

# **Active Transport Plan for the ACT**

**ACT GREENS**



**March 2010**

# Foreword

The Greens' Active Transport Plan focuses on one aspect of the broad range of transport issues in Canberra. It is about accelerating the move to 'active transport'. Active transport means travelling by physically active means - walking and cycling. It also refers to public transport that is effectively integrated with walking and cycling. Walking is the glue that makes our transport system work because (with a few exceptions due to age or disability) we are all pedestrians. All journeys normally start and end with walking. The move toward active transport is happening now. Each day when I ride down Northbourne Avenue it seems there are more people walking, or riding bikes, and the buses are fuller.

Active transport is good for our health. Walking or riding to the local shops, to work, or to see friends can be a very time efficient and cheap form of exercise. And usually it is an easy and enjoyable way of exercising. Streets that encourage active transport are also safe streets, so increased active transport will reduce the deaths and accidents on Canberra's roads.

Active transport costs less than private car use, so it is good for household budgets. It also costs less to build footpaths and cycle paths than roads, making it good for Government budgets too.

Active transport is fuelled by people, not fossil fuels, so it is also good for our planet's health. And the more travel done by active transport, the less resources we need to build cars and roads.

My vision is that Canberra will move from a car-based city to a city that prioritises people. I would like to see our residential areas with human scale streets which are safe for people and have appropriate car use. They will be complemented by more major connector roads with good bus (and some day, light rail) transport, quality on- or off-road cycling paths, footpaths and lanes for appropriate car use.



This paper provides a comprehensive discussion of the ideas and actions that will help the transformation of Canberra. No single change is the answer; we need change in many areas. But change will certainly start with prioritising active transport.

We also want the Active Transport Plan to generate discussion in the community, and we welcome feedback on its ideas and recommendations.

Finally, I want to thank the many people and groups who helped develop the Active Transport Plan.

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# Executive Summary

The ACT Greens' **Active Transport Plan** describes actions that the Greens want to see the ACT Government take to achieve a change in transport patterns, away from private car use, in favour of active transport. Active transport is physically active travelling. Primarily, this means walking and cycling. It also refers to public transport that is effectively integrated with cycling and walking. This document primarily deals with the active part – walking and cycling. This is especially important in a spacious city like Canberra. A key feature of active transport is that it replaces trips by private car – which is a sedentary and highly polluting form of travel – with transport that is healthy, sustainable, and beneficial to community life.

Transport is a very large and important issue for Canberra; this is not the Greens' complete transport plan – the discussion is limited to active transport.

While we recognise that private car use will remain a transport option in Canberra, the Greens' vision is for the share of active transport to dramatically increase. This can be achieved with the right combination of funding and policy measures and a long-term, coordinated strategy. This vision has already become reality in other cities of the world, as shown by the table below:

Transport method	Copenhagen (all trips)	Amsterdam (all trips)	Canberra (to work trips only)
public transport	15%	18%	7.9%
Bicycle	32%	28%	2.5%
car	26%	27%	81%
walking	24%	24%	4.9%
other	3%	3%	3.7%

Comparisons of transport methods in 3 cities<sup>1</sup>

Increasing the percentage of trips made by active transport is critical to help address some of the biggest challenges we are facing, such as peak oil and climate change. Not only this, increasing active transport will help make Canberra a more **sustainable, accessible, healthy, safe, and community-friendly** city. Many of the changes suggested in this plan are small and simple. Some of them are bigger, longer term changes. The Greens believe all of them are achievable in the ACT.

The Active Transport Plan makes **41** recommendations for action the ACT Government should take to encourage a shift to active transport. These recommendations come under **6** broad categories.

**1.** The ACT Government needs to *make active transport the priority transport mode* in planning, traffic, and urban design policies. This requires a new attitude from the Government and a reversal of its current traffic policies, which remain car and road focussed.

<sup>1</sup> Data from: Fiets Beraad <<http://www.fietsberaad.nl/index.cfm?lang=en>>, and *ACT State of the Environment Report 2007*.

**2.** The Government needs to *plan for active transport*. This means formalising the best practice principles of active transport planning into our planning system. Planning for active transport will greatly increase its uptake and avoid entrenching barriers to active transport. It means ensuring cycling and walking networks are high quality, smartly planned, safe, and integrated with public transport. It also means shifting Canberra towards denser, transport oriented development, to cluster a mix of urban and residential land uses around public transport nodes. Our planning laws must encourage more innovative types of developments, which support active transport and discourage car use. To ensure active transport planning is effective, the Government needs to train its staff and engineers in active transport planning, and it also needs to engage in data collection and benchmarking processes.

**3.** Prioritising active transport means accepting that we can't just continue making Canberra more and more attractive for private car use. The Government should carefully *use travel demand management strategies* to encourage alternative transport, as has been done successfully in other cities around the world. These strategies recognise that many factors influence people's transport choices, including the relative ease of different options. Travel demand management can mean restricting car flow into certain parts of the city. One way the ACT Government should do this is to convert appropriate parts of Canberra's town centres into 'pedestrian prioritised areas' (also known as 'shared spaces').

Travel demand management also means reforming car parking policies. The ACT Government should move away from its favoured approach of parking demand *satisfaction*, and entrench a strategy of parking demand *management* into the planning system. This involves, for example, removing mandatory minimums for the provision of parking spaces in new developments. Travel demand management also means recognising that building new roads and freeways creates 'induced traffic'. The Government's environmental assessments of these projects must recognise this phenomenon.

**4.** *Improving safety for vulnerable road users* is essential to getting more people using active transport. Walkers and people riding are our most vulnerable road users. This vulnerability - combined with persistent policies that favour motor traffic - is a significant barrier for people wanting to walk or ride. Lowering vehicle speeds to 30 or 40km/h in key areas (around shopping centres and community facilities) significantly reduces the risk of injury for people who walk or cycle. It also creates an environment that attracts these road users.

Children are a specific vulnerable group. The number of children using active transport has been in rapid decline. The Government needs to ensure child-friendly planning. It should also implement a 'safe routes to school' programme, focussed on developing safe walking and riding routes for school kids.

Work also needs to be done to change longer term attitudes and behaviour of road users. For example, the Government should consider entrenching a 'road user hierarchy' of liability to reinforce the responsibility that road users have to more

vulnerable road users, as well as requiring driver training about vulnerable road users. At the same time, the Government should consider extending laws that apply to dangerous and careless driving to cyclists, as well as undertaking positive, proactive programmes to ensure people riding bikes make themselves visible.

**5.** The Government should undertake specific initiatives to *prioritise walking*, especially since it is the often undervalued ‘glue’ of our whole transport system. ‘Walkability’ should become a design priority. The ACT can do this by adopting the principles from the *International Charter of Walking*. A variety of structural improvements are required, especially to facilitate local walking that will displace car travel. In particular, this means improving the connectivity of walking routes (to public transport, shops and other key destinations) and the convenience and safety for pedestrians with better lighting, a high quality ‘wayfinding’ system, intersections that favour walkers, and ‘soft separation’ at appropriate spaces where cyclists and pedestrians interact. Recognising that there is a multitude of factors that impact on people’s ability to walk, the Government also needs to promote behavioural changes, which can range from enforcing regulations that require nature strips to be kept clear, to educating motor vehicle drivers about pedestrian needs.

Longer term, the ACT needs to rein in Canberra’s sprawl with denser, transport oriented development, which will ensure walking trips remain or become a viable option.

**6.** The ACT Government can make a big improvement to active transport by *prioritising cycling*. Cities like Copenhagen and Amsterdam have pushed strong pro-cycling policies for years, and around 30% of all trips are now made by bicycle. In Canberra, that figure is around 2%. Bicycle infrastructure is relatively cheap, and building projects such as separated bicycle paths, bicycle-friendly streets, bicycle priority intersections, cycle highways, and ‘green waves’ (stretches of traffic lights programmed to favour people commuting by bikes) will help make cycle commuting more convenient and safe, overcoming some of the key barriers that prevent people from riding. A specific priority for the Government should be a redesigned Northbourne Avenue, featuring a median strip cycle path, or a separated bike path to the side. The Civic Cycle Loop proposed by Pedal Power will also be a valuable initiative.

One of the benefits of this improved infrastructure is that it supports people of different skill levels, so that everyone can commute, not just ‘hardcore’ riders. Similarly, the Government needs to look at how its infrastructure will accommodate a large increase in electric bikes, which can make bike riding more inclusive. It is also necessary to improve bicycle parking – especially at public transport hubs – as well as end of trip facilities (showers, lockers etc), to ensure convenience. In conjunction with improved infrastructure, the ACT Government should also support specific school-age training for young people to learn riding skills – which is a skill for life – as well as local rider education programmes for adults.

**Feedback:** We welcome comments and feedback from the community. We expect that in the next few months we will hold a public forum to discuss active transport in Canberra. Please email your feedback on this paper to [LECOUTEUR@parliament.act.gov.au](mailto:LECOUTEUR@parliament.act.gov.au) or send it to: Caroline Le Couteur MLA, Legislative Assembly Building, GPO Box 1020, Canberra, 2601. Submissions would be appreciated by 30 April 2010.

# Summary of Recommendations

The ACT Greens' *Active Transport Plan* makes **41** recommendations under **6** broad topics, summarised below.

## **1. Make active transport the priority transport mode**

**Rec 1.1:** Establish a Chief Minister's taskforce on active living.

**Rec 1.2:** Prioritise pedestrians, cyclists and public transport in planning, traffic, and urban design policies and support this with appropriate funding.

## **2. Plan for active transport**

**Rec 2.1:** Formalise the Healthy Spaces and Places planning principles so they are prioritised in new developments and in upgrades for existing areas.

**Rec 2.2:** Plan suburbs by laying out active transport infrastructure prior to, or simultaneously with, road design.

**Rec 2.3:** Engage in processes that critique and benchmark walkability and cyclability.

**Rec 2.4:** Include cycle and pedestrian counts in traffic simulation models.

**Rec 2.5:** Lead a nationally consistent approach to benchmarking the walkability and cyclability of Australian cities.

**Rec 2.6:** Push for an over-arching Federal approach to active transport, supported with Federal funding.

**Rec 2.7:** Ensure that pedestrian, cycling and public transport networks are highly connected.

**Rec 2.8:** Provide active transport facilities at public transport stops and interchanges, and on buses.

**Rec 2.9:** Build 'transport oriented development', embed transport corridors in the *Territory Plan*, and limit Canberra's urban boundary.

**Rec 2.10:** Review use of lighting on walking and cycling paths, and public transport stops.

**Rec 2.11:** Encourage and build innovative types of urban developments, such as 'cycle-friendly' developments, and increase end-of-trip facilities.

**Rec 2.12:** Coordinate training courses for staff in urban planning roles, as well as engineers, on active transport and the needs of active transport users.

**Rec 2.13:** Promote the benefits of active transport choices to Canberrans.

### **3. Use travel demand management to encourage alternative transport**

**Rec 3.1:** Use ‘travel demand management’ techniques, which may include restricting space and access for motor traffic.

**Rec 3.2:** Convert appropriate areas in town centres into ‘pedestrian priority’ or ‘shared’ spaces.

**Rec 3.3:** Revise the *ACT Parking and Vehicular Access Guidelines* to replace the ‘demand satisfaction’ approach to car parking, with a ‘demand management’ approach.

**Rec 3.4:** Introduce a formalised ‘sustainable transport contributions fund’, which will allow or require developers to limit parking spaces in new developments.

**Rec 3.5:** Remove the mandatory minimum car parking requirements for new developments, but encourage space for ‘car sharing.’

**Rec 3.6:** Before undertaking any new road projects, conduct a full assessment of greenhouse gas emissions which takes account of ‘induced traffic’.

### **4. Improve safety for vulnerable road users**

**Rec 4.1:** Introduce 30 or 40 km/h zones around shopping centres and community centres.

**Rec 4.2:** Undertake a ‘safe routes to school’ project, and consider installing ‘dragon’s teeth’ or safety lights around schools.

**Rec 4.3:** Consider creating a ‘road user hierarchy’ favouring vulnerable road users.

**Rec 4.4:** Consider requiring training regarding vulnerable road users as a requirement for obtaining a motor vehicle licence.

**Rec 4.5:** Consider updating the *Road Transport Act* to extend dangerous and careless driving offences to cyclists.

**Rec 4.6:** Support a programme to address cyclist visibility, and to encourage better relations between road users.

### **5. Prioritise Walking**

**Rec 5.1:** Sign up to the *International Charter of Walking* and formalise the Charter’s principles into the Government’s own planning policies.

**Rec 5.2:** Prioritise *structural* measures to improve walkability, including: providing more and wider footpaths; improving the connectivity of walking routes; improving signalisation, lighting, and pedestrian crossing points; formalising these best practices in the *Territory Plan*.

**Rec 5.3:** Prioritise *behavioural* measures to improve walkability, including: enforcing requirements not to impede nature strips; educating motor vehicle drivers about pedestrians and vulnerable road users; taking measures to improve amenity for walkers.

**Rec 5.4:** Improve the wayfinding system for Canberra's walkers and bicycle riders.

**Rec 5.5:** Introduce 'soft separation' for pedestrians and cyclists in areas of high pedestrian density, such as City Walk and Garema Place, Civic.

## **6. Prioritise Cycling**

**Rec 6.1:** Construct separated bicycle paths, bicycle-friendly streets, and bicycle priority intersections.

**Rec 6.2:** Ensure bicycle facilities cater for riders of different needs, and are convenient.

**Rec 6.3:** Remove the pedestrian crossing rule for bicyclists, or replace pedestrian crossings with give way signs on high usage paths.

**Rec 6.4:** Provide safe, ample bicycle parking in city and town centres, at bus interchanges and at bus stops.

**Rec 6.5:** Build cycling highways.

**Rec 6.6:** Investigate appropriate places to install green waves for cyclists.

**Rec 6.7:** Plan and build infrastructure that can accommodate a large increase in electric bicycles, and extend the permitted wattage of electric bikes beyond 200W, provided safety can be maintained.

**Rec 6.8:** Introduce cycling education to the school curriculum, support a nationally consistent community bicycle skills programme, and build cycle training spaces in playgrounds.

**Rec 6.9:** Redesign Northbourne Avenue to accommodate either:  
- a high quality bicycle path along the centre median strip, or  
- a high quality separated bicycle path travelling in each direction.

**Rec 6.10:** Support the Civic Cycling Loop, as proposed by Pedal Power.

# ACTIVE TRANSPORT IN 2020

It is not far-fetched to imagine a Canberra where active transport is well supported and used much more than it is now. With a coordinated approach that prioritises active transport and involves better planning, relatively cheap infrastructure improvements, education, and some changes to laws and regulation, Canberra can start to change its transport patterns, while still keeping all the qualities that already make it a great city.

## **A Vision of Canberra's Transport Future**

**The Green family is a typical Canberra family, made up of parents Sarah and Bob, and their two primary age kids, Rachel and Scott. They live about 10km from Canberra's city centre.**

**Rachel Green uses a high quality footpath to walk to school. She actually helped choose the path's route when the ACT Planning and Land Authority involved her school in the planning process. She likes the fact she sees a number of her neighbours as she walks, and she also meets some fellow students walking the same path.**

**Scott Green rides his bike to school. He has just started riding, as he is learning bike safety training in his 4th grade class. He uses an off-road bike path. It crosses a couple of streets, but Scott has crossing priority. The drivers drive slowly in this 40km area anyway as it is nearby a school and an aged care facility. Many drivers have also had training in driving safely with other road users, like kids and bike riders.**

**Bob Green works in far South Canberra. Today he is running early, so he walks to the nearby transit stop. Often he cycles to the stop and locks his bike at the facilities provided. He likes the fact that when he returns late, the path home is well lit, so he feels safe. When he needs to, Bob drives to work using a car sharing arrangement; the complex they live in prioritises convenient parking for share cars. Bob and Sarah sometimes use the car to shop on the other side of Canberra, though they can usually do their shopping locally without it.**

**Sarah Green enjoys cycling all the way to Civic for work, because she takes a 'cycling highway'. She's a casual rider, but the 'highway' takes a direct, uninterrupted route so it takes under half an hour. She feels extra safe in the city too, because she can ride on a separated bike path, and the cars travel slowly where it is busy with cyclists and pedestrians. Car traffic is mild anyway, as most people now take alternative transport. Some people park outside the city centre at 'park and ride' stations. Sarah has time to visit a bakery in the vibrant 'shared space' of Bunda Street. Afterwards, she showers and parks at the central 'Cycle City' - a convenient cycling amenities facility - before heading to work. In the evenings, Sarah is happy she has the option of taking her bike home on public transport. Tonight though, she rides home, making sure that she is visible to traffic.**

# BENEFITS OF ACTIVE TRANSPORT

Active transport is a way for people to become healthier, happier, and more connected to their environment and community. But it is also a very important way of addressing some of the biggest challenges facing the ACT, such as climate change, poor health and obesity.

## **Environmental benefits**

Journeys made by active transport rather than by car will reduce greenhouse gas emissions. Currently, Canberra's transport sector makes up approximately 23% of our total emissions. These continue to increase.<sup>2</sup> Passenger cars remain the largest single contributor to road transport greenhouse gas emissions, followed by trucks and light commercial vehicles.<sup>3</sup> In order to meet its goal of zero net greenhouse gas emissions<sup>4</sup>, the ACT will need to oversee a shift to sustainable transport modes like walking, cycling and public transport. The infrastructure built to support active transport also has a low cost of greenhouse gas emissions compared to that of infrastructure built to support motor vehicle use.



## **Health benefits**



**Sedentary Canberra Cars**

Active transport is an important preventative health measure. By continuing to accept and cater for continued growth in car use, Governments have helped create a more sedentary lifestyle. In Australian cities, the proportion of trips made by walking, cycling or public transport has plummeted. Correspondingly, the risk of health problems and diseases linked to a lack of physical activity - like diabetes, heart disease, obesity and osteoporosis - is continuing to increase.

Around 32% of Canberrans are above a healthy weight, and 17% are obese. Over 15% of the ACT population suffer under a long-term cardiovascular disease.<sup>5</sup> Mental health problems can be a direct result of the lack of physical activity, and increased active transport will also

<sup>2</sup> In 2006, the ACT's transport emissions were 25% higher than 1990 levels and 10.5% higher than 2000 levels, ACT Commissioner for Sustainability and the Environment, *State of the Environment Report 2007/08*.

<sup>3</sup> Department of Climate Change, *Transport Sector Greenhouse Gas Emissions Projections*, 2008.

<sup>4</sup> ACT Government, *Labor Government sets zero net emissions target for Canberra*, Media Release, 12 May 2009.

<sup>5</sup> Australian Bureau of Statistics, *National Health Survey 2004-05*, 2006.

help the ACT's rate of mental and behavioural problems, which is higher than any other Australian jurisdiction.<sup>6</sup>

Making walking or cycling part of a regular trip to work or school is one of the easiest ways to increase physical activity. Although individual behavioural change is required, Government transport and planning policies also need to encourage people to choose active and sustainable alternatives to private car use.

By prioritising the needs of walkers, people cycling and public transport users, and creating infrastructure and an environment conducive to these modes of travel, Governments can have a significant positive impact on public health. Increased active transport also means reduced motor vehicle use, and improved air quality; the burden of disease attributable to traffic pollution is an often under-rated health impact of modern transport patterns.<sup>7</sup>

### ***Strengthening the community and the economy***

Active transport is a great way to create vibrant public space. Thriving public spaces - and all the benefits that come with them - are in constant danger of being eroded away by the patterns of modern living. As Cheryl Wright from the Heart Foundation of Australia says, 'the private car in particular has reinforced a growing emphasis on private wellbeing at the expense of a vibrant and interactive public realm.'<sup>8</sup> By contrast, walking and cycling around neighbourhoods and city centres allows people to make contact and to communicate in ways that is prevented by car use. It strengthens the community through increased social interactions and improves safety by getting more people on the streets.

Active transport is an excellent way to address inequalities in the amount of physical activity undertaken in terms of age, gender and socio-economic status. In fact, research suggests that 'fostering active transport in Australia may be a more equitable and inclusive form of promoting physical activity than organised sport and exercise programs.'<sup>9</sup> On the other hand, policies that focus on travel by private vehicles can increase the risk of social exclusion for disadvantaged groups; particularly as not all people can afford or can drive a car.<sup>10</sup>

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<sup>6</sup> Data supplied to the ACT Greens by the Heart Foundation, 2010.

<sup>7</sup> For example, it has been estimated that air pollution from motor vehicles accounts for more than 500 early deaths in the Sydney Region per annum and over 1,000 hospital admissions, and that the health costs of motor vehicle emissions in that city are between \$600 million and \$1.5 billion per annum. See: Australasian Railway Association (2006), *National Passenger Transport Agenda*, p.22. According to the World Health Organization for example, in some countries, air pollution from road transport causes even more deaths than those resulting from traffic accidents. World Health Organization, *The World Health Report 2003: Shaping the Future 2003*, p. 95, <[http://www.who.int/whr/2003/en/whr03\\_en.pdf](http://www.who.int/whr/2003/en/whr03_en.pdf)>. See also: A Woodward, S Hales, S Hill, *The motor car and public health: are we exhausting the environment?*, MJA 177 (11/12), 2002, pp. 592-593, <[http://www.mja.com.au/public/issues/177\\_11\\_021202/woo10480\\_fm.html](http://www.mja.com.au/public/issues/177_11_021202/woo10480_fm.html)> (discussion about the serious effects of traffic pollution on public health, especially in relation to heart disease and respiratory problems).

<sup>8</sup> Atkinson, R, quoted in Cheryl Wright, *Creating Supportive Environments for Physical Activity: Encouraging Walking*, in Rodney Tolley (ed), *Sustainable Transport*, p. 403.

<sup>9</sup> Dr Jan Garrard, *Active transport: Children and young people: an overview of recent evidence*, December 2009, p. 2 (prepared for VicHealth).

<sup>10</sup> ACT Council of Social Service, *The Path Less Travelled: Transport and Social Inclusion in the ACT*, 2009, pp. 9-10.

Features that make a city friendly for active transport, also tend to be the same features that make a city child-friendly. As a city that is spread out, and dominated by cars and roads, Canberra is currently not well planned for children's needs. Children are becoming less active; the overall proportion of children cycling in the ACT declined 14% between 2000 and 2009.<sup>11</sup> But cities planned for active transport account for the special mobility and safety needs of children. Measures like stimulating open spaces, mixed development with active frontages, good public transport, reduced or slower traffic, and well-connected and safe cycling and walking routes all help to foster a sense of belonging for children, and enhance their opportunities to independently play, explore and interact with the environment.

There are considerable economic benefits from improving active transport. Slower travel creates more business for local shops and cafes. Recent research commissioned by the Federal Department of Health and Ageing quantified the overall benefits to the community of the current level of cycling as more than \$220 million each year through reduced congestion, reduced emissions and reduced disease and health problems.<sup>12</sup> Active transport infrastructure itself is very cost efficient compared to infrastructure that supports motor vehicles.

Canberra also needs to make active transport a viable alternative to car use so that it becomes resilient and sustainable in the face of 'peak oil' – that is, the time when global oil production reaches a peak and then starts an irreversible decline. The majority of researchers predict that peak oil will have occurred between 2005 and 2010.<sup>13</sup> It's unlikely we will recognise the peak until after it has already happened. The impacts of peak oil will change our way of living and cities that remain car dependent will become very vulnerable.

Increasing active transport will bring huge savings by reducing the risk of preventative disease and easing the burden on the health system. This is of particular value in Australia, where health costs are spiralling.<sup>14</sup> A recent World Health Organization study published in the Medical Journal *Lancet* documented the benefits of mass active transport and concluded that: policy makers should divert investment away from roads and toward infrastructure for walkers and cyclists; motor vehicles should be slowed down and controlled; and walkers and people cycling should have direct routes with priority at intersections.<sup>15</sup> These are exactly the kinds of changes to the ACT that the Greens are advocating for in this *Active Transport Plan*.

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<sup>11</sup> Australian Bureau of Statistics 4901.0: *Children's Participation in Cultural and Leisure Activities, Australia*.

<sup>12</sup> It estimated that every kilometre cycled by commuters in Australian capital cities provides almost \$1 of benefit to the community! Bauman, A, Rissel, C, Garrard, J, Ker, I, Speidel, R, Fishman, E 2008, *Cycling: Getting Australia Moving: Barriers, facilitators and interventions to get more Australians physically active through cycling*, Cycling Promotion Fund, Melbourne.

<[http://www.goforyourlife.vic.gov.au/hav/admin.nsf/Images/cycling\\_getting\\_australia\\_moving.pdf/\\$File/cycling\\_getting\\_australia\\_moving.pdf](http://www.goforyourlife.vic.gov.au/hav/admin.nsf/Images/cycling_getting_australia_moving.pdf/$File/cycling_getting_australia_moving.pdf)>

<sup>13</sup> QLD Government, *Towards Oil Resilience – Community Information Paper*, 2009, p.12.

<sup>14</sup> See for example, the Federal Treasury's intergenerational report, which predicts Federal spending on health to grow from about 4% of GDP, to more than 7% by 2050.

<sup>15</sup> See: Margaret Munro, 'Walking, biking good for you and the planet: Study', *Montreal Gazette*, 25 November 2009, <<http://www.montrealgazette.com/health/Walking+biking+good+planet+Study/2264373/story.html>>.

# WHAT TO DO?

Creating a Canberra environment that is friendly to active transport is a considerable challenge and requires a multi-faceted approach. Many of the recommendations set out in this plan depend on one another and benefit from being implemented in a coordinated way.

For example, it makes sense to build ‘pedestrian prioritised zones’ (*recommendation 3.2*) and improve connections between public transport stops and walking and cycling routes (*recommendation 2.7*) at the same time as using ‘travel demand’ techniques to reduce the amount of car parking space (*recommendation 3.1*). Similarly, introducing a ‘road user hierarchy’ that favours vulnerable road users (*recommendation 4.3*) makes more sense in an environment where structural measures help keep vulnerable road users safe (e.g. 30–40 km/h speed limits around highly pedestrianised areas – *recommendation 4.1*).

Canberra also presents specific challenges to active transport, primarily due to its low density and long distances. In Canberra, getting people to make longer trips via active transport, means getting them into public transport. This makes integration of the walking and bicycle networks with the public transport system very important. Improving the quality of the public transport system also remains an overarching issue.

It is also important to remember that the measures set out below are not an overnight solution, and some will need to be implemented over many years. A new road user liability hierarchy, for example, involves changing a legal onus of proof and would require consultation, and community education.

Nevertheless, the ACT needs to start acting swiftly and actually implementing measures that will make a difference. Transport is also just one part of the broader ‘active living’ issue. The different ACT Government agencies – such as Territory and Municipal Services (TAMS), Planning, and Health – need to communicate and coordinate an active living plan. To this end, the Chief Minister should convene an ‘Active Living Taskforce’, which brings together the various government agencies and experts from different fields. As the *only jurisdiction* in Australia without such a taskforce, the ACT should act swiftly.

**Recommendation 1.1: Establish a Chief Minister’s taskforce on active living.**

## **1. Make active transport the priority transport mode**

The first, essential step for the ACT is to make active transport the priority transport mode in planning, traffic, and urban design policies. Currently, traffic policies in the ACT are undoubtedly ‘car focused’. We already have a higher percentage of car travel than any other Australian capital city.<sup>16</sup> Yet the ACT Government continues to facilitate – and even encourage – unsustainable traffic growth. ACT Labor’s election policies say, paradoxically: ‘ACT Labor is preparing for the future. ACT Labor has ... made it easier ... to travel by road’.<sup>17</sup>

<sup>16</sup> Australian Bureau of Statistics, *Census of Population and Housing*, 2006.

<sup>17</sup> ACT Labor, *ACT Labor’s Integrated Transport Policy* (election 2008), <<http://www.actlabor.com.au/Documents/Policy/Integrated%20Transport%20Policy.pdf>>

Recent comments from the ACT Chief Minister indicate that the Government considers it too difficult or inconvenient to shift its priorities away from motor traffic, and that ‘business as usual’ transport policies will continue. When asked about prioritising walking and cycling instead of roads and cars, the Chief Minister answered:<sup>18</sup>

... in the context of the structure of our city, the nature of the way it has been designed, the essential maintenance of the Y plan and, indeed, its expansion, and some of the other issues that we are all very fundamentally aware of in relation to the challenges that Canberra’s geography sets in relation to sustainable transport and public transport and the capacity to lay out an affordable and sustainable transport network that the people of Canberra will respond to, including issues around density and the extent to which the city has been built to date for the motor vehicle, these are significant issues for us to grapple with.

To think that we could just retrofit or turn around those parts of our history and devote significantly greater amounts of money to cycle ways and to pedestrians and ignore the needs for a road network that will not just provide the opportunity across the city for an equitable road network but a road network that essentially is at the heart of our economy is not possible. The implications for economic activity through roads that do not work well and cause delay are quite significant.

This answer highlights the gulf between the rhetoric seen in Government discussion papers and action plans, and its real attitude to change.

The Chief Minister’s explanation ignores the positive features of Canberra’s planning. We have a clear separation between residential streets and major transport routes. This means we can easily make our suburbs safe and attractive for active transport. Our roads tend to be wide with good median strips and verges so there is plenty of space to provide better bike, pedestrian and bus space – we are not limited by narrow congested streets as some other cities are.

The explanation also makes the assumption that motor vehicle travel is the unbeatable transport mode for speed and cost, and the best option for the future. This ignores the significant ongoing costs to society caused by motor car use. It also overlooks the fact that bicycle and pedestrian infrastructure is incredibly cheap to build in comparison to roads and car parks. Even the apparent speed advantages of private car use is somewhat illusory, when one considers the ‘social speed’ or ‘effective speed’ – a calculation that describes the average speed of a vehicle after hidden time costs are considered (such as time spent earning money to pay for buying and running a car, as well as other environmental and social costs).<sup>19</sup> Even in real time calculations, it is often quicker to ride than drive in many parts of Canberra, especially at peak hours around the city.

Transport transformation in Canberra is possible. There are many examples of cities making radical and successful changes to transport patterns. It is a common misperception, for example, that European cities with high rates of walking and cycling have always been friendly for these modes of transport. In fact, many of these cities emphasised *motor* transport in the post World War II period and only embraced the benefits of active transport in the 1970s and beyond.<sup>20</sup>

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<sup>18</sup> Jon Stanhope MLA, *Legislative Assembly for the ACT Hansard*, 10 December 2009, pp. 5691-92.

<sup>19</sup> Paul Tranter’s study of Canberra drivers, bus passengers and cyclists, showed that both bus and bicycle have a higher ‘effective speed’ than most types of car (this is even before the external costs are factored in), Paul Tranter, *Effective Speeds: Car Costs are Slowing Us Down*, 2004.

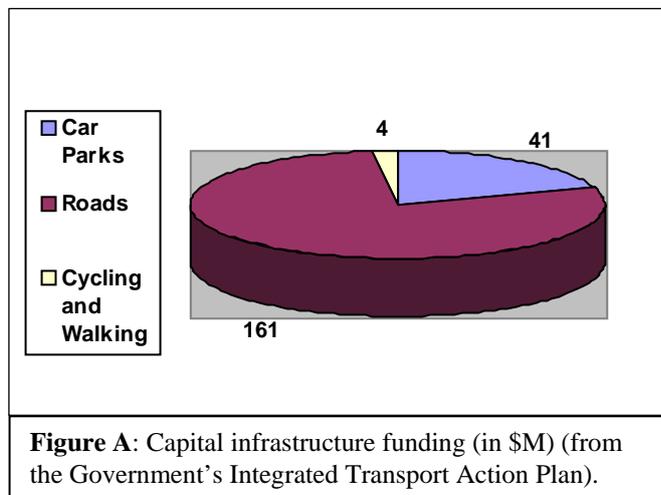
<sup>20</sup> See: Gabe Rousseau, ‘Handy Lessons From Overseas on Walking and Bicycling’, *Public Roads*, 2010, 73(4).

Copenhagen, for example, was congested with car traffic throughout the 1960s, and bicycle lanes were virtually eliminated.<sup>21</sup> Today, Copenhagen is widely known as one of the world's best cycling cities, with approximately 32% of all trips taken by bicycle, and more cycle traffic than motor traffic.<sup>22</sup> Incredibly, Copenhagen also has the third-largest urban sprawl in Europe<sup>23</sup>, yet it still managed to create a sustainable transport system, demonstrating that with political drive, transport trends can be shifted substantially and quickly.

In any case, the fact that there is currently a low rate of trips in Canberra made by walking, cycling or public transport cannot be solely attributed to our 'geography' or the 'Y-plan'. It is estimated that around 35-40% of car trips made in Canberra are less than five kilometres, and around 10% of car trips are for less than one kilometre.<sup>24</sup> The potential for much more walking and cycling already exists.

Active transport must be prioritised and this priority should be formally recognised through policies, promotion, and a 'transport hierarchy', which will guide implementation of all future funding, planning and infrastructure, and transport policies.

York, England, offers one example of how this can be achieved. In 1990, recognising the negative effects of its car-dominated transport patterns, York Council introduced a hierarchy to guide the implementation of its transport policy. Walkers, cyclists, and public transport passengers were prioritised in this hierarchy. The motor car was prioritised last. York Council implemented the policy with specific initiatives, such as pedestrian only zones, a city cycle network, traffic calming schemes, and 20 mile/hour zones.



By 2001, walking and cycling journeys to work in York were over 29%.<sup>25</sup> The ACT should adopt a similar hierarchy of users.

Re-prioritising transport policies to favour active transport will also mean reprioritising funding. Currently, the Government provides funding for roads and cars at a hugely disproportionate rate to the amount given to cycling and

By 2001, walking and cycling journeys to work in York were over 29%.<sup>25</sup> The ACT should adopt a similar hierarchy of users.

<sup>21</sup> Copenhagen Technical and Environmental Administration, *City of Cyclists – Copenhagen Bicycle Life*, 2008, <[http://kk.sites.itera.dk/apps/kk\\_publicationer/pdf/681\\_GektAxfnoq.pdf](http://kk.sites.itera.dk/apps/kk_publicationer/pdf/681_GektAxfnoq.pdf)>.

<sup>22</sup> Recently, Copenhagen has had an increase in cycle traffic of 41% over 8 years. Copenhagen Technical and Environmental Administration, *Copenhagen City of Cyclists - Bicycle Account*, 2004.

<sup>23</sup> European Environment Agency, *Urban sprawl in Europe: The ignored challenge*, 2006. <[http://www.eea.europa.eu/publications/eea\\_report\\_2006\\_10/eea\\_report\\_10\\_2006.pdf](http://www.eea.europa.eu/publications/eea_report_2006_10/eea_report_10_2006.pdf)>.

<sup>24</sup> Pedal Power Inc, *Making Canberra into Australia's Best Cycling and Walking City*, 2008, <<http://www.pedalpower.org.au/events/docs/election%20part%201.pdf>>.

<sup>25</sup> James White, *York: Towards a Sustainable City*, 1996, <<http://www.etcproceedings.org/paper/york-towards-a-sustainable-city>>.

walking (see **Figure A**).<sup>26</sup> We should work towards reversing this. As an example, the latest Danish traffic plan uses a ‘two thirds green, one third black’ mantra, meaning two thirds of the transport budget goes towards ‘green transport’ (bikes, public transport, walking), with the remaining one third for asphalt and roads.<sup>27</sup> Engaging in projects that accurately benchmark the ‘walkability’ and ‘cyclability’ of Canberra (discussed below) will allow wise allocation of this funding.

Studies of cities with the highest active transport rates show that political choices – that is, policies that prioritise active transport – are a key factor in their success.<sup>28</sup> It is critical to realise that a successful modal shift in transport *can* occur in the ACT, as has been demonstrated by other cities around the world, but it will take the right attitudes, policies, and funding from Government decision makers.

**Recommendation 1.2: Prioritise pedestrians, cyclists and public transport in planning, traffic, and urban design policies and support this with appropriate funding.**

## **2. Plan for active transport**

Excellent work has already been done by the Heart Foundation, the Planning Institute of Australia, and the Australian Local Government Association to create the Healthy Spaces and Places initiative ([www.healthyplaces.org.au](http://www.healthyplaces.org.au)). This is a national guide that sets out design principles that provide a foundation for planning communities for active living, based around a quadruple bottom line sustainability measure (economic, social, environmental and cultural sustainability).

We recommend that the ACT Government formalise these planning principles so that they are prioritised in new developments and as part of progressive upgrades for existing areas. Some further detail on planning measures is below.

**Recommendation 2.1: Formalise the Healthy Spaces and Places planning principles so they are prioritised in new developments and in upgrades for existing areas.**

### **Plan for active transport first**

Suburbs need to be designed with active transport in mind, rather than it being overlaid as an afterthought. At present when a new suburb is designed, the arterial roads are first set in the plans, then the rest of the suburb (housing, smaller streets, commercial and community areas, playgrounds, etc.). Footpaths and bike paths are squeezed in afterwards. As an example, the Government’s attitude in planning the Well Station Drive extension to Horse Park Drive in

<sup>26</sup> As an example, the ACT Government’s Integrated Transport Action Plan (August 2008) sets out \$161 million for road infrastructure projects over five years and another \$41 million for car parks. By contrast, it provides \$4 million for cycling and walking. See:

[http://www.tams.act.gov.au/\\_data/assets/pdf\\_file/0019/117145/Integrated\\_Transport\\_Framework.pdf](http://www.tams.act.gov.au/_data/assets/pdf_file/0019/117145/Integrated_Transport_Framework.pdf).

<sup>27</sup> Erica Schlaikjer, ‘Denmark’s “Two-Thirds Green, One-Third Black” Traffic Investment Plan’, *The City Fix*, 2 February 2009, <http://thecityfix.com/denmarks-two-thirds-green-one-third-black-traffic-investment-plan/>.

<sup>28</sup> See: Fiets Beraad, *Bicycle policies of the European principals: continuous and integral*, p. 114, [http://www.fietsberaad.nl/library/repository/bestanden/Fietsberaad\\_publicatie7\\_Engels.pdf](http://www.fietsberaad.nl/library/repository/bestanden/Fietsberaad_publicatie7_Engels.pdf).

Gungahlin was that it first had to build the arterial road before it could commit to building any cycle paths in the vicinity. The *Territory Plan* has only minimal requirements for footpaths and bike paths.

New developments provide unique opportunities to create well planned walking and cycling networks that will make active transport popular, such as directness, safety, proximity to public transport, etc. The new suburban development of Molonglo is an upcoming opportunity for the ACT to ensure that this infrastructure is prioritised from the outset.<sup>30</sup> Cities like Houten (see case study) show the excellent results that can be achieved with this type of planning.

**Case study: Houten, Netherlands**<sup>29</sup>

The city of Houten was the Netherlands' 'Bicycle Town' of the year in 2008. It ranks bikes as the most important means of transport, because it wants to become a residential area that is 'safe, quiet and environmentally friendly'. Its planning system focuses on providing the most direct routes to town centres by bike path and 'bicycle street', which have priority over cars.

When Houten Council undertook major extensions to the town, it first planned a network of segregated, off-road cycling tracks. Only then was a network of slow access roads for cars designed around it. The city has also located its principal facilities – schools etc. – along bicycle routes.

Today in Houten, 42% of trips less than 7.5 km are made by bike and around 21% are made by foot.

**Recommendation 2.2: Plan suburbs by laying out active transport infrastructure prior to, or simultaneously with, road design.**

## **b) Benchmarking**

In order to prioritise 'walkability' and 'cyclability' in its planning, the ACT Government needs to engage in processes that can critique and benchmark these qualities. Canberra is lacking in this area, and still concentrates on cars and roads. The ACT Government should, for example, sign on to the *International Charter of Walking* and begin to engage with the work being done through this Charter to benchmark the walkability of world cities. The principles laid out in this Charter should also be formalised into the Government's urban planning policies. These include:

- ☺ Putting pedestrians at the heart of urban planning and giving slow transport modes such as walking and cycling priority over fast modes.
- ☺ Reducing the conditions for car-dependent lifestyles (for example, reducing urban sprawl) and re-allocating road space to pedestrians.

<sup>29</sup> For more information see: 'Bikers' Paradise: Houten', in *Bike Europe*, June 2002,

<<http://www.houten.nl/over-gemeente-houten/projecten/houten-demarreert/internationaal/>>.

<sup>30</sup> ACT Greens, *Excellence in sustainable design in the Molonglo Valley development*, February 2010,

<[http://act.greens.org.au/wp-content/uploads/2010/02/Molonglo\\_Valley\\_Development.pdf](http://act.greens.org.au/wp-content/uploads/2010/02/Molonglo_Valley_Development.pdf)>.

- ☺ Ensuring that pedestrian networks link people’s homes, shops, schools, parks, public transport interchanges, green spaces and other important destinations.

These are keys to walkability and cyclability that are being picked up by other cities around the world, but still being overlooked by the ACT.

The Greens would also like to see the ACT lead a nationally consistent programme for benchmarking the walkability and cyclability of towns and cities in Australia. This type of initiative would create competition and help change funding decisions in favour of active transport.

As there is no national integrated walking-cycling-public transport strategy, the Greens also want to see the ACT Government push for an over-arching approach to active transport, which is supported by Federal funding. It was only due to the Federal Greens that \$40m for cycle paths was included in the Government’s infrastructure stimulus package.

Active transport planning requires data. The Chief Minister’s Department must ensure that its traffic simulation modelling – being used by all government agencies and private sector developers – includes cycle and pedestrian counts, instead of just cars.

**Recommendation 2.3: Engage in processes that critique and benchmark walkability and cyclability.**

**Recommendation 2.4: Include cycle and pedestrian counts in traffic simulation models.**

**Recommendation 2.5: Lead a nationally consistent approach to benchmarking the walkability and cyclability of Australian cities.**

**Recommendation 2.6: Push for an over-arching Federal approach to active transport, supported with Federal funding.**

### **c) Integrate public transport with cycling and walking networks**

As Canberra is a relatively spread out city, public transport is a key component to reducing private car use and increasing active transport. A significant number of public transport users will make part of their trip by walking or cycling. Planning for active transport therefore needs to consider the facilities that public transport passengers will use to get to and from public transport stops. Likewise, if there are good facilities that encourage people to walk or ride to their local bus stop or interchange, then people will ‘actively’ travel to their public transport route, displacing car trips.

Canberra’s overall access and movement strategy should be built around active transport, and this will necessarily involve integration of public transport stops with walking and cycling networks. These networks should be supplemented with safe crossing points to improve accessibility. Routes to and from public transport stops should be planned to have

passive surveillance from nearby developments – including more active frontages in commercial areas - to increase safety.

The stops themselves should provide shelter, seating, signage, information, lighting and bike parking facilities (which can be as simple as providing a space to lock your bike while you catch the bus). Public transport interchanges should include active transport facilities, such as sufficient bicycle storage areas, to allow people to cycle and connect with public transport.

Although a number of Canberra buses provide bike racks, there are still many that don't. In addition, the routes that are supposed to have buses with bike racks are still unreliable. Pedal Power's counts of buses in 2008, for example, found that almost 1 in 10 buses did not have a rack when they were supposed to. Extending the bike rack service to all Canberra buses is an important way to ensure people can cycle to catch buses.

**Recommendation 2.7: Ensure that pedestrian, cycling and public transport networks are highly connected.**

**Recommendation 2.8: Provide active transport facilities at public transport stops and interchanges, and on buses.**

#### **d) 'Transport Oriented Development'**

Active transport can be greatly encouraged by planning for 'transport oriented development'. Transport oriented development is a key planning principle gaining prominence in Australia and around the world. It involves clustering a mixture of land uses ('mixed use development') around a public transport node, such as a train station or bus or tram stop. The area around the node becomes an urban centre, with shops, workplaces, community facilities, and pleasant public spaces, while nearby housing provides passive surveillance, increasing personal safety.<sup>31</sup> Its opposite is the large, isolated shopping centre, with long walls and no active frontages, which can't be reached easily by walking, cycling or public transport.

This co-location of key destinations allows people to more easily walk, ride, or take public transport to popular destinations, and also to undertake a number of activities in the one trip. On the other hand, low density development creates a barrier to active transport, increasing average journey distances and fostering a culture of car dependence.<sup>32</sup>

To assist development to grow near transport corridors, the ACT's transport corridors should be embedded in the *Territory Plan* (in combination with the NCA and the National Capital Plan) so that they are recognised from the very beginning of the planning process. Zoning and land use regulations should be tuned to ensure that more Canberra development is 'mixed use' and has active frontages.

<sup>31</sup> Description from 'Urban Ecology', <<http://www.urbanecology.org.au/topics/transitorienteddevelopment.html>>, 19 February 2010.

<sup>32</sup> See: World Health Organization 2006, *Promoting physical activity for health: A framework for action in the WHO European Region*, <[http://www.euro.who.int/Document/NUT/Instanbul\\_conf\\_edoc10.pdf](http://www.euro.who.int/Document/NUT/Instanbul_conf_edoc10.pdf)>.

Longer term, the ACT Government also must review how it can limit new greenfield developments to accommodate population growth in existing space. Greenfield developments increase the distances that people need to travel, making it more difficult to use active transport. A recent study from Melbourne City Council showed that Melbourne could house an additional 2 million people along its transit corridors, leaving 94% of its urban space unaffected, and also resulting in considerable economic savings.<sup>33</sup> Canberra needs to take the same approach. The Canberra Spatial Plan should embed a stricter urban boundary, beyond which development may not occur: this means constricting the existing urban growth containment line.<sup>34</sup>

**Recommendation 2.9: Build ‘transport oriented development’, embed transport corridors in the Territory Plan, and limit Canberra’s urban boundary.**

**e) Improve safety**

Strategies such as planning active transport from the start, and transport oriented development, alleviate many barriers to active transport resulting from poor planning, such as inconvenient, unsafe routes. However, the Government should also review existing infrastructure to make improvements. Personal safety concerns are a barrier to active transport, particularly for women and children.<sup>35</sup> When people don’t feel safe using a transport mode, they won’t use it. One simple step the Government can take is to review the use of night lighting on walking and cycling paths (such as by using solar lights that recharge in the day) as well as security around bus interchanges and bus stops. In combination with other measures discussed in this paper, such as separated cycling paths, measures to slow motor traffic, and passive surveillance, this can alleviate the actual and perceived safety risks of active transport and boost its popularity.

**Recommendation 2.10: Review use of lighting on walking and cycling paths, and public transport stops.**



**Fig B:** King George Square end of trip facilities in Brisbane.

**f) More innovative developments and end of trip facilities**

The Government should support (whether through Government projects, joint ventures, or relaxed planning laws) developments that encourage and support sustainable transport. An excellent example of such a development is the ‘bike city’ in Vienna, Austria – a 99 unit bike-friendly housing development which includes a bike rental and maintenance area, secure bicycle parking, a car

<sup>33</sup> City of Melbourne Council, *Transforming Australian Cities For a More Financially Viable and Sustainable Future*, 2009, <[http://www.bedp.asn.au/papers/docs/Transforming\\_Australian\\_Cities\\_Report\\_July\\_09.PDF](http://www.bedp.asn.au/papers/docs/Transforming_Australian_Cities_Report_July_09.PDF)>.

<sup>34</sup> See: ACT Government, *The Canberra Spatial Plan – Strategic Direction* <<http://apps.actpla.act.gov.au/spatialplan/maps/map1.htm>>

<sup>35</sup> Dr Jan Garrard, Natalie Hakman, *Healthy Revolutions: Promoting Cycling For Women*, p. 10 (prepared for the Department for Victorian Communities), <<http://www.bv.com.au/file/JanPaperVelo-city%202005.pdf>>. See also: Cycling Promotion Fund, *Cycling – Getting Australia Moving*, 2008, <<http://www.cyclingpromotion.com.au/>>.

sharing system, and other facilities. The development was only possible due to the willingness of local authorities to waive standard car parking provision requirements.

Other private developers in Vienna are now producing other car-minimised development plans.<sup>36</sup> In some cases, developers will also be willing to assist the Government to pay for extra cycling and walking facilities around the proposed developments.<sup>37</sup> The ACT planning authorities should be strongly supportive of these kinds of developments, and planning laws should be tailored to encourage them.

Governments also need to take action to make life easier for active transport users when they arrive at their destination. The lack of secure and convenient end-of-trip facilities (such as lockers, changerooms, etc) is a major deterrent to commuters using active transport. King George Square Cycle Centre in inner city Brisbane provides an excellent example (see **Fig B**). This facility is centrally located and is designed to support people who want to ride to work but have inadequate workplace facilities. Membership of the facility provides daily access to secure bike parking, towels, locker rooms, showers, a laundry service and a full bicycle workshop. The project was constructed with combined funding by Brisbane City Council and Queensland Transport. A similar project could be funded by the ACT Government. This kind of facility could be one of a suite of initiatives to compensate for reducing or steadying the number of car parking spaces in Civic (discussed below).

**Recommendation 2.11: Encourage and build innovative types of urban developments, such as ‘cycle-friendly’ developments, and increase end-of-trip facilities.**

## **g) More training and promotion**

There is a danger that urban planning will continue to fail to meet the needs of public transport users, walkers and cyclists if urban planners do not know how to do things differently.

The ACT needs its Government agencies to understand, and to advocate, the cutting edge in active transport planning. Many active transport principles are not accepted in Australian Governments in the same way they are in, for example, Europe. To support the shift towards prioritising active transport in planning, the Government should support training courses for its planning staff, as well as engineers, to increase awareness and understanding of active transport and the needs of walkers and people cycling.

Such an attitude shift will help Canberra achieve the big changes it needs to change its transport patterns. It will also have smaller day to day impacts. TAMS, for example, should give more priority to fixing the little issues that can have a big impact on active transport, but often go unnoticed. These include issues such as changes in grade heights on paths or at intersections and missing connections (for example the bike path built to the Canberra

<sup>36</sup> See Sustainable Cities, *Case study: Vienna: ‘Bike-City’ housing project stimulates soft mobility*, <<http://sustainablecities.dk/en/city-projects/cases/vienna-bike-city-housing-project-stimulates-soft-mobility>>.

<sup>37</sup> This has happened at a proposed cycle development Bristol, UK, for example. The Bristol development also demonstrates that housing can be integrated with other initiatives that take advantage of the growing interest in cycling. It includes ‘a positive landmark building ... called the Cycle Dock, [which] will have a cafe and bike shop on the two lower levels, with a budget hotel on the upper floors’, reported on *Bikeradar.com* at <<http://www.bikeradar.com/news/article/cycle-friendly-homes-for-bristol-bath-railpath-20475>>.

Airport deposits riders at Fairburn Avenue, but it is then very difficult to cross the traffic to reach the final destination. This is in fact a problem for which the Canberra Airport could fund a solution).

In addition to training staff and engineers, the Greens believe that the Government should promote community education and awareness about the value of active transport. Even with the existing infrastructure many more Canberrans could use active transport. Promotion programs can help dispel myths about safety and encourage more walking and riding. They can also remind people that active transport is a convenient, low cost, and fun way of getting the 30 minutes exercise a day we are told we need. Other initiatives include the 'walking school bus', cycleway and walking maps, or celebrity endorsement.

**Recommendation 2.12: Coordinate training courses for staff in urban planning roles, as well as engineers, on active transport and the needs of active transport users.**

**Recommendation 2.13: Promote the benefits of active transport choices to Canberrans.**

### ***3. Use travel demand management to encourage alternative transport***

#### **a) Travel Demand Management**

The ACT Government's Sustainable Transport Plan says that it will not take measures to restrict cars which, it says, 'provide the community with significant benefits'. Instead it wants to make 'the other transport modes more attractive and competitive with the car.'<sup>38</sup>

This approach overlooks the reality that we cannot continually make Canberra more and more attractive for cars. In fact, a common factor of international cities which excel in cycling and walking numbers, is that they use some restrictions on car traffic – particularly near the city centres.<sup>39</sup> This can mean restricting car flow; for example, cars are not allowed to enter the core of the city. Or it might entail restricting parking or increasing parking fees (generating revenue that is then used to improve sustainable transport options). These techniques are called 'travel demand management'.

Copenhagen is a showcase of well balanced traffic management. Over the past 40 years, the city converted 18 major car parking areas into people-friendly spaces. The need for inner city car parking has dwindled as the numbers of people using public transport, riding bikes and walking has increased. Another example is London, which in 2003 started charging single occupant vehicles a fee to enter its CBD. Since then, vehicle traffic speeds have improved, bus patronage has increased, accidents and air pollution have declined and millions of dollars of revenue has been raised and invested in improved transit service.

<sup>38</sup> ACT Government, *The Sustainable Transport Plan for the ACT* (2004), p. 29.

<sup>39</sup> See: Fiets Beraad, *Bicycle policies of the European principals: continuous and integral*, p. 117, <[http://www.fietsberaad.nl/library/repository/bestanden/Fietsberaad\\_publicatie7\\_Engels.pdf](http://www.fietsberaad.nl/library/repository/bestanden/Fietsberaad_publicatie7_Engels.pdf)>.

Travel demand management should work as a complement to integrated policies that ensure people have access to quality active transport (including public transport) routes. Travel demand management strategies should also recognise the special needs of people with disability, or other disadvantaged groups. When working properly, they should in fact make transport for these groups easier (by, for example, allowing disabled parking spaces, but restricting other parking spaces).

## Reducing car access

Restricting motor traffic can seem counter intuitive to city planners. Usually in ‘car-focused’ cities, all the space between sidewalks becomes ‘traffic space’ that prioritises the movement of motor vehicles. This segregates pedestrians and limits the available public community space to the footpath area. Yet there are many problems with this standard approach:

- ☹ It is unaccommodating and sometimes dangerous for people using other modes of travel, such as walking, cycling, skateboarding, scooters, wheelchairs, etc.
- ☹ It minimises ‘public space’ and the opportunities to use streets for multiple purposes.
- ☹ It encourages ‘drive-through shopping’, which has a negative impact on busy retail streets through noise, pollution and short stay times.
- ☹ Streets are cluttered with signs, traffic lights, barriers, etc.

When governments start to put walkers, cyclists and public transport ahead of motor vehicles, they realise there are great benefits. The Danish architect Jan Gehl captures this idea with his ‘five birds, one stone’ concept. He has shown that city centres become more livelier, safer, more attractive, more sustainable and healthier (the five birds) if governments *restrict cars in core areas* (the one stone) using a variety of methods, including removing lanes, widening sidewalks, and using traffic signals to impede, rather than expedite, vehicular movement.<sup>40</sup>

The city of Toronto, Canada, for example, recently took a major step in this direction by proposing the removal of an entire traffic lane on a main street in order to prioritise bikes and reduce cars. Toronto Council’s policy is now to prioritise pedestrians, cyclists and public transit ahead of motor vehicles as part of its integrated transportation plan. The ACT Government needs to do the same. As discussed in **section 6(g)**, the Government could consider redesigning Northbourne Avenue in a similar way.

**Recommendation 3.1: Use ‘travel demand management’ techniques, which may include restricting space and access for motor traffic.**

## Pedestrian priority zones or ‘shared spaces’

The Greens want the Government to move beyond its focus on strictly controlled traffic environments and motorised transport. We support the traffic engineering concept of ‘pedestrian priority zones’, which are also sometimes called ‘shared spaces’.

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<sup>40</sup> Discussed by Jan Gehl at the 2009 Walter Burley Griffin Memorial Lecture, Canberra, 30 November 2009.

These are general terms that can refer to a range of design options, but usually they will involve removing traditional traffic signals and traffic segregation, and creating a safe, slow-moving environment shared by all road users.

In shared or pedestrian priority spaces, the streets are often paved, cafes may extend to the edge of the street, footpaths are denoted by texture and colour instead of gutters, and other features such as street furniture or artworks create an ambience of shared space. The result is an environment where drivers do not have priority. It is a space shared by all users of the street, including cars, people cycling and pedestrians.



**Fig C:** Shared space in Drachten, The Netherlands

A key principle to these spaces is that traffic behaviour is more positively influenced by the built environment than by rules and controls. Signs and other indications of legislative control are therefore minimised. In the resulting space, users of the street proceed with caution and flexibility. The system has been called ‘safety through intrigue and uncertainty’.<sup>41</sup>

This key factor is missing from the ‘shared space’ nearby the National Library at Lake Burley Griffin. The area has a number of signs, rules and bollards designed to channel different road users into different areas. Retaining these rules tend to make a shared space dysfunctional.

Functional shared space tends to be busy, which increases safety. They result in lower vehicle speeds. Shared spaces are also good for business. They attract more people, who stay for longer, instead of encouraging the ‘drive-by shopping’ that dominate areas designed for cars.

Shared spaces have been successful in Europe and North America. In Australia, Bendigo has integrated shared spaces into its CBD, and achieved good results (including reduced vehicles and reduced vehicle speeds).<sup>42</sup> Following the success of its first shared space, Bendigo is now starting to construct a second shared space at the busiest roundabout in the Town Centre. Shared space has recently been established in Barrack Street in Sydney, and Mayor Clover Moore is also planning to make other nearby streets into shared spaces.<sup>43</sup>

The Greens want shared space concepts to be used to redesign appropriate city spaces in Canberra to give priority to pedestrians, people cycling and other vulnerable road users, making them safer, more vibrant, and less populated by motor vehicles. This will require careful, tailored design to suit each different space. Shared spaces work best where there are active street frontages, a relatively high number of pedestrians, and the opportunity for alternative traffic routes. Bunda Street in Civic and Hibberson Street in Gungahlin – which

<sup>41</sup> David Enwicht, *Mental Speed Bumps, the smarter way to tame traffic*.

<sup>42</sup> Information supplied by Benigo City Council, 18 February 2010.

<sup>43</sup> Vikki Campion, ‘Clover Moore moves to ban cars from heart of Sydney CBD’, [www.news.com.au](http://www.news.com.au), 3 July 2009.

suffer from problems associated with the traditional traffic environment – may be appropriate areas for shared space.

**Recommendation 3.2: Convert appropriate areas in town centres into ‘pedestrian priority’ or ‘shared’ spaces.**

## Better manage car parking

Car parking is an area that needs proactive work from the ACT Government. While it has recognised the need for action, it has failed to take this action.<sup>44</sup>

ACT parking policies are still characterised by an attitude of ‘demand satisfaction’. This is a typical approach that aims to supply adequate, convenient and reasonably priced car parking to meet demand. This approach remains embedded in the *ACT Parking and Vehicular Access Guidelines* under the Territory Plan. Most recently, the Government’s Action Plan on the Greater Canberra City Area considered how to meet demand for parking in central Canberra, and proposed 3,300 new public car parking spaces by 2016.<sup>45</sup> In contrast to this approach, other cities around the world are proactively addressing car usage through car parking policies. Vancouver, Canada, for example, has a policy to keep its parking supply at the same level it is at today in 25 years’ time.<sup>46</sup>

It is increasingly recognised that this ‘demand satisfaction’ approach imposes a huge social cost. Providing parking for cars is costly. It takes up valuable land in key areas. It tends to increase urban sprawl. It creates barriers for people walking and cycling. Abundant parking space results in more vehicle ownership, more driving, more pollution, and reduced city amenity.

The ACT needs to take a strong ‘demand management’ approach to parking, which discourages people away from driving and parking, and toward sustainable transport. It will mean stabilising or reducing car parking space.

Developers, residents and business owners may initially view the removal of parking spaces as detrimental. In fact, a well balanced parking strategy that favours active and sustainable transport can benefit all of these groups, by increasing property values, improving economic opportunities for businesses, and improving traffic and transport options.

One change the Government should make is to remove mandatory minimum limits for the provision of parking space. Regulations currently dictate the minimum amount of off-street parking spaces that any land use must provide. The ACT’s *Parking and Vehicular Access Guidelines* for example, require two-bedroom units in the ACT to have three car park spaces for every two units. This off-street parking is typically free. Canberra’s parking requirements

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<sup>44</sup> The ACT Government’s draft parking strategy, released over three years ago, acknowledged a number of ways that parking management could increase sustainability in the city. The Canberra Spatial Plan also includes a goal of ‘managing and pricing parking to encourage greater use of transit, cycling and walking... and to encourage more efficient use of motor vehicles’. The Sustainable Transport Plan also says the Government will revise guidelines for parking requirements and review parking pricing. Unfortunately, the Government has not taken these opportunities.

<sup>45</sup> ACT Government, *Greater Canberra City Area Coordinated Action Plan 2010-2016*, 2010, p. 11.

<sup>46</sup> Transport Canada, Reducing or eliminating parking in support of TDM initiatives, <<http://www.tc.gc.ca/programs/environment/utsp/casestudy/cs76eparkingtdm.htm>>.

are generous to car users. Vancouver, for example, recently reduced the maximum permissible number of parking spaces at apartment buildings and condominiums from 1.7 per unit to 0.7.<sup>47</sup>

These minimum parking requirements are costly. They distort the real costs of transport. The cost of building parking space tends to be bundled into the cost of the goods or services provided at the building or – in the case of housing – into the costs of renting or owning the building.<sup>48</sup> This is bad for housing affordability, and also disproportionately impacts on low income earners (who also own fewer cars and so don't need as much off-street parking).<sup>49</sup> Minimum parking rules skew Canberrans' transport choices away from active transport.

Removing the minimum will allow the market to decide how low parking can go, rather than require unnecessary parking spaces and higher construction costs. This can also result in innovation, such as the 'bike city' developments discussed above. Recent innovative developments that have occurred in inner city Melbourne, for example, would not have been permitted in Canberra.<sup>50</sup> This may also result in more parking in residential streets. This can be managed in many ways. One option is to allow residents to park for free, but to charge other people to park. The proceeds can be used to improve the neighbourhood that generates them (e.g. improving sidewalks) or can be used to develop other sustainable transport

options. On-street parking also often slows down residential traffic in the area by narrowing the road reserve, which also lowers noise pollution and can benefit other active transport options.

Developers should also be encouraged to provide dedicated car *sharing* parking spaces. Car sharing allows residents to hire a car (which resides in a dedicated space) for short periods, giving people a convenient alternative to car ownership. The ACT Government should also facilitate car sharing by providing convenient car sharing spaces around the city – as Sydney City does.

In situations where minimum car parking space requirements remain, developers should be allowed to contribute to a 'sustainable transport contributions fund', instead of having to meet normal requirements for providing parking space.

#### **Case study: Calgary, Canada**

**The city of Calgary introduced a strict 'parking contribution fund' to its city centre in the 1970s. Under this regulation, developers are required to supply up to 20% of usual car parking space on the site of any new office developments. The cost of the remaining 80% of parking (that is, costs that developers would have spent to meet full parking requirements) are put into a cash-in-lieu fund.**

**Calgary has used the fund to construct 'interceptor' parking lots around the city limits. These allow people to park away from the city, and then take public transit or walk the remaining distance.**

**Calgary's parking policy provides space for about half of the workers in the city. This encourages alternative transport. Currently about 46% of travel into the city is made by transit. The city hopes to increase this to 60% by 2030.**

<sup>47</sup> Transport Canada, *Reducing or eliminating parking in support of TDM initiatives*,

<<http://www.tc.gc.ca/eng/programs/environment-utsp-casestudy-cs76eparkingtdm-891.htm>>.

<sup>48</sup> See Donald Shoup, 'The Trouble with Minimum Parking Requirements,' *Transportation Research Part A*, Vol. 33A, 1999, p. 556. See also: Christian Seibert, 'There's No Such Thing as a Free Parking Space', *Policy* 2008, Vol. 24, No. 2, p. 7.

<sup>49</sup> ABS statistics show that only 32.6% of households in areas of high disadvantage own more than one registered motor vehicle.

<sup>50</sup> For example, 'Society' in South Yarra is a 'vertical village' with 242 1-bedroom and 2-bedroom apartments and only 169 car spaces, <<http://www.societysouthyarra.com.au/>>.

The money from the fund can then be used for a range of active transport-related initiatives/infrastructure. Although the *Parking and Vehicular Access Guidelines* refer to the possibility of using a sustainable transport contributions fund, the Government has still not utilised the scheme.

**Recommendation 3.3: Revise the *ACT Parking and Vehicular Access Guidelines* to replace the ‘demand satisfaction’ approach to car parking, with a ‘demand management’ approach.**

**Recommendation 3.4: Introduce a formalised ‘sustainable transport contributions fund’, which will allow or require developers to limit parking spaces in new developments.**

**Recommendation 3.5: Remove the mandatory minimum car parking requirements for new developments, but encourage space for ‘car sharing’.**

## **b) Recognise ‘induced traffic’**

A key to effective travel demand management is the recognition that increasing road capacity creates a new demand for car travel. Increased road capacity increases travel speed, which triggers changes in travel behaviour, including<sup>51</sup>:

- ⊖ commuters now being willing to drive to more distant destinations
- ⊖ commuters now favouring car use over public transport
- ⊖ reduced congestion during peak travel periods, which may encourage people to change their departure time, thereby increasing peak period traffic volumes
- ⊖ people choosing to make more trips, undertake trips where they had previously not travelled at all, or driving their own car instead of being a passenger.

This concept is called ‘induced traffic’. Failing to acknowledge induced traffic causes governments to overestimate the benefits of new road projects and to underestimate the project’s greenhouse gas emissions, and further impacts on other traffic infrastructure.

The Majura Parkway project, proposed for North Canberra, is a case in point. The Environmental Impact Statement for this project concludes that the operation of the Majura Parkway ‘will not in itself result in a net increase in greenhouse gas emissions as it is unlikely that commuters will purchase vehicles specifically to travel on the Majura Parkway’.<sup>52</sup> Similarly, the Government’s website on the project claims the Parkway will reduce greenhouse gases.

This is the same flaw that has been present in assessments of other major road projects in Australia. Recently, a panel appointed by the Victorian Planning Minister to investigate the proposed Frankston Bypass concluded: ‘We do not think that there is any doubt that induced

<sup>51</sup> See discussion in: Frankston Bypass Inquiry Panel, *Frankston Bypass EES Inquiry Report*, 2009, <[http://www.land.vic.gov.au/CA256F310024B628/0/387419EA39D7F775CA2575D600220380/\\$File/Frankston+Bypass+EES+Inquiry+Report.pdf](http://www.land.vic.gov.au/CA256F310024B628/0/387419EA39D7F775CA2575D600220380/$File/Frankston+Bypass+EES+Inquiry+Report.pdf)>.

<sup>52</sup> SMEC, *Majura Parkway Draft EIS Report*, Chapter 10, p. 4.

traffic is a real phenomenon, and agree that a common sense approach suggests it to be the case'. It criticised the Bypass's EIS for failing to properly assess the projected greenhouse gas emissions of the project. It rejected as 'not credible' the proponent's claim that the project would reduce emissions by easing traffic flows.<sup>53</sup>

The Government should always be looking for alternative proposals to major freeways, which would improve transport options *and* produce the strongest environmental results. However, in situations where road projects proceed, the Government must conduct a full assessment of greenhouse gas emissions, taking into account the induced demand. This should be fully declared to the public.

**Recommendation 3.6: Before undertaking any new road projects, conduct a full assessment of greenhouse gas emissions which takes account of 'induced traffic'.**

#### **4. Improve safety for vulnerable road users**

Pedestrians and cyclists are our most vulnerable road users. They are the most sensitive to road injury. Within these two groups is a third category of vulnerable road user: children, aged people and people with disability.

The concept of 'vulnerability' should be entrenched in our planning, policies and laws. It recognises that some road users need special consideration and protection. In Europe, planners and safety organisations use the term 'vulnerable road users' as a way of categorising and describing non-motorised road users.

Vulnerability makes potential users of active transport fearful. In Canberra, for example, while 49% of people own a bicycle, only one in six uses it to commute. 81% of those who don't ride cited dangerous traffic and unsafe roads as the biggest barrier to riding.<sup>54</sup> Unfortunately, research from the Australian National University shows that there is some reason for people's fear. Cyclists are over-represented in statistics of hospital episodes in Canberra. Amalgamated hospital data from 2001-2003 shows that almost one quarter of hospital episodes due to road trauma in Canberra were cyclists.<sup>55</sup>

Pedestrians are also over-represented in road casualty and fatality statistics in the ACT. Pedestrians accounted for 20% of ACT road fatalities in 2005 and 14% in 2007. In 2007, they accounted for 6% of ACT road casualties.<sup>56</sup>

One of the most obvious ways to increase safety is to increase numbers. It is well recognised in cycling and walking towns that a significant increase in cycling and walking corresponds

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<sup>53</sup> Frankston Bypass Inquiry Panel, *Frankston Bypass EES Inquiry Report*, April 2009, <[http://www.land.vic.gov.au/CA256F310024B628/0/387419EA39D7F775CA2575D600220380/\\$File/Frankston+Bypass+EES+Inquiry+Report.pdf](http://www.land.vic.gov.au/CA256F310024B628/0/387419EA39D7F775CA2575D600220380/$File/Frankston+Bypass+EES+Inquiry+Report.pdf)>.

<sup>54</sup> Independent research from insurance company, AAMI. (based on an independent telephone and internet survey of 2,523 Australians, conducted by Sweeney Research across all states and territories). AAMI press release, *Riding a bike still too risky for many*, 4 February 2010, <<http://www.aami.com.au/Resources/File.aspx?id=174>>.

<sup>55</sup> Drew Richardson, *Amalgamation of Police and Hospital Trauma Data in the Australian Capital Territory 2001-2003*, November 2008.

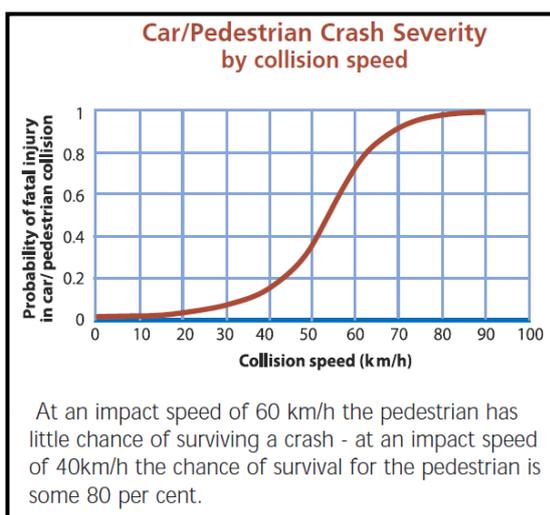
<sup>56</sup> Statistics from Canberra Pedestrian Forum.

with a significant decrease in the number of casualties. In Copenhagen, for example, between the late 1990s and 2006, the number of serious bicycle casualties fell from over 200 a year to less than 100, as the cycling population increased.

Another key to improving safety is improving driver behaviour. Aggressive or unsafe behaviour by motorists is a serious problem in Australia. An international survey of driver attitudes and behaviours found generally higher rates of aggressive driver behaviours in car-reliant countries such as Australia and the US.<sup>57</sup> Improved driver education, as well as initiatives to slow drivers down and make them engage with the environment, are key solutions to these issues.

### a) Introduce 30–40 km/h limits in key areas

The Greens want to see reduced vehicle speed limits in areas where the different types of road users congregate, like shopping centres and community centres. Reduced vehicle speeds in these areas will significantly improve safety, as well as encourage more people to walk and ride in the area. Evidence suggests that in Australia, perceived traffic hazards such as vehicle speeds, are a strong disincentive on walking and cycling for transport.



**Fig D:** Likelihood of fatality vs speed

Low vehicle speeds make a substantial difference in reducing the risk of injury for cyclists and pedestrians. Research by the UK’s Department of Transport, for example, shows that while most unprotected road users survive if hit by a car travelling at 30 km/h, the majority are killed if hit by a car travelling at 50 km/h (Fig D).<sup>58</sup>

In 2009, the ACT Government undertook consultation about the possibility of reducing speed limits around shopping and community centres to 40 km/h. The consultation was done in fulfilment of an item from the Greens’ Parliamentary Agreement with the Labor Party. In February 2010, the Government announced that it would undertake a trial of one or more 40

km/h zones at shopping centres, but it would not proceed with community centres.

These slow zones should be extended to community centres, which include, for example, childcare and aged care facilities. Children, aged people and people with disability are vulnerable road users and their safety was one of the reasons the Greens also specified ‘community facilities’ in the Parliamentary agreement.

International practice and evidence is actually showing that 30 km/h is a safer and more effective speed for areas where cars and vulnerable road users share space. The risk of death for pedestrians struck by cars increases radically as speed increases, so that the risk of death to a pedestrian struck at 30 km/h is about half of the risk when struck at 40 km/h. The Greens

<sup>57</sup> EOS Gallop Europe, *Aggressive behaviour behind the wheel*, 2003.

<sup>58</sup> Victorian Government, *Speed: Keep it Down*, VicRoads Publication Number 01341/1, <[http://www.arrivealive.vic.gov.au/downloads/roadssafe/Speed\\_Keep\\_it\\_down.pdf](http://www.arrivealive.vic.gov.au/downloads/roadssafe/Speed_Keep_it_down.pdf)>.

think this speed should be considered for the ‘slow zones’ around Canberra. This is the speed that is being implemented in many parts of Europe with successful results.

Just like many European cities, Canberra already has relatively fast travel between town centres via arterial roads, and can afford to slow traffic in shopping and community areas. In any case, reducing speeds in targeted zones would not have a significant impact on average travel times for motor vehicles, and there would be little difference in travel time between 30 or 40 km/h limits.<sup>59</sup>

**Case study: Kingston-upon-Hull, UK<sup>60</sup>**

The UK city of Kingston-upon-Hull has a similar population to Canberra. It began the widespread introduction of 30 km/h zones (20 mph) in 1994. 30 km/h zones now cover around 25% of roads across the city.

An uncontrolled before and after study found remarkable declines in casualties. Overall, Hull’s road casualties decreased 14% from 1994 to 2001. Comparatively, road traffic casualties increased 1.5% over the same time period in the nearby shires.

In the 30 km/h zones, total collisions decreased 56%, the numbers fatally or seriously injured decreased 90%, pedestrian casualties decreased 54%, child casualties decreased 64% and child pedestrian casualties decreased 74%.

**Recommendation 4.1: Introduce 30 or 40 km/h zones around shopping centres and community centres.**

## b) Improve safety around schools

One particular area needing attention is schools, and school routes. The number of children walking and cycling to school has rapidly declined since the 1980s<sup>61</sup> and traffic and safety have been identified as two of the major reasons for this decline.<sup>62</sup> The ACT Government can improve this with a concerted effort around school zones to improve safety, and traffic problems.

This should not be seen as a substitute for broader child-friendly planning, which creates safe environments for all journeys, not just to and from school. However, focusing on school trips can make an important difference, as school trips are an important component of car

<sup>59</sup> Katherine McCray, David McTiernan, *Investigation to Reduce Speed Limits Around Shopping Centres and Community Facilities: A background report for public consultation*, 2009, <[http://www.tams.act.gov.au/\\_data/assets/pdf\\_file/0007/172384/20091120\\_Roads\\_ACT\\_40\\_km\\_HPAZ\\_Report\\_Part\\_A.pdf](http://www.tams.act.gov.au/_data/assets/pdf_file/0007/172384/20091120_Roads_ACT_40_km_HPAZ_Report_Part_A.pdf)>.

<sup>60</sup> Rodney Tolley, *Providing For Pedestrians: Principles and Guidelines for Improving Pedestrian Access to Destinations and Urban Spaces*, 2003, p. 20. See also: COSAIN, *The Case for Walkable Communities*, 15 February 2010, <<http://www.dublincycling.com/node/578>>.

<sup>61</sup> Salmon, J., et al., *Trends in children's physical activity and weight status in high and low socio-economic status areas of Melbourne*, Victoria 1985-2001. Australian and New Zealand Journal of Public Health, 2005, 29(4): pp. 337-342. There has been an 80% reduction in the proportion of children cycling to/from school (at least once a week) and a 50% reduction in the number of children walking to/from school 6-10 times a week.

<sup>62</sup> Zivani, J et al., *Walking To School: Incidental Physical Activity in the Daily Occupations of Australian Children*, Occupational Therapy International, 2004, 11(1), 1-11.

trips, they are an easy place to target, and children can take the confidence they learn on their school trip to other journeys.

The Government should develop safe walking and riding routes for pupils, through a ‘safe routes to school’ project. This project should aim to provide urban design improvements at key places on school routes, to try and increase the number of pupils walking and riding to school and reduce the dependence on cars for school trips. This could extend to day care centres and preschools, to facilitate a safe route for parents and carers cycling with small children in child seats or carriages.

Targeted design improvements might include speed reduction measures and improved footpaths or cycle paths. Ideally these will be developed in consultation with the school community itself, to identify the specific barriers to walking or cycling to school. The Government should not be averse to including children in the planning process: several experiments on children’s participation in urban planning in Finland, Norway, Switzerland and Italy have demonstrated that children are excellent analysts of their local environment and creative producers of solutions.



**Fig E:** Footpaths connecting schools

One specific example of where a small upgrade could make a big difference is the refuge island at Antill Street, Dickson. The refuge island is currently very small, making it hard for the ‘walking school bus’ to help large numbers of children to walk to school. The walking school bus is an excellent cooperative community safety initiative where adult volunteers walk along a set route to school, ‘picking up’ children along the way, to encourage groups of children to walk together (see **FigF**).



**Fig F:** Walking school bus

Another advantage of ‘safe routes to school’ measures is that they reduce the number of cars near the school at peak hours. Nevertheless, in areas such as school zones, it may still be necessary to install visual clues such as flashing lights, to assist drivers to slow down and acknowledge they are entering a slow zone. A cheaper alternative is ‘dragon’s teeth’ (triangular line markings painted on roads before the beginning of the zone). These can also be useful at 30–40 km/h zones around shopping centres or community facilities. A more inclusive and interactive way to do this in school areas, is to support children’s urban art projects, which decorate the urban landscape near the school.

**Recommendation 4.2:** Undertake a ‘safe routes to school’ project, and consider installing ‘dragon’s teeth’ or safety lights around schools.

### c) A revised hierarchy of road user liability

There is a public perception that cyclists usually cause accidents between cars and bikes. However, evidence suggests that collisions have far more to do with driving mistakes than

aggressive cycling. Recent research from Canada and the USA on police collision reports found that people cycling are the cause of less than 10% of bike-car accidents.<sup>63</sup> The most frequent causes of accidents were motorists entering intersections without stopping properly; motorists overtaking unsafely; and motorists opening a door onto an oncoming cyclist.

Our current system of civil liability requires the party making a claim to show negligence. In the case of traffic accidents between motor vehicles and cyclists or pedestrians, it is far more likely that the cyclist or pedestrian will be the injured party, as they are the more vulnerable road user. This could put them at an unfair disadvantage especially since, as the injured party, it could be difficult for them to recall how a collision occurred.

One approach used to address this issue in Northern European countries, is to change the liability laws governing road users to a system that places a burden of responsibility with the bigger, 'more dangerous' vehicles. Under this system, for example, a car would be strictly liable in a crash with a cyclist, and a cyclist would be strictly liable in a crash with a pedestrian. The 'more dangerous' vehicle would need to show that they were not negligent. There are different ways to deal with a situation where the more vulnerable party did contribute to the accident. For example, in Denmark, property damage compensation can be reduced, but not injury compensation. In the Netherlands, if the vulnerable party who was at fault was a child, the liability remains with the 'dangerous' vehicle.

The scheme could be introduced in the ACT, following further consultation and consideration. A possible road user hierarchy for the ACT could rank road users as follows:

1. People with disabilities.
2. Pedestrians
3. Human powered transport (including cyclists, skate boards, scooters and rollerblades)
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4. Motorcyclists
5. Passenger cars
6. Commercial vehicles including buses and trucks

The key motivation behind such a change is to improve the conditions for cycling and walking in the ACT, reducing injuries and fatalities, and encouraging more walking and cycling. Embedding this structure of liability in our laws acknowledges that motor vehicle drivers have a special onus of responsibility for more vulnerable road users. It would help shift the mindset of drivers to one of care for, and anticipation of, more vulnerable road users.

A road user liability hierarchy would also provide compensation faster so that victims can recover from their injuries, and it would shift medical costs from the injured party and the public health and welfare system to the insurers of the more dangerous road users (and then back to the premium pool – the costs of which would be internalised and shared between compulsory third party policy holders).

To complement the above changes, anyone wishing to obtain a motor vehicle licence in the ACT should have to receive specific training about vulnerable road users. This should focus

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<sup>63</sup> Beth McIlroy, 'Interview with Professor Chris Cavacuiti', *Smart Cycling: Experience Research* (University of Toronto), 19 August 2009, <[http://www.research.utoronto.ca/behind\\_the\\_headlines/smart-cycling/](http://www.research.utoronto.ca/behind_the_headlines/smart-cycling/)>.

on the need to anticipate the presence, needs and intentions of pedestrians and people cycling, as well as about responsibilities toward vulnerable road users.

These types of measures are also justified by recent data showing that ACT drivers appear to be more critical and less supportive of bike riders than other major Australian cities. ACT drivers also report more accidents with cyclists, and combined with the above statistic, this appears to indicate a higher degree of animosity and division between people driving and people cycling.<sup>64</sup> This also partly explains ACT residents' common complaint that traffic and unsafe roads are barriers to commuting by bike.

**Recommendation 4.3: Consider creating a 'road user hierarchy' favouring vulnerable road users.**

**Recommendation 4.4: Consider requiring training regarding vulnerable road users as a requirement for obtaining a motor vehicle licence.**

#### **d) Consider extending dangerous and careless driving rules to bikes**

The ACT's traffic safety laws focus on motor vehicles and are deficient when it comes to regulating the behaviour of bicycle riders and other users of non-motorised vehicles. Although the risk of a serious injury or fatality as a result of careless or dangerous cycling is low, incidents in Australia have shown that the consequences of collisions between cyclists and pedestrians can be serious.

Under the current ACT law, if an irresponsible rider injures or kills a pedestrian there may not be an appropriate offence with which to charge them. For example, if a bike rider ran a red light and hit and killed a pedestrian, the rider could be charged with running the red light, but there may be insufficient other penalties.

In conjunction with a revised road user liability model, as discussed above, it would be sensible to acknowledge the responsibilities held by bicycle riders by expanding the definition of some inappropriate behaviours to include bike riders. For example, the *Road Transport (Safety and Traffic Management) Act 1999* should cover bicycle riding (and other non-motorised vehicles) in relation to the negligent driving offence (s6) and the furious, reckless or dangerous driving offence (s7).

In relation to enforcement, ACT police should focus on enforcement initiatives that will prevent crashes. This includes targeting dangerous behaviour in traffic, and warning riders to use lights at night. Focusing on the rule requiring cyclists to wear a helmet does not actually prevent the crash itself from occurring (although the helmet may reduce brain damage if a crash occurs).

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<sup>64</sup> In the independent research from insurance company AAMI (cited above), survey responses measuring negatives (hard to see / riding dangerously / a road hazard / not wearing helmet / no lights) were ALL higher in the ACT than nationally.

**Recommendation 4.5: Consider updating the *Road Transport Act* to extend dangerous and careless driving offences to cyclists.**

### **e) Addressing visibility of people riding bikes**

The number of people cycling in Canberra is nearing 100,000. It is important to make sure that these people, as well as the pedestrians and motor traffic that they interact with, remain safe. Collisions often occur because people driving have not been aware of the object they hit, or have seen it too late. This is a serious safety issue in Canberra, where we have a fairly large commuting population riding at dusk and at night. Visibility is also an issue that fuels angst between people cycling and people driving. 82% of drivers surveyed in a recent AAMI cycling study said that they had observed cyclists not using lights at night.

Acknowledging this, the Greens have advocated for the funding of a ‘safe, friendly cyclist project’ in the 2010-2011 Budget. The funding will allow the Government to encourage cyclist visibility by making available free reflective ‘slap bands’ (a magnetic reflective strip for ankles, wrists, etc.), reflective patches for panniers and/or reflective vests. As well as targeting cyclist visibility, the project helps address another issue: cyclist etiquette. The accessories could be printed with a few short principles, or pictures representing these principles, which reflect a ‘code of etiquette for Canberra cyclists’. These could be things like ‘respecting pedestrians’, ‘staying visible’, obeying road rules’ etc. A similar system has been introduced in Glasgow and Edinburgh in Scotland.<sup>65</sup>

The items could be given away through Government shopfronts or local bike shops. The programme could be accompanied by a police ‘lighting blitz’ using checkpoints on popular cycling routes. People riding bikes are stopped and reminded about the need to be visible. The police could use this opportunity to hand out lights or reflective accessories, or discount vouchers for lights from local bike stores.

It is worth noting that some European countries have seen cyclist visibility as such a safety concern, that they have made reflective vests compulsory for people cycling. For example, since 2008 in France, cyclists have been required to wear high visibility jackets when cycling outside of towns, as well as during the night or when visibility is poor in towns.<sup>66</sup>

We would like the Government to investigate what impact these laws have made to accident rates, and to cycling numbers.

**Recommendation 4.6: Support a programme to address cyclist visibility, and to encourage better relations between road users.**

## **5. Prioritise walking**

Walking should be considered the ‘glue’ of the transport system; it is humans’ basic way of moving around. People catching public transport tend to walk to a bus stop, and even people driving a car need to walk to and from their car.

<sup>65</sup> Information about the ‘Bike Polite’ scheme can be found here: <<http://www.politecycling.info/index.html>>

<sup>66</sup> The French law can be found (in French) here: <<http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000019274295&dateTexte=&fastPos=1&fastReqId=134102763&oldAction=rechTexte>>.

Pedestrians and the benefits of walking have been given little attention in the ACT. Walking is something that is usually overlooked in policy and planning. As the UK's Metropolitan Transport Research Unit put it, walking is 'hidden' as it is 'so basic to all planning and transport activities, and so undemanding in terms of government finance, that it somehow slips through the net in strategy formulation'.<sup>67</sup>

The Government has a big role to play in promoting walking for transport. A 2006 survey of expert opinion found a strong consensus all around the world that Government's pro-car policies prevent people from walking more, despite the fact they want to.<sup>68</sup> The built environment in a city is directly associated with the amount of walking people do; it can either facilitate or discourage walking.<sup>69</sup> Walking for transport is associated with living in neighbourhoods that have good access to destinations, including public transport, connected street networks, and higher residential densities.<sup>70</sup>

Recognising that there are many barriers still preventing increased walking in the ACT, the ACT Greens secured regular additional funding for footpath upgrades and maintenance (\$500,000 per year above current levels) through its Parliamentary Agreement with the ACT Labor Party. This funding is now being delivered, but much more work is needed.

### **a) Increase 'Walkability'**

Canberra is known as a good place for driving. The surrounding area is also known as a good place for bush walking. But it is not known as a place that is good for urban walking – that is, walking around town or walking to and from common destinations. The Greens want to see Canberra become a much more walkable city. As discussed above, one of the first and most important steps is to sign the *International Charter of Walking* and formalise the Charter's principles for 'walkability' into ACT planning policies, to ensure future planning and design work prioritises walking. Some further structural and behavioural measures are discussed below.

**Recommendation 5.1: Sign up to the *International Charter of Walking* and formalise the Charter's principles into the Government's own planning policies.**

### **Structural measures**

Immediate structural improvements for walking should focus on *local* walking to facilitate pedestrian trips that will displace a car trip, especially by improving the connectivity of walking routes between homes and key destinations – such as shops and public transport routes. Too many areas of Canberra still lack footpaths – the Canberra Pedestrian Forum estimates around 600 km of streets – or they have poor footpaths. This is a constant disincentive to people to walk around their local neighbourhood. Particularly in Civic, there

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<sup>67</sup> Quoted in: Rodney Tolley, *Providing For Pedestrians: Principles and Guidelines for Improving Pedestrian Access to Destinations and Urban Spaces*, 2003.

<sup>68</sup> Quoted by Rodney Tolley in *Walking around the world. Benefits, barriers, current situation around the world and Australia*, Presentation given at ANU, 17 November 2009.

<sup>69</sup> Heart Foundation, *Position Statement: The Built Environment and Walking* (2009), p. 1.

<sup>70</sup> Heart Foundation, *Position Statement: The Built Environment and Walking* (2009), p. 1.

are ‘goat trails’ (worn down areas) on either side of many footpaths. This is a good indication of unmet demand.

The Government also needs to focus on improving convenience and safety for pedestrians. It should consider better lighting in walking areas; this can now be done cheaply with solar



**Fig G:** High quality footpaths in a new subdivision, Perth

lights that charge during the day. Signalised intersections around the ACT should be improved, particularly at high-volume walking routes, so that phase times allow adequate crossing times, and so that pedestrian phases are coordinated along routes. Intersections overseas prioritise pedestrians by changing lights quickly or even instantly as soon as pedestrians arrive. Others display countdown timers showing the time until the lights change (**Fig H**), which have the advantage of making

waiting times public, and discouraging pedestrians from trying to ‘beat the lights’. These are being trialled widely in the USA. Some four way intersections may be able to

utilise diagonal crossing, allowing walkers to make one crossing, instead of having to wait for two sets of crossing lights. This works well in the centre of Sydney and would be beneficial in areas like the city sections of Northbourne Avenue.

**Recommendation 5.2:** Prioritise *structural* measures to improve walkability, including: providing more and wider footpaths; improving the connectivity of walking routes; improving signalisation, lighting, and pedestrian crossing points; formalising these best practices in the *Territory Plan*.

## Behavioural measures

As well as improved infrastructure, the Government should undertake a number of behavioural measures to improve the utility of walking infrastructure. There are many opportunities across a range of areas for the Government to undertake behaviour that will assist the uptake of walking. When the Government embraces the recommendation above – to put active transport at the heart of its transport and urban planning policies – more and more of this behaviour will be prioritised.

One example is the problem of nature strips that are often obstructed by illegal car parking or other landscaping. This is a significant problem in areas where there are no footpaths. The problem could be addressed by Government enforcement and awareness raising of residents’ obligations.



**Fig H:** Pedestrian count down timers in Washington D.C, USA

A second example is the problem of walking (and cycling) routes that are interrupted by roads. These are often unsafe because pedestrians cannot rely on drivers to follow road rules and give way to pedestrians. This can be addressed with additional training for car drivers, focused on vulnerable road users (see **recommendation 4.4**).

A third issue is that of ‘local amenity’. People walk in areas that are interesting and varied. Part of the reason some people consider Canberra to be boring, is its sprawling sameness. This is also a reason that prevents people walking. Making walking routes more interesting (artworks, information, other ‘surprises’ for walkers) makes a great difference to the walkability of an area.

**Recommendation 5.3:** Prioritise *behavioural* measures to improve walkability, including: enforcing requirements not to impede nature strips; educating motor vehicle drivers about pedestrians and vulnerable road users; taking measures to improve amenity for walkers.

## b) Make Canberra legible

One of the important principles of making a city walkable (or rideable), is legibility. Lack of information is a common barrier to walking and cycling. This can be overcome with a ‘wayfinding’ system to allow people to navigate their way around walking and cycling networks without confusion. Wayfinding also maximises the experience by explaining the environment ahead. It makes this kind of travelling more enjoyable, safer and easier.

One of the principles of the International Charter of Walking is ‘Designing legible streets with clear signing and on-site information to encourage specific journey planning and exploration on foot.’

A recent wayfinding study of London stated that:

It’s clear many journeys are ‘walkable’ – but how many people could be persuaded to walk, merely through better information? A study by Research Business International (2002) found that 66% of travelers said they would consider walking instead, after being shown a walking map. (Among tourists it’s as high as 80 %...) ... These findings are supported by a MORI study for the London Borough of Islington, which reported in 2005 that 49% of respondents had seen and used map-based signs, and of these 83% were satisfied that the signs had helped them find their way. Maps had assisted 66% with their journey, with 47% saying that the maps had ‘encouraged’ them to walk. Only 5% said that they did not find them useful. What this suggests is that an integrated signage and information strategy to support the needs of walkers can be expected to deliver substantial dividends.

There is no reason why similar results could not be expected in Canberra. The networks of cycling and walking paths are often confusing and there is no connected, legible system of information. Canberra’s layout can be confusing, especially for visitors from cities based on a grid system. The ACT Greens’ 2008 agreement with the Labor Party guaranteed funding to be used on improved directional signage on the cycle path network. We would like to see this project continued and completed, and expanded for walkers.



**Fig I:** Bristol’s legible signage

Bristol’s ‘legible city project’ presents an excellent example of pedestrian wayfinding. Its information panel signs show a city wide map with the viewer’s

location within the city, the current site name, a ‘heads-up map’ (intuitive maps which identify the area in front of the viewer) and directional signs. They also show approximate walking times.

There have been many benefits from Bristol’s initiative, including a 40% reduction in street furniture, as map based signs can incorporate things like street lights, bins, etc.

In Australia, work is being done on walkability and legibility in Bendigo, Parramatta and Melbourne. Canberra needs to join them and adopt a ‘world best practice’ pedestrian wayfinding system.

**Recommendation 5.4: Improve the wayfinding system for Canberra’s walkers and bicycle riders.**

### c) Accommodate pedestrians and cyclists

Pedestrians are sometimes concerned that the presence of people cycling in car-free areas is a safety concern. Cyclists shouldn’t be banned from these areas: car-free areas provide an important short cut for people cycling who otherwise could not avoid traffic; they are also often a destination point. Recent studies also show that generally people cycling and people walking actually mix well and fears for pedestrians tend to be unfounded in fact.<sup>71</sup>



**Fig J:** ‘Soft separation’ in a car-free zone.

Instead of banning cyclists, design steps can be taken to ensure walkers and riders can coexist in the area comfortably.

In areas of high population density, ‘psychological’ or ‘soft’ separation can be provided to assist both walkers and riders. A clearly marked cycle path in the middle of the area will encourage both groups to remain in the space set aside for them. This also has the advantage of keeping cyclists away from shopfronts, and for generating a smooth flow of cycle and pedestrian movement. The separate areas can be

marked using different paving, colours, symbols, or gentle slopes to create a grade separation. Separation should not be achieved with physical barriers or raised areas that can hinder movement or cause pedestrians to trip.

The Greens recommend the Government consider ‘soft separations’ for riders and walkers in areas of high pedestrian density, such as City Walk and Garema Place, Civic.

**Recommendation 5.5: Introduce ‘soft separation’ for pedestrians and cyclists in areas of high pedestrian density, such as City Walk and Garema Place, Civic.**

<sup>71</sup> Transport Research Laboratory (UK), *Cycling in Vehicle Restricted Areas*, 2003, <[http://www.trl.co.uk/online\\_store/reports\\_publications/trl\\_reports/cat\\_traffic\\_engineering/report\\_cycling\\_in\\_vehicle\\_restricted\\_areas.htm](http://www.trl.co.uk/online_store/reports_publications/trl_reports/cat_traffic_engineering/report_cycling_in_vehicle_restricted_areas.htm)>. Fiets beraad also published a 2005 report showing similar results in the Netherlands (*Fietsers in voetgangersgebieden: feiten en richtlijnen*).

## 6. Prioritise cycling

Cycling in Canberra is rapidly increasing in popularity. However there are still great gains to be made and we need to take these opportunities. People riding bikes are a key part of active transport. Taking action to increase cycling numbers is low cost investment with very high returns: for health, for the environment, for the community. Through its Parliamentary Agreement with the Labor Party, the ACT Greens secured \$2.5 million to address the cycle path maintenance backlog, as well as to increase recurrent funding for cycling infrastructure to \$3.6 million per annum. However, there is still a lot of work to be done to assist, encourage and prioritise people riding.

### a) Build separated cycle paths and bicycle-friendly streets

The Greens would like to see separated bicycle paths in Canberra (often called ‘Copenhagen style’ paths). These are cycle paths that are physically separated from other road users by a traffic island or other barrier. They can follow the road, or have their own route. They are exclusively for people cycling. This style of cycle path has been shown to provide a high degree of safety and to encourage more cycling. They can be used where traffic travels



**Fig K:** Separated bike path in Swanston Street, Melbourne

quickly, as well as in slower town centres. Separated cycle paths are proving successful in other Australian cities such as Melbourne (e.g. Swanston Street – **Fig K**) and Adelaide (Sturt Street). Canberra’s wide streets are ideal for accommodating high quality separated bicycle paths. One-way cycle paths should be at least 2 metres wide to allow side-by-side riding and overtaking. It is also preferable to give pedestrians a separate walking sidetrack.

In Canberra, on-road, non-separated cycle lanes are becoming more common. The ACT Territory Plan makes it a requirement to build these on-road lanes on all new major collector roads. These are a good, lower cost option that help to facilitate cycling in the ACT.

However, because on-road lanes don’t allow a cyclist to be physically separated from traffic, some riders are concerned about perceived safety issues. This is especially so where the on-road lanes are narrow and close to busy traffic – such as the on-road bike lane on Northbourne Avenue. Separated paths also reduce the risk of collisions with opened car doors, which can occur when riding near parked cars, or (as on Northbourne Avenue), when stopped cars open passenger doors into the cycle lane to drop off a passenger.

Separated bike paths are therefore a great encouragement for more people to travel by bike. They provide comfort and safety, including for parents and carers cycling with small children in child seats or trailers. The Greens recommend that separated cycle paths are used as much as possible. In instances where space is apparently lacking for separated or off-road cycle infrastructure on busy roads, we recommend:



**Fig L:** Example of priority bicycle crossing.

- ☺ First, revising the road layout so that it can accommodate separated cycle lanes, or a wide on-road lane (e.g. by removing a traffic lane).
- ☺ If this can't be done, the risk should be minimised (e.g. reducing speed; making the cycle lane as wide as possible, adding 'vibra-line' to the edge of the lanes).
- ☺ Or, creating a high-quality, alternative cycling route.

When using separated cycle paths, care needs to be taken at intersections where traffic mixes. In slower speed areas and on main cycle routes it may be appropriate to give cyclists crossing priority. This right-of-way must, of course, be strongly underlined by the design. For example, the cycle crossing may be a raised, coloured 'hump', with clear signage (see **Fig L**). Crossing priority is an important consideration generally, as accidents involving

bike riders and cars typically occur at intersections.



**Fig M:** One possible 'cycle street' layout

The Government should also look for opportunities to use bicycle streets (see **Fig M**) in Canberra, especially to create main cycle routes. Bicycle streets are streets designed for cyclists, but where motor cars are still allowed as 'guests' (i.e. local traffic may drive and park there). They basically look like street-wide cycle tracks on which cars are still permitted.

They have the advantage of being separated from main roads, so use less space than separated cycle paths, and they can be more flexible and cost

effective. While 'bicycle streets' are used widely in Europe, Brisbane has adapted the concept into 'Bicycle Friendly Zones', or BFZs. BFZs clearly indicate the 'likely travel corridor' for bike riders using symbols on the road pavement (such as a bike with an arrow). This is a simple and cheap alternative where on-road or off-road lanes or bicycle streets are not justified – such as in lower traffic residential streets. The symbols also endorse the presence of cyclists and increase motorists' awareness.

**Recommendation 6.1: Construct separated bicycle paths, bicycle-friendly streets, and bicycle priority intersections.**

## **b) Build for convenience and with 'human touches'**

An important part of making cycling (or walking) attractive to people, is keeping it inclusive. People need to feel like it is easy, safe and comfortable to cycle. In this regard, anthropological details can sometimes play an important a role in urban infrastructure. Copenhagen, for example, uses small, human touches to encourage all levels of rider and to enhance the social aspect of urban cycling, such as city bike routes that are broken into two separate lanes – a 'fast lane' and a 'conversation lane'.

**Recommendation 6.2: Ensure bicycle facilities cater for riders of different needs, and are convenient.**

A city is also conducive to riding if bike riders are not burdened by unnecessary rules that impede their trip. An example of this in Canberra is the rule prohibiting bicycle riders from riding across a pedestrian crossing or marked foot crossing. Instead, people cycling should be able to stop their bike, and then ride it slowly across the crossing without a requirement to needlessly dismount.<sup>72</sup> This rule can also be overcome by replacing pedestrian crossings on busy bicycle paths with give way signs, which means drivers have to give way to both pedestrians and bicycles, and cyclists can ride across without dismounting.<sup>73</sup> An example is in De Burgh Street, Lyneham. Bicycle counts indicate there are a number of busy cycle routes around Canberra where this substitution should be made in favour of people cycling.

**Recommendation 6.3: Remove the pedestrian crossing rule for bicyclists, or replace pedestrian crossings with give way signs on high usage paths.**

### Make sure bike parking is ample and safe

The provision of secure, ample, and well located bicycle parking is critical if we want to encourage people to ride as transport. Bicycle parking should be located at convenient spots, and as close as possible to the main entrances to buildings. This also makes the parking highly visible, which encourages people to ride, and also makes it more secure.

Canberra needs to become more supportive of bicycle parking, particularly as the number of people cycling grows. It is common that there is already not enough bicycle parking at busy areas, such as the Woden shopping centre and Bunda Street – let alone accommodating a growth in cycling. The Government’s 2010 plan for Greater Canberra even appears to propose removing some bicycle parking.



**Fig N:** Lots of parking space helps bring lots of bikes.

The Government should also consider providing dedicated secure parking facilities – such as covered parking stations – at key destinations such as bus interchanges and city centres. These have been very successful in overseas cities, where many of the facilities are actively guarded. Brisbane City Council also recently spent

approximately \$500,000 on four lockable bike shelters for bus stations. In addition, simple bike rack facilities (upside down ‘U’ racks, or double loops) should be installed at bus stops, which will allow people to ride to the stop and leave their bike.

<sup>72</sup> The ACT has adopted the crossing rule from the Australian Road Rules. It should therefore pursue a change to the rule by raising it at the Australian Road Rules Maintenance Group. Victoria and Queensland have previously indicated they wish to remove the rule, so the ACT could give traction to this campaign if it were to speak up.

<sup>73</sup> This is actually already in the ACT’s Design Standards for Urban Infrastructure (number 13), which recommends using ‘path priority crossing treatment such as “Give Way” or “Stop” sign crossings, on Main Community Routes when traffic volumes are low and peak path usage is greater than 100 users per hour.’

Another useful innovation would be mobile bicycle parking facilities that can be installed at locations that attract a lot of cyclists, or at special events (e.g. festivals) for temporary use.

There are also opportunities to improve the ACT's planning requirements for new, or renovated buildings, to strengthen the requirements for the number and quality of bicycle parking facilities.

**Recommendation 6.4: Provide safe, ample bicycle parking in city and town centres, at bus interchanges and at bus stops.**

### c) Build cycle highways



**Fig O:** Cycling highway from Utrecht to Amsterdam, Netherlands.

Prioritising cyclists means finding the best routes for them to travel. The Government should investigate the best locations to build 'cycling highways'. These are smooth stretches of cycling paths where traffic lights are limited, and people cycling have safe and quick crossing priority at any point where they cross streets. Crucially, they take the most direct route between key destinations. On these paths it is possible to maintain a high speed and there is sufficient width for overtaking. Some even feature drinking fountains and bike pump stations along the route.

The highways have been used in parts of the Netherlands and have reportedly increased the number of people cycling considerably. London's mayor has recently announced that building 'cycle superhighways' is part of his plan to boost low carbon transport and make London one of the world's great cycling cities.

Canberra's current off-road cycle path network winds considerably and crosses many roads, which means people cycling must often take indirect routes, as well as stop at road crossings to wait for cars.

Cycle routes travelling out of the new suburbs being developed in Molonglo are an ideal spot to use cycling highways and the Government should look at the precedent set in the Dutch city of Assen (see case study).

**Case study: Assen, Netherlands<sup>74</sup>**

**When a new suburb was built on the edge of Assen (around 5km from the city centre), the local council was concerned that new residents would be put off cycling. It planned a cycle highway that took the most direct route between the city centre and the new suburb. The route is almost entirely car-free (except for cars accessing their homes) and there are no traffic lights or other obstructions on the route. It is shorter than the driving route. It is easy, safe and direct. Since the building of the new development, the cycling rate in Assen has increased: 41% of all journeys in the city are now by bike.**

**Recommendation 6.5: Build cycling highways.**

<sup>74</sup> For more information on Assen, see: David Hembrow, *A View from the Cycle Path*, <<http://hembrow.blogspot.com/2009/04/41-percent-of-journeys-by-bike.html>>.

#### d) Introduce the 'green wave' for cyclists

A green wave is a series of traffic lights that are coordinated to allow continuous traffic flow over several intersections. It allows vehicles to not have to stop at intersections, giving them a continuous run. They can be implemented at any series of two or more traffic lights.



**Fig P:** A 'green wave' in the Netherlands

Planners tend to think of using green waves for car traffic. However, green waves can be used to facilitate bicycle traffic. For example, in Copenhagen and Amsterdam, green waves on arterial streets allow cyclists to maintain a speed of approximately 20 km/h without being stopped by a red signal. Testing has shown that this improves travel time for people cycling, and also has benefits for motorists and public transport.

Green waves reprioritise the travel network to improve comfort and travel times for cyclists and can be implemented at low cost. This can be an important factor in encouraging people to travel by bicycle instead of using cars. They can be especially useful in peak hour travel areas. This should be considered for Northbourne Avenue, where bikes regularly travel faster than the motor traffic.

This simple measure, as well as measures like the cycle highways, and Copenhagen-style lanes, makes travelling by bicycle convenient, fast and easy.

In cities like Copenhagen – where there are continuous efforts to improve cycling infrastructure with these kinds of measures – cycle traffic is growing faster than motor traffic. Interestingly, when people in Copenhagen (where over 30% of trips are made by bike) are surveyed on why they choose to ride bikes, 61% answer that it is convenient, fast and easy. This suggests that cycling numbers can be significantly increased in Canberra through measures that make this travel mode fast, convenient and easy.<sup>75</sup>

**Recommendation 6.6:** Investigate appropriate places to install green waves for cyclists.

#### e) Accommodate electric bicycles

Electric (or power-assisted) bicycles are growing in popularity in Australia. As fuel becomes more expensive and as people become more environmentally conscious, and as the population ages, the popularity of electric bikes will continue to grow. In many ways electric bicycles are a good, sustainable transport solution. They can be used by people who wouldn't usually use a standard bicycle, particularly people who are less fit or who are ageing. They are likely to be an important part of a shift towards mass bicycle commuting.

<sup>75</sup> Discussed by Jan Gehl at the 2009 Walter Burley Griffin Memorial Lecture, Canberra, 30 November 2009

The mass introduction of electric bicycles to Canberra's roads and bike network will create new complexities and safety issues. The Government needs to plan for this development now. Planning for cycling and walking infrastructure should be developed so that it can safely accommodate a growth in electric bicycles. One obvious way to do this is to ensure tracks that will be shared with electric powered bikes are wide – approximately 3.5m to 4m.<sup>76</sup>

Because of the great transport potential of electric bicycles, we also need to encourage their take-up. Currently electric bikes are only allowed to be ridden if the motor is 200 watts or less. This limits their speed and hill climbing ability. The Greens support increasing the permissible wattage provided that safety on roads and paths is maintained. Not only would this make electric bicycles more convenient for people, but it would also open up the market of these bikes significantly. Increasing the permitted wattage to 250W, for example, would allow the import of vehicles built to the European and Japanese markets, which are the two biggest markets outside China.

The Greens also support restricting electric bikes to those that only offer engine support when the rider is pedalling. This means that the bikes remain a form of active transport that can be used according to the rider's physical needs.

**Recommendation 6.7: Plan and build infrastructure that can accommodate a large increase in electric bicycles, and extend the permitted wattage of electric bikes beyond 200W, provided safety can be maintained.**

## f) Education and training for riders

People's actual or perceived lack of riding skills has been identified as a significant barrier to more people taking up cycling.<sup>77</sup>

One of the best ways to train riders is in school, at an early age. Where possible, the ACT should introduce cycling education courses as part of its regular school curriculum for primary age children. Overseas practice shows high success rates in behaviour change and safety by providing cycle training for all 4th grade school children.<sup>78</sup> Teaching these skills at school age helps children begin a lifetime of safe cycling skills, and also means both boys and girls are included from an early age.

Canberra should also provide facilities for children to learn road rules and to learn to ride. These would be ideally located at Canberra's local parks and playgrounds, where children and parents can ride and practice together in safety. Centennial Park in Sydney is a good example of this kind of facility. Near the playground it has a sealed track with a variety of practice intersections.

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<sup>76</sup> This is the same width recommended by the EU's cycling body: See Presto's Cyclist and Pedestrian Fact Sheets on infrastructure <<http://www.presto-cycling.eu>>.

<sup>77</sup> Cycling Promotion Fund, *Cycling – Getting Australia Moving*, 2008. ([www.cyclingpromotion.com.au](http://www.cyclingpromotion.com.au))

<sup>78</sup> Dutch, German and Danish children complete cycle training courses by the 4th grade. Police officers test the children and award official certificates and stickers for completing the course. See John Pucher and Ralph Buehler, *Cycling for Everyone: Lessons from Europe*, 2007, Rutgers University, <<http://policy.rutgers.edu/faculty/pucher/Cycling%20for%20Everyone%20TRB.pdf>>.

The ACT Government can also help to address the problem of a lack of riding skills by supporting local rider education programmes, and by working with Federal counterparts towards a nationally consistent community bicycle skills programme.

**Recommendation 6.8: Introduce cycling education to the school curriculum, support a nationally consistent community bicycle skills programme, and build cycle training spaces in playgrounds.**

## g) Specific cycling projects

### A cycle path down central Northbourne Avenue



A bus enters the bike lane on Northbourne Avenue

Northbourne Avenue is a busy route for people commuting by bike, particularly from North Canberra into Civic. With three lanes of car traffic in each direction, a number of traffic lights, no bus lane, and only a narrow on-road bike lane, it can be perceived by some as a dangerous and difficult cycle. The motor traffic is situated very close to the cyclists, and the traffic lanes themselves are narrow. The increasing popularity of these lanes mean that the lack of room for cyclists to overtake is becoming a major drawback, as the route does not accommodate riders of different speed and skills. Buses use the

cycle lane to stop at bus stops, which can cause chaotic situations for buses, cyclists, and cars. Buses can be intimidating for less confident riders given their mass, slow manoeuvring, and reduced ability to see cyclists.

This route is a key commuting route and needs to be improved. Already, Northbourne Avenue and surrounding parallel streets in Turner and Braddon – such as (Watson, Moore, Mort, and Lonsdale Streets) carry over 500 bicycles per morning in the 90 minutes between 7:30am and 9:00am.<sup>79</sup> About half of this total is made up of riders on the streets parallel to Northbourne. Cycling is increasing in popularity rapidly in Canberra so the numbers of riders are likely to increase.

Many people report that they are not cycling due to concerns about the perceived difficulty of this route. It remains a barrier to greater numbers of bicycle commuters. As the Danish architect Jan Gehl said when he visited Canberra last year, ‘commuting by bicycle mustn’t be an extreme sport’.<sup>80</sup>

The Greens would like to see redevelopment of Northbourne Avenue to better support and encourage commuting by bicycle.

<sup>79</sup> Actual total is 530. Figures from Pedal Power’s cordon count in March 2009, <<http://www.pedalpower.org.au/advocacy/docs/cordon%20count%202009.pdf>>.

<sup>80</sup> Jan Gehl, 2009 Walter Burley Griffin Memorial Lecture, 30 November 2009.

We advocate the development of a dedicated bi-directional path along Northbourne’s median strip. Work would need to be done at points where the path crossed intersections to ensure safe crossing. We recommend giving people cycling priority over other traffic where possible. For example, intersections might use raised priority crossings; traffic signals that are programmed to cause minimal delay to people cycling; or in some cases, an overhead crossing bridge to eliminate delay altogether. In addition, at the time of redevelopment, the Government should consider the opportunity to improve to improve the reliability and efficacy of bus travel by, for example, making one lane in each direction of Northbourne a bus-only lane.



An example of a similar median strip path can be seen at St Georges Road in Melbourne. This path is one of the fastest growing cycle routes in the area, with the numbers of bicycles using the path increasing by 58% in the last two years. The St Georges Road path gives priority to bicycles at places where it intersects with the road.

As an alternative to this proposal, we recommend considering the replacement of the on-road lane, with a separated Copenhagen lane (designed to the high standards described in **section 6a** above). This is likely to require taking some of the room on the verge. Again, bike priority could be given at intersections, and the Government could consider making one lane in each direction ‘bus only’. Bus traffic next to the separated bike lane is also better for cyclists, as bus numbers are fewer and slower to accelerate.

Both of these options share many advantages, including:

- ☺ A direct, safe route for cyclists riding to the city from North Canberra that overcomes the present perceived traffic dangers presented by cars and buses.
- ☺ Highly visible, high quality cycling facility, that would help promote cycle commuting.
- ☺ The median strip path could be shared with pedestrians, which would also help open up the central Northbourne area as public, recreational space. Reworked intersections would also make it more accessible to pedestrians.
- ☺ Separating buses, cars and cyclists would make travel easier for all modes.
- ☺ Linkage to the Civic cycling loop (proposed below) at Rudd Street and Bunda Street, allowing commuters and shoppers easy access to and around the Civic centre.
- ☺ A walking and cycling track on the median strip adheres to Walter Burley Griffin’s original design of using this area for active and healthy transport.

**Recommendation 6.9: Redesign Northbourne Avenue to accommodate either:**  
 - a high quality bicycle path along the centre median strip, or  
 - a high quality separated bicycle path travelling in each direction.

## **Civic Cycling Loop**

Pedal Power has proposed a *Civic Cycling Loop* for inner Canberra. It is a three kilometre circular cycling route, connecting the Inner North and South with Civic, and connecting East and West Civic. The loop would use both the ‘shared space’ concept (at Bunda Street), and ‘Copenhagen style’ bike paths, both of which are described above.

The ACT Greens support this project as an excellent investment for the city centre, which would provide important encouragement and support for active transport.

The full proposal is available online here:

<<http://www.pedalpower.org.au/advocacy/docs/civic%20cycle%20loop.pdf>>.

**Recommendation 6.10: Support the Civic Cycling Loop, as proposed by Pedal Power.**

## Picture references

**Fig B:** King George Square end of trip facilities in Brisbane. Photo from Brisbane City Council and <[www.healthyplaces.org.au](http://www.healthyplaces.org.au)>.

**Fig C:** Shared space in Drachten, The Netherlands. Photo from Fietsberaad, <<http://www.fietsberaad.nl/index.cfm?lang=en>>.

**Fig D:** Graph from Victorian Government publication, *Speed: Keep it Down*, VicRoads Publication Number 01341/1, <[http://www.arrivealive.vic.gov.au/downloads/roadssafe/Speed\\_Keep\\_it\\_down.pdf](http://www.arrivealive.vic.gov.au/downloads/roadssafe/Speed_Keep_it_down.pdf)>.

**Fig E:** Footpaths connecting schools. Photo by Pamela Miller, <<http://www.healthyplaces.org.au>>.

**Fig F:** Walking school bus, Western Australia, Department for Planning and Infrastructure.

**Fig G:** High quality footpaths in a new subdivision, Perth. Photo from Planning Institute of Australia, <<http://www.healthyplaces.org.au>>.

**Fig H:** Pedestrian count down timers in Washington D.C, USA. Photo by James Wagner, from <<http://www.pedbikeimages.org>>

**Fig I:** Example of Bristol's Walking sign. Photo from Bristol Council, <<http://www.bristollegiblecity.info>>.

**Fig J:** Visual separation in a car-free zone. Photo from P. Kroez, Presto's Cyclist and Pedestrian Fact Sheet <<http://www.presto-cycling.eu>>.

**Fig K:** Separated bike path in Swanston Street, Melbourne. Photo from Bicycle Victoria.

**Fig L:** Example of priority bicycle crossing. Photo from T. Asperges, Presto's Cyclist and Pedestrian Fact Sheet, <<http://www.presto-cycling.eu>>.

**Fig M:** One possible 'cycle street' layout. Photo from P.Kroez, Presto's Cyclist and Pedestrian Fact Sheet <<http://www.presto-cycling.eu>>.

**Fig N:** Lots of parking space helps bring lots of bikes in the Netherlands. Photo from Fietsberaad.

**Fig O:** Cycling highway from Utrecht to Amsterdam, Netherlands. Photo courtesy of Maarten Sneep.



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