gungahlin to the City would travel on a priority route, separated from traffic. This makes the service congestion-free. It will be faster than driving, and faster than the current buses. Kellogg Brown Root consultants estimated that a prioritised route from Gungahlin to Civic that included 14 stops would take *24 minutes*. However, a prioritised express route would take *less than 20 minutes*. The existing *Red Rapid* service currently takes *34 minutes* to make this journey during peak times.

If constructed as a light rail route, the service would have its own priority track. Running the service using buses would require the construction of exclusive priority bus lanes - and in some places bus priority traffic lights - in each direction. One advantage of priority bus lanes is that they can lay out a route that can later be served by light rail.

Northbourne Avenue is a key location for these priority lanes. Existing work already shows how this could be done and its benefits. Consultants have previously costed a bus priority scheme between Gungahlin and Civic at approximately \$15.3 million in each direction. Importantly, they noted that over 20 years these priority lanes would deliver about \$110 million in benefits to Canberra.^{iv} Different consultants have costed an overhaul of

Northbourne Avenue - which would add bus priority lanes in each direction as well as make other improvements – at about \$20 million. They identified benefits of approximately \$60 million over 12 years.^v

Frequent: To serve the large population of travellers, the route would operate frequently – every 5 or 10 minutes. For 5 minutes intervals, no timetables are required. For 10 minute intervals, the route would be coordinated to connect with other services that are delivering passengers to the Civic or Gungahlin termini. This would eliminate waiting.

Part of a better Canberra-wide network: The public transit system described above focuses on serving the dense and fast growing population of Gungahlin. It should be part of a larger plan to deliver rapid, reliable and regular public transit all over Canberra; potentially through a Canberra-wide light rail network, or through a much improved bus network.

It is also critical that this public transport network links into a quality active transport network – for use by pedestrians and cyclists. Footpaths, cycleways, and infrastructure at transit stops and interchanges are all needed to support the crucial linking of active travel and public transport travel. The ACT Greens outlined a comprehensive approach to this in the ACT Greens' 2010 Active Transport Plan.^{vi}



Light rail in the Spanish city of Murcia (Pop: 430,000)

The service described above would mean:

- Commuters catch a fast, frequent bus close to home that would quickly take them to a terminus (or they can easily drive, walk or cycle to the terminus using good active transport infrastructure and park 'n' ride facilities).
- A high capacity bus or light rail train will be waiting (or arriving within a couple of minutes) because the timetables are coordinated.
- Multimodal tickets mean the transfer is free and simple.
- They are then taken at high speed (travelling on prioritised routes such as light rail track or bus lanes) to key destinations such as Civic, Russell, Barton.

Buses or Light Rail?

Both buses and light rail can deliver a rapid, high capacity transport system that will serve the people of Canberra very effectively.

However, a number of factors suggest that light rail, supported by buses acting as a feeder service, would be best at achieving the desired outcomes.^{vii}

Light Rail	Buses
Electric, and therefore compatible with a renewable energy future.	More polluting (although new fuel technologies can reduce emissions significantly).
Quieter, and does not produce local pollution.	Noisier and emits local pollution.
Can operate on existing roads or separately.	Can operate on existing roads or separately (on busways).
Multiple carriages make it more adaptable to passenger numbers – also carry more people per vehicle.	Less flexible to passenger numbers.
Generally more attractive to commuters, more comfortable, simpler to timetable.	Not as successful in attracting commuters, routes are less legible.
More popular with commuters that need to transfer; quicker to load passengers.	Less popular with commuters needing to make transfers; slower to load passengers.
Fixed, permanent, high capacity and therefore suited to key trunk routes.	More flexible in their routes; will remain necessary for linking neighbourhoods to key trunk routes.
Permanence of routes better at attracting residential and commercial development and improving land values.	Flexibility means buses are not as good at attracting development around routes due to impermanence – they are more useful at following new development.

Compatible with bikes; can carry several bikes.	Compatible with bikes, though currently only hold 2 bikes per bus.
Typically more expensive capital cost, but lower operating costs	Typically cheaper capital costs, but higher operating costs.

The public transport solution is cheaper

Improvements to public transport - including building large, new infrastructure such as a light rail network or a system of prioritised bus routes - are a better investment than building new major roads.

The cost of building a new **Majura freeway is \$288million**.

According to consultants Kellogg Brown Root, the cost of providing light rail between the following town centres in Canberra (when built as part of a complete network) is:^{viii}

- **Light rail from Gungahlin and Civic: \$86 million**
- **Light rail from Civic to Russell, Barton, Kingston: \$90 million**

If built in isolation from any other parts of the network, the Gungahlin to Civic route is estimated to cost \$185 million and the Civic to Kingston route, \$171 million.^{ix}

Not only are the capital costs for these major improvements to public transport cheaper than the proposed Majura freeway, but a cost-benefit analysis of light rail in Canberra identified over \$2.6 billion in benefits, and demonstrated an overall positive economic net benefit to the project.^x

Public transport is an investment that continues to give to the community. Not only does it bring excellent short term benefits, but it pays off many times over through community benefits (such as increased liveability, improved land values) and avoided costs (such as pollution, congestion and road accidents).

Why is a freeway not the best solution?

The people of Gungahlin and Canberra's North need solutions to their travel problems, but transport planning research and experiences tells us that building a new Majura freeway will not solve these problems. This might seem counter-intuitive. Why wouldn't a new freeway make travel better?

The freeway model of city planning was popular in the 1960s and 1970s, but today we know that it is an unsustainable strategy that has failed wherever it has been implemented.^{xi} The congestion, pollution, urban sprawl and social inequities we see in American car cities such as Houston, Phoenix and Detroit, for example, are a testament to the failure of this automobile-focused strategy. Closer to home, we all know the problems faced by Sydney residents. Modern, sustainable transport planning shows us that what does work is the provision a high quality network of public transport. This creates a convenient, healthy, sustainable city.

The Majura freeway concept originates in a transport plan for Canberra conceived in the sixties and seventies, the same era when planners openly aimed for a city dominated by car travel.^{xii} The vision was for the private car as the principal mode for all trips. This is not the Canberra we should be planning for today.

The ACT Government seems wedded to this outmoded, 40 year old vision for freeways in Canberra. It justifies the proposed Majura freeway with recycled arguments about the supposed benefits of freeways, despite all the evidence to the contrary. The Government says that a new freeway will relieve traffic congestion, reduce fuel consumption and greenhouse gases, improve safety, and that it is necessary for freight travel.^{xiii}

Canberrans deserve to have these arguments scrutinised and re-analysed, particularly as they are the basis for spending hundreds of millions of dollars of tax-payers' money that could be used on different transport solutions.

Issue 1: Traffic and congestion



The Government has tried to paint the freeway as a solution for traffic congestion and a way to 'reduce greenhouse gas emissions'.^{xiv} Yet evidence today shows that these claims are illusory. Time after time, cities have built new freeways only to discover that they attract more traffic, quickly become congested, and create more pollution.

Building these new roads and freeways actually increases the amount of road travel and the amount of traffic. In doing so, the freeway creates an overall increase in fuel and emissions, and it fails to reduce commuters' travel times.

The traffic that fills these new roads is not just traffic reassigned from other routes: it constitutes an absolute increase in the amount of car travel. The road generates car trips that would formerly have been made on public transport, additional trips that wouldn't have been made otherwise, and extra cars due to reduced car pooling.^{xv}

This well-documented concept is called '**induced traffic**'.^{xvi} The phenomenon of induced traffic is observable and documented on roads all over the world including Sydney,^{xvii} Britain,^{xviii} and other major international cities.^{xix} In a typical example, a

study of California's freeway system found that within five years 60-90% of increased urban road capacity is filled with new traffic.^{xx}

The induced traffic concept recognises that traffic is not like a liquid that flows where directed, as is often thought. It is actually like a gas that expands and fills up the available road space.^{xxi} A conclusive inquiry was conducted into induced traffic in Britain. This followed the opening of the final link in London's M25 orbital motorway where traffic conditions became remarkably worse than before the motorway was opened.^{xxii} Despite the conclusiveness of this report, Governments frequently continue to ignore induced traffic.

We've already seen this phenomenon at play here in Canberra. Proponents of the Gungahlin Drive Extension (GDE) argued that building the road would fix congestion problems. Now that it is built, the GDE is heavily congested and Gungahlin's transport problems remain. The duplication of the GDE and the freeing up of its road space is itself likely to induce more traffic that makes the road and its intersections busy and congested. In fact, modelling of Canberra's traffic by Price Waterhouse Coopers shows that in the next 10 years the most constricting congestions will occur around the wide multi-lane roads such as the proposed Majura freeway. These are places like Parkes Way, Glenloch Interchange and Monaro Highway.^{xxiii} These big roads inevitably siphon a lot of traffic into intersections and narrower streets where congestion is intensified.

New freeways are a bottomless pit of traffic and congestion problems. Majura freeway is likely to provide only a minor initial benefit to motorists, and will make things worse overall in terms of both traffic and greenhouse gas emissions due to the induced traffic.

The worst response to the failure of roads to cope with congestion is to build more roads. This creates a cycle of road building, congestion and sprawl that will never bring real transport solutions to Canberra.

On the other hand, improving public transport will reduce travel times. A good example of this can be seen in Vancouver, Canada. It has demonstrated this over the last 15 years as *the only Canadian city that has managed to lower the average time taken to travel to work*. The way that Vancouver achieved this was by implementing an explicit policy to improve public transport and to build no new major roads.^{xxiv}

Vancouver's existing transport plan was adopted in 1997. It put public transport, pedestrians and cycling at the top of the city's priorities and planned for ways to absorb growth without building new roads. Despite strong population and employment growth, which increased the number of trips in Vancouver considerably, the amount of vehicles entering and leaving the city decreased by 10%. New trips are being accommodated by public transport and active transport.^{xxv}

Issue 2: Safety

The Government has said that building a new, wider Majura freeway will improve safety on the road. While improving safety is certainly an important objective, the evidence doesn't support the idea that replacing the road with a freeway will improve accident statistics. In fact, the evidence suggests that multi-lane freeways, like the one proposed for the Majura Valley, make little difference to the numbers of accidents. Freeways cause people to drive further, more often, and to use other

modes of transport (such as public transport) less, which in turn increases the risk of crashes.

Canberra's accident statistics back this up. Between 2006-2010, there were significantly more crashes on our wider, dual carriage-way roads such as Tuggeranong Parkway, Hindmarsh Drive, Monaro Highway, William Hovell Drive, Northbourne Avenue, Gungahlin Drive, and Canberra Avenue than there were on the Majura Road.^{xxvi} On the existing Majura Road from 2003-2008, there were 210 accidents and 0 fatalities. In the same period, on the dual carriageway of Monaro Drive just south of Majura Road, there were 312 crashes and 1 fatality (between Morshead Drive and Johnson Drive).^{xxvii} Expanding Majura Road into a wide dual-carriageway route is likely to increase the overall amount of car accidents.

The key way to improve road safety is to provide convenient public transport alternatives.^{xxviii} Public transport is much safer than car travel^{xxix} and a modal shift to public transport is the way to really improve safety for Canberrans. Beyond that, the initiatives that have the biggest impacts on road safety are speed checks, random breath testing, and programmes that help change driving culture.^{xxx}

Traffic accident analysis also shows that a large proportion of the crashes that occur on the existing Majura Road actually occur at key intersections, rather than the main stretches of road.^{xxxi} Money to improve safety should therefore be targeted at these intersections, which can be done for a lot less money than building an entire new freeway.

The ACT Government has access to funding through black spot programmes, which are funded by both the Federal Government and the ACT Government. If there are particular areas on Majura Road that pose a safety risk, the ACT Government should dedicate black spot money to fixing it. It has not done this to date^{xxxii} nor are any parts of Majura Road listed on the ACT Government's current black spot list.^{xxxiii}

Issue 3: Freight and the economy

The ACT Government is attracted to the idea of Canberra becoming a freight hub that is centred around the Canberra Airport, and it sees this as an economic growth strategy.^{xxxiv} The Federal Government has also promoted the Majura freeway project as part of a national freight route^{xxxv} and the Canberra Airport values the project because it will assist the airport to become a future freight hub.^{xxxvi}

As part of this vision, the ACT Government has touted a new Majura freeway as being necessary for freight travel.

However, this freight plan is not one that will benefit Canberrans in the long run. The limited pool of funding that Canberra has should be used to build the projects that will benefit Canberrans and our city into the future. The ACT Chief Minister partly acknowledged this in the context of asking the Federal Government to contribute to the cost of the new freeway. She said Majura freeway is *"an infrastructure project that is essentially for the nation... we've got plenty of other infrastructure projects we need to fund from this tax base."*^{xxxvii} A good example of 'other infrastructure projects' are high speed, high quality public transport solutions; these would put Canberra's tax revenue into projects which directly benefit Canberrans.

A new Majura freeway might help the airport, and it might facilitate road based freight in the short term; but it won't solve the emerging congestion problems facing Canberrans. At the very least, if the Federal Government and Canberra Airport wish to build a whole new freeway to facilitate national freight travel, then they should fund the project.

Importantly, the ACT Government's views about growth around freight travel are short sighted, and do not take account of the critical way our economy must – and will – change in the future. Challenges such as climate change and peak oil will result in significant shifts in industrial production and transport patterns in the coming decades. The ACT should be focussing on new industries that are consistent with a green economy, such as renewable energy, green IT, and local food production, rather than relying on industries built around road and air-based freight. The Greens do not support the airport's expansion plan which includes a 24-hour freight hub, nor do we support the transformation of the Majura Valley into an industrial zone to support this freight hub.

The ACT Government has also claimed that a new Majura freeway should be built to reduce the freight travelling through urban Canberra. However, the ACT Government does not have data on how much freight is travelling through urban Canberra, where that freight originates, or how much would be diverted if a new freeway was built.^{xxxviii} Without this data, the Government's claim that a new freeway would prevent freight entering urban Canberra is supposition at best.

The likelihood of a new Majura freeway being used by freight that would otherwise travel through the urban areas of Canberra would depend on where the freight originates and its destination. For example, freight coming from Melbourne via the Barton Highway would still travel through Canberra's urban area. However, without good data about freight movement through Canberra, it is difficult to plan solutions. Those solutions may include options that aren't about building new roads – for example, one solution might be to prevent trucks over a certain size using certain city routes and to improve lighting on the existing Majura Road.

Issue 4: Where's the data?

Considering that a new Majura freeway would be an enormous capital outlay, and would have ongoing impacts on Canberra's travel patterns, urban form and ecology, the Government has surprisingly little data and evidence to support building it. Its argument seems premised on assumptions and a blinkered view about the need for new major roads.

- The Government has done no analysis of the benefits that new high quality, high capacity public transport would bring to Canberra compared to building the freeway. It has no data about the amount of freight that passes through Canberra or how much might be diverted by a freeway.
- The Government has not thoroughly investigated or consulted on alternative options to a freeway, such as targeted upgrades at Majura Road intersections and choke points. It hasn't given proper consideration to the concept of induced traffic, and the likelihood that a freeway will generate more traffic and congestion.

Some problems facing a car-dependent Canberra

Oil dependence: As the production capacity for oil peaks the price of petrol will rise sharply. The degree of this rise is uncertain. What is certain is that cities that remain oil dependent will face severe problems in terms of mobility, costs and services. The CSIRO recently argued that in the near future, petrol prices of between \$2.60 and \$8 per litre would be required in order to constrain petrol consumption to the rate of production and availability.^{xi}

Social and community problems: Car dominated environments reduce urban vitality, create more dangerous public environments, and reduce the amount of public interactions compared to cities with good pedestrian and public transit options. A car-reliant city also causes acute mobility disadvantages for people living in outer suburbs and people who don't have access to private transport, creating social isolation and limiting community participation

Pollution and health: The transport sector – predominately private car use – creates almost ¼ of all of the ACT's greenhouse gas emissions, as well as contributing to health problems from air pollution. On top of this, the sedentary lifestyle linked to high car usage is increasing the risk of health problems such as diabetes, heart disease, obesity and osteoporosis.

Land waste: A city dominated by car travel sprawls outward, impacting on surrounding ecology, requiring more infrastructure, and increasing travel distances. Road and car infrastructure – including car parks - takes up urban space that is both economically and socially valuable. Currently Canberra is creating around 70% of developments as new 'greenfield' sites (previously undeveloped land).

- Importantly, it hasn't accurately assessed the greenhouse gas emissions that will be created by building the proposed freeway^{xxxix} - instead claiming that the new freeway will reduce greenhouse gas emissions.

- Nor has there been any analysis of the impact the proposed freeway will have on the transport modal shift targets that the Government has promised to meet, or on the legislated 40% greenhouse gas reduction target.

In the short term at least, the freeway proposal should be shelved while these issues are properly scrutinised. Ideally, an independent expert in sustainable transport planning would analyse these issues and report publicly, focusing on issues such as:

- the costs and benefits of building the proposed freeway compared to building new high quality public transport options (such as light rail);
- the impacts of the proposed freeway in terms of induced traffic, congestion, greenhouse gas emissions, transport modal shift, economic costs, and the urban form of Canberra; and
- alternative options to a new freeway such as targeted upgrades to the existing Majura Road intersections and choke points.

The Ongoing Costs of a Car-Dependent Canberra

The Government's continued reliance on building major roads over public transit solutions costs Canberrans, our city and our environment (see sidebar, and graphic below). When a city is planned around car travel it costs the community both in monetary terms, and in social wellbeing. These ongoing costs - such as wasted land, urban sprawl, social exclusion, pollution etc – have serious negative impacts on cities that grow automobile dependent, yet they are frequently overlooked.

Not only do car-dominated transport policies cost the community as a whole, they also have a very real and direct impact on individuals and family budgets:

Cost issues: ACT transport policy is costing Canberrans

Cars are expensive. By planning a city that expects and relies on car travel, the ACT Government locks Canberrans into car ownership and into paying the ongoing costs. The approximate average time that a resident of Canberra has to work in order to pay for their cars is **550 hours a year, or 1 and 1/2 hours every day of the year.**^{xlii} These figures are based on average Canberra incomes, meaning that many Canberrans must work even longer than this just to pay for cars.

Owning a car also comes with opportunity costs. A recent study^{xliii} found that by running one less car in a household over a 25 year period, the household could:

- Accumulate more than an additional \$1million in superannuation over their working life, or
- Repay a \$300,000 housing loan in 12 years instead of 25 years, saving \$245,000 in interest payments, or
- Purchase a home which is \$110,000 more expensive than they would otherwise be able to, at the outset.

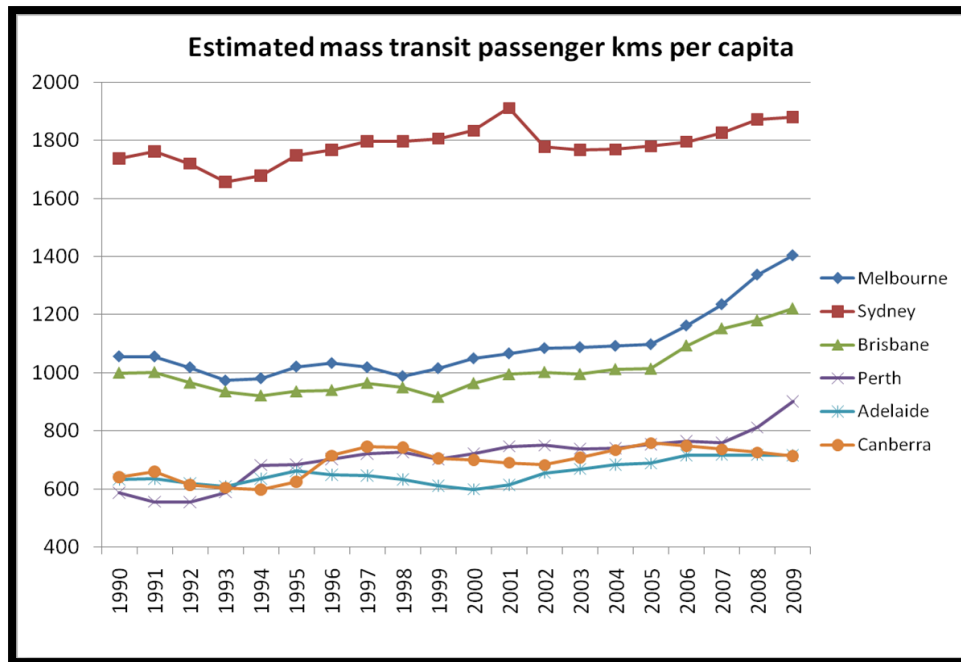
The study concluded that in cities planned around car travel, lower income households are forced to live toward the fringes in what appear to be more affordable locations; but in fact they are entering a lifetime of car dependency and the costs associated with that. The study recommended that governments facilitate reduced car ownership through planning and infrastructure investment, and that this strategy would create cities that were both more sustainable and more equitable.^{xliv}

The Government's focus on building roads instead of public transport means that Canberra has the highest number of car passenger kilometres per capita of any capital city in Australia. While other Australian cities are sharply increasing their rates of public transport usage, Canberra's is in

Some 'hidden costs' to a car dependent city^{xliii}



decline. In fact, Canberra has the lowest per capita use of public transport of all capital cities in Australia.^{xiv}



Canberra has the lowest capital city transit usage, and it is declining.

This approach puts particular pressure on residents of Canberra’s outer suburbs. In Canberra, as with most Australian capitals, higher income households tend to be located in the inner urban areas, where there are better transport options. Without good public transport options, residents of the outer suburbs are required to rely on cars. They are burdened with the costs of owning and operating more than one car with no other alternatives.

In addition, families in outer suburbs already suffer the most cost-of-living pressures. Recent research on Australia’s capital cities clearly demonstrates regional patterns of economic vulnerability, with families at the city fringes being at particular risk of rising oil prices and mortgage stress.^{xlvi} Locking Canberrans into car reliance, particularly as oil prices rise, will cause significant economic stress.

Individual Canberrans and the community as a whole have to bear the negative costs of an approach that plans for automobile travel at the expense of public transport. This is the approach that is behind the proposal for a Majura freeway. The freeway as proposed by the Government does not even include bus lanes for the road; it is a proposal that plans for – and encourages – growth in car travel only. The short term capital cost alone of a new Majura freeway is hundreds of millions of dollars. But the ongoing costs to individuals and the community – including the lost opportunity costs of better public transport solutions – will be long term.

Public transport can work in Canberra!

Canberra is often dismissed as a city that cannot accommodate a good public transport system. Proponents of this view argue that Canberra was a city planned for car travel, that it is too low density, or that residential areas are too far from employment areas. However, there are many cities around the world facing the same challenges as Canberra, but which still have excellent, well-used public transport systems. These successful results have been achieved using various combinations of buses, trams, rail, and light rail, in cities of various sizes and densities.

Ottawa and Zürich are two areas that are comparable to Canberra that have both achieved excellent, well-used, convenient and sustainable transport systems.^{xlvii} Like the example of Vancouver (discussed above), these cities' key strategies focused on **prioritising public transport**.

1. Ottawa, Canada - success with bus priority

Ottawa is achieving one of the best sustainable transport results of any North American city. For journeys to work, **68% drive, 21% take public transport, and 10% cycle or walk**.

It achieves this with the lowest urban density of any of Canada's major cities (a density that is comparable to Canberra's). It has a population of approximately 1 million people. It has also achieved this by turning around its transport patterns.

In the 1970s, Ottawa was completely car dominated and its transport planning basically involved a network of new freeways. Ottawa turned around its transport system with some key transport policy changes:

- It made public transport *the priority for all new infrastructure, and made building major new roads a last resort*;
- It expanded *high-quality transit services into lower-density suburbs*;
- It used suburban buses to feed into faster buses, which run on *prioritised 'busways'*;
- It provided *on-street priority for buses* on trunk routes, allowing them to bypass congestion.

2. Zürich, Switzerland - success with trams and buses

Zürich has the lowest rate of car use in Switzerland. Approximately **32% of the entire Zürich Canton's population use public transport to get to work, compared to 37% by car**. Zürich Canton achieves this result despite being very dispersed, spreading out into a large area of low density suburbs. In the more dense Zürich city, **66% of people travel to work by public transport and only 19% drive**. The share of car trips in Zürich is still falling, while in most areas around Switzerland it is increasing.

Zürich achieved these excellent public transport results by:

- Providing a high-quality network of public transport *that serves the whole canton, including the city and the suburbs;*
- Using a combination of *trams and buses, that are precisely coordinated for connections;*
- Utilising a three decade long (virtual) moratorium on major new roads in Zürich city and *giving public transport priority in both funding and road space;*
- Focusing on providing *on-street priority for all trams and buses* on trunk routes. This works so well that there is virtually no difference between the running times at peak hour and late evening.

Canberra's Crossroads

The ACT Government has an important choice. Will it continue with its business-as-usual strategy that focuses on roads – an approach that will increase congestion, pollution, and require Canberra households to own more than one car? Or will it put the necessary resources and funding into public transport solutions that will create a more convenient, sustainable, resilient and equitable Canberra?

The ACT Greens MLAs call on the ACT Government to:

- Make a real difference to Gungahlin's travel problems by funding a high speed, high capacity public transport route between Gungahlin, Civic and the Parliamentary Triangle; this should then be expanded into an improved network servicing all of Canberra. This can be achieved with prioritised

buses, but light rail would have a number of advantages as the trunk route of Canberra's public transport system;

- Instead of building a completely new Majura freeway, make improvements to the existing Majura Road, especially around the problematic intersections or any black spots;
- Revise its transport policies to prioritise public transport solutions rather than building new roads; it should also assess the negative costs of a road-focussed strategy on Canberra and Canberrans, including induced traffic and congestion, sprawl, health and pollution, social disadvantage, and the impact on our efforts to meet greenhouse gas reduction targets; and
- Before proceeding with the Majura freeway proposal, as a minimum ensure that an independent expert in sustainable transport planning has analysed and reported publicly on the merits of the project including:
 - the costs and benefits of building the proposed freeway compared to building new high quality public transport options, such as light rail;
 - the impacts of the freeway in terms of induced traffic, congestion, greenhouse gas emissions, transport modal shift, economic costs, and the urban form of Canberra;
 - alternative options to a new freeway such as targeted upgrades to existing Majura Road intersections and choke points.

**Please email any feedback on this paper to the office of Amanda Bresnan
MLA, ACT Greens Transport Spokesperson: bresnan@parliament.act.gov.au**

Endnotes

ⁱ Peter Newman and Jeffrey Kenworthy, *Sustainability and Cities: Overcoming Automobile Dependence*, 1999.

ⁱⁱ Public transport causes the fewest deaths from accidents per journey both among the travellers and pedestrians. See for example: Fiona Godlee, "Transport: A Public Health Issue", *British Medical Journal* 304, 1992

ⁱⁱⁱ See for example routes suggested in: *Kellogg Brown Root Consultants, Canberra Public Transport Futures Feasibility Study - Final Report: Economic and Financial Implications of Transport Options*, 2005

^{iv} *Kellogg Brown Root Consultants*, above, note iii

^v SMEC, *Northbourne Avenue Bus Priority Feasibility Study*, Final Report, November 2005

^{vi} <http://act.greens.org.au/sites/greens.org.au/files/Active%20transport%20plan.pdf>

^{vii} See: Vukan R. Vuchic, "Light rail and BRT, Competitive or complementary?", *Public Transport International* 5, 2005; and Peter Newman and Jeffrey Kenworthy, *Sustainability and Cities: Overcoming Automobile Dependence*, 1999

^{viii} Kellogg Brown Root study, above, note iii. Note that these are 2005 prices; application of indexing suggests the prices would be higher today, but still cheaper than Majura freeway.

^{ix} *ibid.*

^x Price Waterhouse Coopers Consultants on behalf of ACT Government, *ACT Light Rail, Proposal to Infrastructure Australia*, December 2008.

^{xi} Cities dependent on automobile travel face serious problems with costs (to transport, to infrastructure, to people's time), sustainability (GHG emissions, oil vulnerability, air pollution, sprawl), social equity (severe disadvantage of being carless or living in areas where it is difficult to drive), and liveability (loss of community, safety and public vitality).

^{xii} The Majura Parkway was first proposed in the Tomorrow's Canberra document (1970), which reflects the 1967 Y-plan. It proposed the idea of peripheral Parkways going down the east and west of Canberra.

^{xiii} ACT Government Majura Parkway website: www.majuraparkway.act.gov.au

^{xiv} This claim remains on the ACT Government's Majura Parkway website.

^{xv} Dr Michelle Zeibots, *Expert Witness Report on Induced Traffic Growth and its Implications for Greenhouse Gas Emissions to the Frankston Bypass Panel Inquiry*, (2009)).

^{xvi} See for example, Todd Litman, Victorian Transport Policy Institute, *Generated Traffic and Induced Travel*, 2011 presentation, for a comprehensive list of studies. See also Peter Newman and Jeffrey Kenworthy, *Sustainability and Cities: Overcoming Automobile*

Dependence, 1999

^{xvii} See, for example, case study on the M4 Motorway in Sydney. Annual Average Daily Traffic volumes show a sharp increase - which is greater than usual annual traffic volumes – when the new Mays Hill to Prospect section of the road opened (Dr Michelle Zeibots, *Space, time, economics and asphalt: an investigation of induced traffic growth caused by urban motorway expansion and the implications it has for the sustainability of cities*. Doctoral dissertation, Institute for Sustainable Futures, University of Technology, Sydney.)

^{xviii} A study of British roads shows that those with the highest rates of traffic growth are closely associated with those that have experienced the greatest increase in capacity. (Referenced in Dr Michelle Zeibots, *Expert Witness Report on Induced Traffic Growth and its Implications for Greenhouse Gas Emissions to the Frankston Bypass Panel Inquiry*, (2009)).

^{xix} An empirical study of 78 major international cities demonstrates the pattern that greater road widths correspond to more vehicle kilometres travelled per person. (Referenced in Dr Michelle Zeibots, *Expert Witness Report on Induced Traffic Growth and its Implications for Greenhouse Gas Emissions to the Frankston Bypass Panel Inquiry*, (2009)).

^{xx} Mark Hansen and Yuanlin Huang, “Road supply and traffic in California urban areas”. *Transportation Research A*.31(3):205-218

^{xxi} Todd Litman, Victorian Transport Policy Institute, Generated Traffic and Induced Travel Implications for Transport Planning, 11 March 2011.

^{xxii} Standing Advisory Committee on Trunk Route Assessment (UK), *Trunk roads and the generation of traffic*, HMSO, London, 1994

^{xxiii} Price Waterhouse Coopers, Above, note x

^{xxiv} John Stone and Paul Mees, *Success stories: greenhouse reductions from transport policy change* (Paper for Garnaut Review Team), 2008

^{xxv} There are numerous studies done of Vancouver’s transport success, but a good summary is in a recent interview with Neal LaMontague, a senior transport planner in Vancouver, published at: *Projecting Transportation Change in Vancouver*, May 24, Projecting Change 2011 Blog: <http://projectingchange.ca/2011/05/24/projecting-transportation-change-in-vancouver-2>

^{xxvi} See answer to ACT Budget Estimates 2011-2012 Question on Notice E11-114

^{xxvii} Statistics from: SMEC, *Majura Parkway Draft EIS Report* (2009), as well as statistics provided by the ACT Government in: ACT Government media release, *Speed cameras make our roads safer*, 7 September 2007.

^{xxviii} Traffic data show that traffic deaths tend to follow the degree of automobile dependence, and the level of development of the traffic regulatory system, and that by far the biggest gains in road safety would be made by shifting to other modes and reducing the overall level of car use. See Peter Newman and Jeffrey Kenworthy, *Sustainability and Cities: Overcoming Automobile Dependence*, 1999, pp118-119.

^{xxix} Public transport causes the fewest deaths from accidents per journey both among the travellers and pedestrians. See for example: Fiona Godlee, “Transport: A Public Health Issue”, *British Medical Journal* 304, 1992

^{xxx} See, for example: Monash University Accident Research Centre, *Further modelling of some major factors influencing road trauma trends in Victoria: 1990-96, Report No.129, 1998.*

^{xxx}_i SMEC, *Majura Parkway Draft EIS Report, Appendix C, Traffic Analysis, 2009*

^{xxx}_{ii} The most recent list of black spot funding can be viewed at: <http://www.nationbuildingprogram.gov.au/funding/blackspots/> The ACT had 12 projects, none around Majura Road.

^{xxx}_{iii} See answer to ACT Budget Estimates 2011-2012 Question on Notice 287

^{xxx}_{iv} ACT Government, *Submission to Infrastructure Australia's National Freight Network Plan, March 2010*

^{xxx}_v Australian Government, Infrastructure Australia, *National Land Freight Strategy, February 2011*

^{xxx}_{vi} Canberra Airport, *2009 Master Plan, (Part 6: Freight Operations)*

^{xxx}_{vii} *The Canberra Times, 29 May 2011*

^{xxx}_{viii} See answer to ACT Budget Estimates 2011-2012 Question on Notice E11-113.

^{xxx}_{ix} For example: the Government has not taken into account induced traffic. Its traffic projections also forecast a large increase in car trips. However this does not need to be a presumption if the Government instead actively plans to increase the public transport options for Gungahlin residents. The projections overlook the possibilities of trends away from personal motor transport as a response to climate change, and with greater Government efforts to create sustainable transport options.

^{xl} CSIRO (National Research Flagships), *Fuel for thought. The future of transport fuels: challenges and opportunities, 2008.*

^{xli} Calculations derived from: Australian Bureau of Statistics data on household incomes, average annual salaries and cars per household, as well as the NRMA's calculations of vehicle running costs. See:
<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/93FBEBFF98D13D03CA2571F40080E952?opendocument>;
 (<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/1344.8.55.001Media%20Release13502007?opendocument&tabname=Summary&prodno=1344.8.55.001&issue=2007&num=&view=>);
http://www.carsguide.com.au/site/news-and-reviews/car-news/running_costs_for_600_cars

Interestingly, calculations can also be done of the percentage of income that goes to running cars, based on different regions of Canberra. The figures show that Belconnon, Weston Creek, Tuggeranong, and Gungahlin-Hall are particularly affected, with 19% - 21% of income in these regions going to car costs.

^{xlii} Charter Keck Cramer Consultants, "Urban Economics and Policy Review, Issue 1: November 2008", Quoted in Simon McPherson and Adam Haddow, *Shall We Dense?: Policy Potentials (research Project), 2011.*

^{xliii} Accident costs from: Luke Connelly and Richard Supangan. “The Economic Costs of Road Traffic Crashes: Australia, States and Territories”, *Accident Analysis & Prevention* 38(6), 2006. Congestion costs from: Department of Transport and Regional Services, Bureau of Transport and Regional Economics, *Estimating urban traffic and congestion costs trends for Australian cities -working paper*, 2007. Health impact costs from: Department of Transport and Regional Services, Bureau of Transport and Regional Economics, *Health impacts of transport emissions in Australia -working paper*, 2005.

^{xliv} Charter Keck Cramer Consultants, “Urban Economics and Policy Review, Issue 1: November 2008”, Quoted in Simon McPherson and Adam Haddow, *Shall We Dense?: Policy Potentials (research Project)*, 2011.

^{xlv} Data from Bureau of Infrastructure, Transport and Regional Economics’ Australian Infrastructure Statistics Yearbook 2011. Graph courtesy of Chris Logan (<http://chartingtransport.wordpress.com>)

^{xlvi} Jago Dodson and Neil Sipe, *Unsettling Suburbia: The New Landscape of Oil and Mortgage Vulnerability in Australian Cities*, Griffith University, 2008.

^{xlvii} See: Paul Mees, *Transport for Suburbia*, 2010; John Stone and Paul Mees, *Success stories: greenhouse reductions from transport policy change* (Paper for Garnaut Review Team), 2008; Peter Newman and Jeffrey Kenworthy, *Sustainability and Cities: Overcoming Automobile Dependence*, 1999.

Images

Title page: 1. Light rail in Strasbourg, France (Pop: 640,000) - *Tramways in Strasbourg* by Ex13 (Wikipedia Commons).

2. Bus Rapid Transit in York, Canada (Pop: 890,000) - *Viva 5201 on Viva network* by Lppa (Wikipedia commons)

Light rail picture, page 6: Light rail in the Spanish city of Murcia (Pop: 430,000) - *Citadis 302 - Tranvía de Murcia* by Angelvilu (Wikipedia commons)