ASPO-Australia

Australian Association for the Study of Peak Oil & Gas
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Active Transport Working Group
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ASPO-Australia's Active Transport Working Group commends the Senate for holding the inquiry into Australia's future oil supplies and alternative fuels. Such a public inquiry is long overdue as forecasts of the date of Peak Oil are clustering around 2010.

> "Active transport relates to *physical activity* undertaken as a means of transport. It includes travel by foot, bicycle and other non-motorised vehicles."
> 'Be Active Australia: A Framework for Health Sector Action for Physical Activity 2005-2010'

We recommend a massive increase in the priority and allocated funding for bicycle and pedestrian transport as a significant strategy to reduce Australia's oil vulnerability.

Bicycles are powered by alternative fuels, either Weetbix or abdominal fat.

No shortage of either!

Bicycle transport has traditionally been largely overlooked or discounted by transport professionals as illustrated in the cartoon above. Peak Oil is a crucial reason to increase urgently the priority of bicycle and pedestrian transport infrastructure and promotion.

Peak Oil is one term for the inevitable change from the current rising trend of world oil production to the final decline trend as oil fields age

"…the cost of preparing too early (for Peak Oil) is nowhere near the cost of not being ready on time". (MacTiernan, 2004)

The working group fully endorses the need for urgency in preparing for Peak Oil, shown in the U.S. DoE Hirsch report (Hirsch et al.,2005) and by WA's Minister for Planning and Infrastructure, Hon. Alannah MacTiernan.

Responding to the Risks of Peak Oil

The US Department of Energy's 'Hirsch' report makes it very clear that avoiding major Peak Oil-induced economic and social dislocation and mitigating the impacts of oil depletion will require 'crash programmes' beginning *at least 20 years prior* to Peak. As many informed authorities believe Peak Oil will occur within the current decade, it appears essential that Government-led mitigation strategies be commenced immediately.
Australia should start such 'crash programs' aimed at mitigating the impacts of oil depletion *now!*

Flow-On Economic and Social Impacts

Costs of Oil Dependence: Australia's petroleum imports already cost approx. Au$15 billion a year and will grow many-fold as self-sufficiency drops in the years ahead and world 'post-Peak' crude oil prices rise. By 2015, Australia will be using over 1 million barrels of oil per day, and producing only about a third of that (Geoscience/ABARE). If the cost of international oil *merely doubles* over the next decade, importing the balance will cost almost Au$50 billion p.a. at current exchange rates and possibly much more. This is greater than the entire Federal Government health budget, for instance.

Without drastically reducing its oil consumption and oil dependence, Australia will become reliant on foreign and increasingly uncertain sources of oil and oil purchases will demand a much greater share of the national budget.

Social and Economic Impacts of Peak Oil Rising costs of transport fuels will have significant and unevenly focused economic and social impacts on Australians. Those impacted most immediately and severely are likely to be Australians who:

- are *most reliant* on motorised transport in their daily lives
- have the least financial capacity to meet rising fuel costs.

These will include:

- those living at the fringes of our urban areas
- regional and remote (including indigenous) communities

(Dodson and Sipe (2005), Robinson et al (2005))

The affordability and flexibility of *personal transport* in Australia is most immediately at risk due to oil-depletion induced rises in fuel costs, unless a substantial shift can be achieved towards the cheap and healthy option of bicycle transport and walking where appropriate.

Alternative fuels

Australia's most effective 'alternative fuel' is *oil itself*, used sparingly via extensive *reduction in consumption* and the *replacement* of many individual car journeys with more sustainable forms of transport.
Biomass fuel: Bicycle and pedestrian transport are *'powered by biomass'*, and an unhealthy and rapidly growing number of people, including many children, already carry excess waistline biomass which is available as 'transport fuel'.

Public Transport

Expansion of public transport as a strategy to cope with a liquid fuels crisis in Australia is important, but presents a *number of practical difficulties.* Many of our cities are geographically large (Adelaide, a city of only 1.2 M people is 90km by 35km) and would require huge public transport infrastructures and investments to cope with the potential travel demand stemming from an oil depletion-induced mode switch. Public transport infrastructure is capital intensive and currently requires extensive public subsidy. The costs of *greatly expanded* public transport infrastructures may be beyond that afforded by the revenue bases of most of our cities. Peak-hour use of public transport is already very high and there is little or no 'spare capacity' available to cater for rapidly increasing demands in the event of a sudden fuel emergency.
Without major investment, public transport *does not* offer an easy option for short-term peak hour 'modal shifts' in most urban situations. While an important planning consideration, it must inevitably be complemented by measures supporting much higher levels of walking and cycling for the shorter intra and inter-suburban trips.

Increased Use of Active Transport - Cycling & Walking:

No 'single solution' will reduce Australia's oil vulnerability. We need to invest in a range of *"no regrets"* options that:

- are *already justified* on other grounds
- rely on *proven technology* and…
- will be *useful* and of *lasting value* irrespective of oil shortages.

Facilities aimed at *increased bicycle and pedestrian transport* are such "***no-regrets***" options. They can already be fully justified on health, environmental & social grounds alone and – irrespective of any technological 'solutions' that may emerge over coming years – can only result in *more* personal transport choice and *less* oil dependence.

Cycling and walking have critical roles in moving toward sustainable transport. Everyone is a pedestrian at some point and it is essential that pedestrian movement be maximized and made as efficient and safe as possible. The bicycle is an accessible, low-cost, non-polluting, relatively fast and healthy form of travel over short to medium-length urban distances. There is significant potential to 'grow' bicycle use to 20% or even 30% of all trips in most of Australia's cities and towns. We need to educate people in making sustainable travel choices and encourage lifestyle changes that:

- improve health
- reduce greenhouse gas emissions, local pollution and motor vehicle traffic congestion
- reduce dependence on fossil fuel

Rates of cycling and walking in Australia have diminished through decades of government neglect. We need to increase the share of trips made by walking and cycling significantly by *better meeting* the needs of pedestrians and bicycle users.

There Are Many Reasons to Invest in Increased Cycling & Walking

- Cycling and walking already have strong community support & some 5% of Australian urban and country town trips are already undertaken by bicycle.
- Both cycling and walking are 'no-regrets' options with many known benefits.
- The Australian transport system is heavily dominated by provision for car-drivers at the expense of the convenience and safety of cyclists and pedestrians, and especially those 46% of Australian's who do not have a driver's license. There is enormous need for *more balance and equity* in our transport systems.
- Around half of all urban trips are less than 5km and easily covered in 15-20 minutes by bicycle (these journeys use more fuel per km and produce the most pollution if undertaken by cars with cold engines). Another 20% or so are between 5-10 kms, still well within cycling distance at the15-20 kmh speed of many urban cyclists
- Investments in walking and cycling are well placed to provide the best value for dollar of any transport investment, especially counting the externalities like increased health, less noise, congestion and pollution. It is quite practical to aim for a level of 20% Australian urban and country-town trips by bicycle. Many European cities have higher levels of usage than this.
- Active Transport is already supported by a number of Federal and State health programs – the potential health savings alone will easily justify increased funding for bicycle transport.
- The social impacts of Peak Oil on the unemployed and economically and socially disadvantaged could be very serious, especially in the outer suburbs of Australia's major cities. (Dodson and Sipe *"Oil Vulnerability in Australian Cities"*, Dec. 2005) Bicycle transport is an affordable and healthy option, far more cost-effective in meeting the needs of people on lower incomes than expanded public transport. .
- Cycling is already well established in our communities and is a traditional (albeit under-utilized) form of transport in Australian society.
- Major investments in increased cycling and walking will be relatively cheap and of assured value in reducing the likely impacts of oil depletion.

Cycling Development Recommendations – Planning Guidelines

The Federal Government should establish National benchmarks and expectations for increased cycling and walking. All States, cities and Local Governments should be required to plan for increasing the share of passenger trips made by walking and cycling to agreed benchmarks 2010 and 2020 (eg; 7% by 2010, 15% by 2020).

The Federal Government should support consistent National guidelines for giving appropriate priority to safe and efficient cycling and walking in transport infrastructure planning. This could be via the development by the Australian Transport Council of a National Charter for Active Transport such as has been developed for the European Union .

AustRoads 'Part 14' should be reviewed to establish a much higher requirement for cycling infrastructure provision. Austroads Part 14 (National cycling infrastructure guidelines) would benefit from review to ensure more stringent cycling safety standards are specified (eg; conversion of 'desirable' cycling provisions to 'mandatory minimums').

Timeliness - Australia should begin implementation of mitigation and adaptation measures *within 12 months* (and well before Peak Oil arrives), due to long lead-times in completing infrastructure and public information programmes. President Bush has recently acknowledged that the US is addicted to oil, and Australia is in a similar situation

and equally vulnerable to Peak Oil with significant impacts likely within a decade. Action needs to be taken *now* to reduce the oil vulnerability of Australia's transport system by undertaking serious planning maximizing the roles of non-motorized and low-power (i.e.; electric bike) transport modes.

Creation of bicycle and pedestrian-friendly environments on all urban arterial roads. Federal funding guidelines and agreements should require creation of integrated, accessible networks of paths and on-road routes that provide adequate safe provision for bicycles and walking for local, inter-suburban and cross-city purposes. The Geelong Bikeplan principle that *'every street is a bicycle street'* should be embedded in road design and planning as should the special needs of long-distance cycle commuting, such as provision of dedicated high-speed Veloways and integrated public transport facilities.

The voice of bicycle users and interests of bicycle transport should be consistently represented in policy-making forums. All Federal transport funding to States should require specific provision for consultation with and involvement of cycling representative bodies in planning and investment processes. This is a basic requirement if bicycle transport is to have fairer consideration in planning and managing the transport network and if the personal transport needs of all local communities are to be adequately represented.

Cycling Development Recommendations – Funding Active Transport

Federal funding and GST contributions to State transport budgets should require that a much more balanced priority be given to Sustainable Transport, including walking and cycling investment.
Federal funding should require that all States establish progressive Sustainable Transport Plans and Policies favouring the rapid development of cycling and walking. This should include the review and enforcement of road design standards and guidelines to safely accommodate bicycles, including spatial requirements, route marking, bicycle-sensitive traffic signals and suitable kerb ramps (as per AustRoads Part 14).

Guidelines should be developed requiring each State's development of a comprehensive *Active Transport Planning Policy* in order to receive continued Federal funding. These should ensure the effective promotion of bicycle transport and walking in all Local Government planning with Councils required to develop and implement local Bike Plans in cooperation with their communities. State Planning Guidelines should include requirement for end-of-trip facilities for bicycle users in urban planning guidelines, including appropriate provision for long and short-stay bicycle parking, lockers and showers in commercial development, office buildings and public institutions.

Federal funding should also require improved integration of bicycle use and public transport (allowing carriage of bicycles on trains and buses, providing secure bike lockers at bus and train stations, designing stations to facilitate bicycle access to and through them and allowing bicycles in bus lanes). All arterial road development should require installation of bicycle lanes (or high standard off-road facilities, or both) as part of arterial road developments or upgrades.

Federal tax reform should eliminate subsidies for private motorized transport and transfer savings to investment in cycling and walking. We ask the Commonwealth Government to closely examine its tax and expenditure policies to assess areas where private motorised transport and excessive transport fuel consumption is being subsidised. Where these policies exist, they should be replaced with policies that maximise the financial

incentive for curtailing transport fuel consumption. Examples of many "perverse policies" which subsidise profligate fuel usage are outlined by Denniss (2003). FBT and salary packaging are well-known examples which distort vehicle choice and usage levels and hence fuel use.

Substantial Federal funding programmes should be provided for each State's development of bicycle and pedestrian transport. This should include provisions for related low-powered vehicles such as the electric scooters and power-assisted bicycles (used in increasing numbers with on-going technological and demographic changes). This National funding should initially be of the order of $200 million pa for bicycle and pedestrian transport, growing to $1 billion pa to overcome the decades of neglect of these transport modes. Providing adequate, safe and efficient bicycle and pedestrian facilities for cities, rural centres and country towns is a crucial, cost-effective, simple and significant first step towards reducing our oil vulnerability. The costs involved will be a small fraction of our annual oil import bill, and will be more than balanced by potential on-going savings in fuel, health costs and other areas. This level of funding should be adequate to complete the provision of high standard close-spaced bicycle transport networks (of both separate paths and on-road bicycle lanes) in our cities and major regional centres and to provide good facilities in country towns. A Federal funding program along lines similar to the US Federal ISTEA and TEA-21 programs is recommended.

Substantial proportions of the Federal Black Spot Funding should be tied to enhancing bicycle transport safety on State Arterial Road Systems. Existing Federal Black Spot funding is usually restricted to the needs of motorists and road freight with very little going to meet the needs of bicyclists. Black Spot funding should be provided with clear guidelines aimed at redressing this imbalance. In particular, the flaws caused by under-reporting and under-recording of injury bicycle crashes should be considered, and actual hospital admission data should be used as the yardstick, not Police "reported crash" data files. In many jurisdictions, only 10% of the numbers of people admitted to hospital from bicycle crashes are recorded in the Police data. Use of these seriously incomplete Police data sets substantially biases the Black Spot funding allocations against bicycle transport safety. As well many Black Spot projects make the road system less safe and less convenient for bicycle transport due to the automobile-dominated outlook of many traffic engineers which causes them to overlook hazards they may inadvertently create for cyclists while improving the road system for motorists.

Charging the real costs of transport to influence transport choice and shift funding towards sustainable transport modes

These charges should include the 'lost opportunity' costs for future generations of our profligate use of short-lived resources. Motorised transport users do not pay the real costs of travel, many costs being imposed on the community (e.g.; health effects and loss of community amenity). Many transport costs are fixed (e.g. vehicle registration and insurance) or too low (e.g. fuel prices compared with many other nations) and so distort the market. This mismatch results in social and economic costs for the community and a strain on public funds. The costs of depriving future generations of vital petroleum are *not* included in current pricing or policies.

Federal Government should allocate 20% of *all urban road funding* towards safe, efficient transport facilities for cyclists and pedestrians.

Remove Federal subsidies and concessions for car imports and company cars and transfer savings to development of sustainable transport. There are many perverse

subsidies that work against an equitable sustainable transport system (e.g.; $940 million pa in subsidies to company cars, and tariff subsidies to 4WDs). Transferring the *real costs of motoring* to transport users (e.g.; through fuel prices, road user charges or other means) would send a strong signal capable of influencing travel behaviour, better reflecting the real costs, and providing funds for sustainable transport infrastructure and demand management strategies.

Incrementally increase excise on petrol and diesel to European levels to reduce demand and to provide funds for health, environmental and sustainable transport programs. A significant share of revenue should be transferred to a National Sustainable Transport Fund to assist States in funding major sustainable transport projects, like urban bicycle networks.

Abolish vehicle ownership charges and replace with a total pay-as-you-go vehicle use charge. Replacement of fixed charges with an equivalent fuel tax was recommended by both the Royal Automobile Club of WA and the WA Coalition State Government in 1979 during the second oil crisis. Funds now obtained from motor vehicle registration charges and third party vehicle insurance costs should be recouped entirely from fuel taxes. Congestion costs, road damage and crash injuries *all* depend on the level of use of the vehicle. A car left at home by someone walking or riding to work, or catching a bus should not be taxed while standing still. It is not using road space or fuel, or injuring anyone while in the garage. Mass and distance based charges should apply to commercial vehicles, especially long distance heavy haulage trucks, rather than fixed licence charges, as was foreshadowed recently at COAG..

Promotion of Cycling and Walking

Require all professionals involved in road planning, engineering and traffic management undertake professional development in bicycle and pedestrian transport needs and standards. State Governments should agree to consistently fund and support professional development initiatives such as AITPM seminars and PedBikeTrans Networks.

Establish Federal Government programmes for nationally-consistent individualised marketing of cycling and walking as preferred travel modes. -As discussed in more detail in the main ASPO-Australia submission, Australia is a leader in individualized marketing of sustainable transport modes. These programs have achieved high benefit /cost ratios and decreases in fuel usage of around 12-13% overall. Increased government support for these programmes would achieve significant transport fuel savings more rapidly and effectively than many other options. The Federal Government should ensure availability of nationwide travel demand management programs using proven Individualised Marketing strategies used in TravelSmart programs around Australia (Robinson, 2004, Socialdata 2004 and Department for Planning and Infrastructure TravelSmart Individualised Marketing at http://www.dpi.wa.gov.au/travelsmart/1637.asp)

A Legal Framework Favouring Active Transport

Legislation is needed to more effectively recognize the causal presence of the motor vehicle in most cycling and pedestrian injuries and deaths. Cars colliding with cyclists or pedestrians nearly always kill or injure – the opposite rarely happens. Insurance regulations need to be biased to better 'protect' the interests of vulnerable road users and encourage much higher standards of duty-of-care on the part of drivers. One strategy is to introduce 'driver fault' legislation to make drivers *prove no-fault* when in collision with pedestrians and cyclists, as is the practice in some European countries. The Federal Government should

conduct an inquiry into the effectiveness of the various state legislation, and in collaboration with the States propose a uniform national framework to give far higher priority to vulnerable road users, like cyclists, pedestrians and elderly users of low-powered electric vehicles like gophers.

Provide National guidelines on the reduction of urban and rural speed limits to improve road safety (real and perceived) as well as reducing fuel consumption. The Australian Transport Council should review the effective restriction of 50km/h speed limits to residential streets with a view to setting *all urban arterial road* speed limits to 50 kmh and residential street limits to 30 or 40 kmh. There is a great deal of evidence that the predominant 60km/h arterial limits:

- are acting as a major inhibitor of increased cycling in towns and cities
- are extremely unsafe for cyclists and pedestrians in the event of car collisions
- can be reduced with virtually no impacts on trip times and with major overall, net benefits.

Electric bicycles

Adopt a 300 Watt limit for electric bicycles with 500 Watts for people with physical disabilities. The electric bike opens up cycling to people inhibited by hills, long distances or lack of fitness. Electric bikes make existing cycling infrastructure available to many more people. Unfortunately Australian vehicle regulations require electric bikes with power output over 200 Watts to be registered. The imposition of charges for economical, low-polluting, non-congesting bike transport is inappropriate and no longer applies in EU countries. In particular, intelligent power-assisted bicycles (PABs), known as 'Pedelecs' in Europe, are a very important new technology. A Pedelec senses the power being supplied by the user, and *supplements* it (for example 1:1). This means assistance is provided going up hills, but *not* downhill when the rider is not pedalling. This is a far safer and more sensible strategy than a solely electric-powered bicycle (known as 'E-bikes'). Pedelecs can be used for people with disabilities (for instance on-going hip or knee problems) and those recovering from illness or surgery, as they slowly recover their strength, or for people who would like to ride a bike to work, but who are not initially fit enough to make the journey in comfort.

Reduce car use and road freight transport to conserve petroleum

Broaden the scope of AusLink, the Federal Government's national land transport plan, to include urban passenger transport, walking and bicycle transport and to give high priority to transport energy efficiency, especially the implications of oil decline, in setting priorities and assessing funding bids.

Conclusion

In summary, the ASPO-Australia working group on Active Transport is confident that bicycle and pedestrian transport offers a very substantial means of reducing our future oil usage, and supports these transport modes. Reducing daily car use by increasing the use of active transport modes is a very significant conservation strategy and would effectively generate 'alternative transport fuel'. The use of these modes frees motor vehicle fuel for essential purposes, such as Meals on Wheels, fire services, farming, and so on.

Many more people would use bicycle transport and walking as a transport mode if far more safe convenient facilities were provided in our cities. Active transport trips can be stand-

alone or integrated with other modes, such as public transport. Riding a bike 7 km to a train station, catching the train to the station nearest the destination, and walking the remaining 1 km of the trip is one example. Active transport could reduce urban and country town passenger transport fuel usage by perhaps 10-20%, under current conditions, with higher possible participation in the event of sudden fuel emergencies, or long-term shortages and rationing.

An editorial "***Fossil fuels, transport, and public health***" in the British Medical Journal by 3 prominent medical academics from the University of London, and Britain's chief representative on the Intergovernmental Panel for Climate Change (IPCC) said "***Policy goals for physical activity and emission controls point the same way". (Appendix 1:)***

We can amend this to:-

> **"Policy goals for oil vulnerability reduction, physical activity and emission controls point the same way - to active transport"**

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Appendix 1:

Editorial in the British Medical Journal: November 2000

Fossil fuels, transport, and public health

Andy Haines, Tony McMichael, Ross Anderson, and John Houghton
BMJ 2000;321 1168-1169,
See http://bmj.com/cgi/content/full/321/7270/1168

Editorials

Fossil fuels, transport, and public health

Policy goals for physical activity and emission controls point the same way

The recent protests in Britain over the price of fuel initially seemed to enjoy public support: any cause that might put more money in the public's pocket is superficially attractive. But our dependence on motor vehicles powered by fossil fuels incurs an array of external costs to the environment and the public's health. Further, the resultant accumulation of carbon dioxide, a greenhouse gas with a very long life, is storing up trouble for us and for future generations.

In 1994 the Royal Commission on Environmental Pollution pointed out that methods of transport had changed dramatically over the previous 25 years. In Britain the average daily distance travelled per person has risen by 75% to around 18 miles.(1) Most of this reflects an increase in the use of cars, amounting to a 10-fold increase in distances travelled over 40 years. This has been accompanied by a decrease in travel by bus, coach, bicycle, and in walking. Transport of freight by road has also increased but at the expense of rail travel. Yet if the external costs of road freight (in terms of accidents, road congestion, air and noise pollution, etc) are calculated and added to the costs of providing and maintaining transport infrastructure, public revenue from heavy goods vehicles contributes only 49-68% of total costs.(1)

The potential adverse effects of transport on health include accidents, air pollution, noise, the social exclusion of vulnerable groups, and the development of sedentary lifestyles which lead, for example, to obesity.(2) Our increasing reliance on private transport has created an urban environment that is unfavourable to walking and cycling. Over the past two decades there has been a marked reduction in the proportion of children who walk or bicycle to school and a substantial rise in childhood obesity in the United Kingdom and a number of other countries.3 The daily energy expenditure of British adults has declined since the 1950s by the equivalent of 2-3 hours of walking per day. It is no coincidence that the prevalence of obesity the precursor to many diseases in adulthood that shorten life, particularly high blood pressure, heart disease, and diabetes has risen markedly in recent decades.(4) **The prevalence of obesity in adults and its rising trend over the past two decades is much less pronounced in the Netherlands than elsewhere in Europe (3); this probably reflects the fact that the Dutch rely on bicycling, walking, and using trams to travel.(5)**

A recent report assessed the contribution of traffic related air pollution to mortality and morbidity in Austria, France, and Switzerland. It used effect estimates from two cohort studies in the United States and found that particulate matter was responsible for about 6% of total mortality. About half of this was attributable to motorised traffic.(6) Cohort studies suggest that the long term effects of outdoor air pollution are greater than is evident from analyses of daily mortality over time.(7) Air pollution from traffic may be responsible for the excess number of lung cancers in urban areas that remain after adjusting for smoking.(8)
Although in recent years technical improvements have resulted in reductions in air pollutants related to transport there is no room for complacency, and the government of the United

Kingdom has acknowledged that its provisional air quality objectives for fine particles are unattainable in the near term.(9)

The transport sector accounts for 26% of all carbon dioxide emissions in the European Union, and its contribution is rising. The concentration of carbon dioxide in the atmosphere has increased by around one third over the past 150 years, and it is a major cause of the worldwide rise in temperatures and the changes that are occurring in the climate.(10) There is a growing awareness that global warming may have various effects, mostly adverse, on health.(11) Although any single event cannot be attributed to climate change with certainty, the recent floods in parts of the United Kingdom are indicative of the type of extreme event which is likely to become more common in the future.

Recognition of the health costs of the present UK policy on transport leads to the conclusion that society must do several things soon. The availability and quality of public transport must be improved, and walking and cycling should be encouraged. This should be done not just to avoid road congestion and reduce air pollution but also to re-establish higher levels of physical activity and to enhance community cohesion by improving opportunities for social interaction.(5)

The use of fossil fuel must be curtailed as newer, renewable energy technologies emerge. There should be greater incentives to develop more energy efficient vehicles and to reduce pollution levels for example, by fitting particulate traps to heavy vehicles. A tax on carbon could help the United Kingdom reduce its carbon emissions by about 60% by 2050.(12) The regressive aspect of the tax could be offset by ensuring that well subsidised public transport is accessible to communities that are at a disadvantage either through poverty or by living in a rural area.

Society will benefit from a more efficient, less polluting transport system. Taxes on fuel do not compensate for the damage caused by road transport, but they may provide the resources to develop cleaner options and the encouragement to use them.

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WALKING

SUSTAINABLE TRANSPORT COALITION POLICY STATEMENT

Sustainable Transport Coalition WA

Policy: WALKING

BACKGROUND

Walking is our most important form of transport and is part of all journeys we make. However, the share of trips made entirely by walking is declining. Walking needs greater priority in urban planning and transport. Some people are unable to walk through a disability and require mobility aids such as wheelchairs or a guide dog; they are included in the terms 'pedestrians' or 'walkers'.

Walking is a sustainable transport and recreational activity and increasing the amount that we walk has many benefits for the community, environment and individuals including:

- Health - Physical inactivity is now our most prevalent health risk factor for heart disease, type two diabetes, bowel and breast cancers and other conditions including obesity. 43% of West Australian's now do insufficient physical activity to achieve health benefits and 56% of adults are overweight or obese. As little as 30 minutes of moderate activity including walking, on most days can provide health benefits.
- Environment and energy - Walking has minimal impact on the environment. It creates no pollution and shifting trips from car to walking will reduce emissions of air pollutants and greenhouse gases. Walking uses renewable energy and replacing motor vehicle trips would reduce reliance on fossil fuels.
- Equity and Cost Efficiency – Walking is the only transport mode available to almost everybody at any time and without charge. Not all community members own or have access to a motor vehicle and many groups including children, older people and those with disabilities depend on a combination of public transport and walking.
- Community – A walkable community is one that provides a safe environment for pedestrians and stimulates and encourages walking. Community design that incorporates safety, shelter and shade increases activity and interaction between community members and creates natural surveillance of local areas.

Once our most important and common transport mode, walking has been replaced by motor vehicle travel. Car ownership in Perth is the highest of any capital city in the world with 725 cars per thousand inhabitants. Four in every five trips made by Perth residents is by car, about 10% of trips are made entirely by walking.

Everyday in WA's cities and towns people make over 240,000 car trips of less than 1 km (10 minute walk). TravelSmart data indicates that at least 20% of these could be walked. The majority of primary school students (60%) live less than 20 minute walk from school, but most are driven to school. A focus on ensuring local communities are walkable can reduce unnecessary car trips.

POLICY

For health, environmental and other reasons we should be walking more, and there is plenty of opportunity to do so. Action is needed to provide for and promote walking as a means of travel in urban and rural Western Australia. For metropolitan Perth, the share of passenger trips made by walking should be increased to 12 per cent by 2010 and 15 per cent by 2030.

To enhance walking for transport the Sustainable Transport Coalition advocates action by government, business or the community to:

(1)

Prioritise pedestrians in planning and transport infrastructure

Walking should be recognised as a legitimate and preferred mode of travel. Walking should be prioritised as a key transport mode in local neighbourhoods and around significant pedestrian trip generators, e.g. schools, shopping areas, and infrastructure provided to accommodate this. Walking should be an integral part of land use and transport planning. Priorities include:

- Increase public investment in infrastructure, including dedicated and multi use paths, shelter, lighting, security cameras (where needed), underpasses and safe and accessible road and rail crossings.
- Work with community and government stakeholders to establish a relevant, whole-of-government agenda to enhance walking and other active transport modes and build cross-sector support for its implementation.
- Undertake regular travel surveys and pedestrian consultation to evaluate progress towards the goal of increased walking and identify issues for attention.
- Retain pedestrian access ways (PAWs) in suburbs. Any proposals to close PAWs should be subject to a transport impact assessment and public review.
- Make the Liveable Neighbourhood community code the standard for residential development and require assessment of pedestrian access and amenity in development applications.
- Develop and implement a Statement of Planning Policy to promote inclusion of pedestrian needs in planning throughout Western Australia.

(2)

Create safe walking environments

Providing a safe, friendly environment is needed to encourage more walking. This includes an integrated, accessible network of walking paths linking key community facilities and public transport routes. Safety will also be improved through appropriate traffic regulations, speed limits and education. Priorities include:

- Review and enforce design standards and guidelines for roads and pathways to safely accommodate pedestrians, including spatial requirements, route marking, pedestrian sensitive traffic signals and kerb ramps. Guidelines for parallel walk phases should be reviewed.
- Require safety audits by competent professionals and community members to improve safe provision of pedestrian facilities.
- Require that professionals involved in road planning, engineering and traffic management undertake professional development in pedestrian needs and standards.
- Review the Road Traffic Code to more clearly and fairly define the rights of pedestrians and educate all transport users of these, e.g. right of way at traffic lights without pedestrian sequence. The traffic code should be enforced to ensure the legal rights of pedestrians are observed.
- Proactively use the walk hazard reporting system to identify and rectify problem areas and facilities, and underlying design, construction and maintenance issues.
- Introduce 'home zone' areas where traffic speed limits are reduced to 30 to 40 km/hr to provide an environment conducive to walking and bicycling in appropriate locations e.g. higher density residential nodes, neighbourhood shops, playgrounds.
- Introduce 'driver fault' legislation to make drivers prove no-fault when in collision with pedestrians and cyclists, as applies in some European countries.

(3)

Better represent pedestrian interests in policy making

The voice of pedestrians should be better represented in policy-making forums. This is a basic requirement if walking is to have fairer consideration in planning and managing the transport network. Priorities to achieve this:

- Ensure pedestrian interests are represented on the Road Safety Council through the road user representative/s and membership of taskforces.
- Continue and strengthen the Walking WA committee so it can inform State Government policy and programs to promote walking.
- Support pedestrian input to policy debates and advisory bodies by funding peak representative organisations and include them in transport and recreation policy forums.

(4)

Encourage walking in the community

Community awareness, access to good information and positive encouragement are vital to greater participation in walking. Walking for transport and recreation should be included in the school curriculum and promoted by schools. Community-based promotions and provision of information should be continued. Priorities are:

- Continue the successful Walk There Today promotion and other walking campaigns to encourage walking in the community. Encourage partnerships to promote walking, for example through the Walking Reference Group.
- Make pedestrian safety training more widely available and integrated into school programs, and continue support for the TravelSmart school program and Safe Routes to School initiative.
- Promote walking as an effective way to incorporate healthy physical activity into everyday life through health promotion campaigns and health advice including the "Find 30" campaign.
- Make reliable, quality information on walking, routes and issues available to the public, including local area maps.
- Promote walking as a valuable travel mode through community, school and workplace based demand management including the TravelSmart household program.

The Australian Pedestrian Charter is endorsed as a statement of principles for promoting and enhancing walking. We encourage others to endorse and work to implement the charter.

Adopted 16 July 2003

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BICYCLE

SUSTAINABLE TRANSPORT COALITION POLICY STATEMENT

Policy: **BICYCLE TRANSPORT**

BACKGROUND

Bicycles have a critical role in moving toward sustainable transport. The bicycle is an accessible, low cost, non-polluting and healthy mode of travel. To improve our health, reduce greenhouse gas emissions and our dependence on transport fuel, the share of trips made by bicycle should be increased significantly through effective promotion, planning and infrastructure provision. Currently a small share of personal trips is made by bicycle; about 6 per cent in metropolitan Perth, but the potential is much greater. Half of all car trips are within cycling distance and Perth's weather conditions are amenable for most of the year.

Greater use of bicycles would bring social, environmental and economic benefits including:

- Healthier, safer community - Increased physical activity to raise fitness, reduce risk of disease and enhance mental well-being. Substituting car trips for bicycle trips will also reduce health impacts associated with pollution, such as respiratory disease. Bicycle use also enhances community safety through more 'eyes on the street' and fewer car trips.
- Environment friendly transport - Minimal impact on the environment, while reducing emissions of air and water pollutants and greenhouse gases associated with car use.
- Oil vulnerability - Bicycles use renewable energy and their greater use would reduce reliance on fossil fuels and so vulnerability to more costly, less secure oil supplies.
- Equity and community - Bicycles offer a low cost, accessible mode of travel, for a range of trips and ages, that imposes minimal costs on household and public budgets. More people travelling by bicycle would help build community interaction and safety.
- Efficiency - Bicycles use much less space and require less infrastructure than motor vehicles. More travel on bicycles could reduce traffic congestion and enhance the efficiency of the transport system.

Transport and land use planning should promote increased bicycle use. For many years bicycles have been a marginalised mode in transport planning and urban design. Investment in bicycle transport is a 'no regrets' option that is justified on health, environmental and economic grounds and will enhance sustainability of the state.

POLICY

The Sustainable Transport Coalition seeks a proactive approach to shift more trips to bicycle and better meet the needs of bicycle users. For metropolitan Perth, the share of passenger trips made by bicycle should be increased to 8 per cent by 2010 and 12 per cent by 2030. This demands a quantum improvement in planning and provision for bicycles in the transport system. To enhance bicycle transport the Sustainable Transport Coalition is advocating action by government, business and the community to:

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(1)

Create bicycle safe environments

Provide a safe, friendly environment that is needed to encourage greater bicycle use. This includes an integrated, accessible network of paths and on-road routes that provides adequate space for bicycles. The principle that 'every street is a bicycle street' should be embedded in road design and planning. Safety will also be improved through appropriate traffic regulations, speed limits and education.

Priorities include:

- Review and enforce road design standards and guidelines for roads and pathways to safely accommodate bicycles, including spatial requirements, route marking, bicycle-sensitive traffic signals and kerb ramps.
- Require safety audits by competent professionals to improve safe provision for bicycle users in all road development and improvement projects and traffic management treatments at macro, meso and micro scales.
- Require that professionals involved in road planning and engineering and traffic management undertake professional development in bicycle transport needs and standards.
- Review the Road Traffic Code to more clearly and fairly define the rights of bicycle users including allowing people of all ages to ride on footpaths.
- Proactively use the bicycle hazard reporting system to identify and rectify problem areas and facilities, and underlying design, construction and maintenance issues.
- Introduce 'home zone' areas where traffic speed limits are reduced to 30 to 40 km/hr to provide an environment conducive to bicycling and walking in appropriate locations e.g. higher density residential nodes, neighbourhood shops, playgrounds.
- Introduce 'driver fault' legislation to make drivers prove no-fault when in collision with pedestrians and cyclists, as applies in some European countries.

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(2)

Give bicycles greater priority in planning and transport infrastructure

Bicycle transport should be recognised as a legitimate and preferred mode of travel. Land use planning should promote access by bicycles and investment in infrastructure for bicycle transport should be increased. This requires professional development, proactive planning policy, integrated and holistic planning practice and increased spending on bicycle transport.

Priorities include:

- Increase public investment on bicycle infrastructure, including at least $10M per year for the Perth Bicycle Network to provide a safe, connected and legible network of on- and off-road bicycle transport routes.
- Work with community and government stakeholders to review and implement the *Bike Ahead Strategy* to establish a relevant, whole-of-government agenda for enhancing bicycle transport and build cross-sector support for its implementation.
- Undertake regular travel surveys and bicycle user consultation to evaluate progress towards the goal of greater bicycle use and identify issues for attention.
- Develop and implement a Statement of Planning Policy to promote bicycle transport in local transport plans and road design and require all local councils to develop a local Bike Plan.
- Require end-of-trip facilities for bicycle users in all local planning schemes and the *Australian Model Code on Residential Development*, including appropriate provision for long and short-stay bicycle parking, lockers and showers in commercial development, office buildings and public institutions.
- Improve integration of bicycle use and public transport by allowing carriage of bicycles on trains and buses, providing secure bike lockers at bus and train stations, designing stations to facilitate bicycle access to and through them and allowing bicycles in bus lanes.
- Provide bicycle paths and bicycle lanes as part of any arterial road development or upgrade.

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(3)

Better represent bicycle transport interests in policy making

The voice of bicycle users and interests of bicycle transport should be better represented in policy-making forums. This is a basic requirement if bicycle transport is to have fairer consideration in planning and managing the transport network. Priorities to achieve this:

- Ensure bicycle user interests are represented on the Road Safety Council through the road user representative/s and membership of taskforces.
- Enhance the effectiveness of the WA Bicycle Committee in providing strategic advice to government by allowing it to report directly to the Minister and providing a dedicated Executive Officer and projects budget.
- Support bicycle user input to policy debates and advisory bodies by funding peak representative organisations and including them in transport policy forums.
- Re-establish Bikewest as a focal point for bicycle policy and programs in the state government, with adequate staff and funding to advocate bicycle use, engage stakeholders and deliver effective programs.

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(4)

Promote bicycling as a preferred travel mode

Community awareness, access to good information and positive encouragement are vital to greater bicycle use. Bicycle transport should be included in the school curriculum and promoted by schools. Community based promotions and provision of bicycle information should be continued.

Priorities are:

- Continue the successful Bike Week promotion and Cycle Instead campaign to encourage bicycle use in the community
- Make bicycle use and safety training more widely available and integrated into school programs, and increase support for the TravelSmart school program and Safe Routes to School initiative
- Promote bicycle transport as an effective way to incorporate healthy physical activity into everyday life through health promotion campaigns and health advice
- Make reliable, quality information on bicycle transport including equipment, routes and issues available to the public, including local area bicycle maps
- Promote bicycle use as a good travel mode through community, school and workplace based demand management including the TravelSmart household program.

Adopted 16 July 2003

Towards Sustainable Transport:

BICYCLE POLICY

BACKGROUND PAPER

1.0

SUMMARY

The Sustainable Transport Coalition's Bicycle Policy aims for an environment where cycling is safe and convenient, respected, supported and encouraged by all areas of government and the community. The Policy identifies impediments to achieving increased bicycle trips, and changes required for greater substitution of motor vehicle trips with bicycle trips for short-medium urban journeys.

Bicycles have a critical role in moving Perth and Western Australia toward sustainable transport. The bicycle is an accessible, low cost, non-polluting and healthy mode of travel. It has the potential to significantly reduce road congestion, oil use, air and water pollution and greenhouse emissions, and improve road safety, community health and exercise levels. It can also improve the amenity and safety of neighbourhoods, enhance general mobility and contribute to tourism.

With its mild climate, relatively flat terrain and open space, Perth is ideally suited to take advantage of the many benefits of bicycles. Initiatives such as the Perth Bicycle Network, Cycle Instead, bike plans and promotional activities and maps are fostering greater use. The *Metropolitan Transport Strategy* (1996) set a target of raising bicycle trips from 5.7 to 8 percent by 2010.

Governments must shift the balance away from motor vehicle transport towards healthier and more sustainable forms of transport, including bicycles. Active transport modes should receive a far greater share of transport budgets.

Major impediments to increasing bicycle use in WA are lack of safe on- and off-road bicycle networks, end of trip facilities and recognition of bicycles as a legitimate mode of transport. These problems result from short comings in road design and transport planning, inadequate funding for bicycle infrastructure, poor integration with other transport modes such as rail, lack of Government leadership to improve bicycle safety, excessive car speeds, inappropriate traffic regulations, and inadequate government coordination and support for bicycle infrastructure design and planning.

Overarching objectives of the Sustainable Transport Coalition's Bicycle Policy are to improve safety, mobility and accessibility, integration with other transport modes, and recognition of (and thus provision for) the role of bicycles in transport, the environment, and community health and well being.

The principles underlying these objectives are:

- Bicycling is an integral part of any effective, efficient, sustainable transport system.
- Government has a legitimate role in providing for and promoting increased bicycling.
- Bicycling delivers benefits not only to transport, but also to other sectors, including health, sport, recreation, tourism and the environment.
- Providing for bicycling requires collaboration across the three spheres of government, across all appropriate government agencies, and between government and the community.
- Bicycling initiatives should adopt best practice without constraining innovation.

Recommendations include:

- Implementation of *Australia Cycling: The National Strategy* (Austroads, 2000), *Bike Ahead: Bicycle Strategy for the 21st Century* (WA Government, 1996) and bicycle initiatives in *Hope for the Future: The Western Australian State Sustainability Strategy* (2003).
- Explicit undertakings by Federal, State and Local Governments to provide for and assign higher priority to bicycles during all major developments, and that standards be developed with involvement of the bicycling community and implemented across all levels of government.
- Integration of bicycling with other modes of transport, such as rail and buses.
- A quality network of on- and off-road bicycle infrastructure and end of trip facilities to improve safety and security for bicycle riders.
- Greater coordination between and within levels of government, with appropriate technical support and promotion of bicycling.
- Revision of traffic regulations to be more supportive of bicycle use and reinforce the legitimacy of bicycles.
- Increased awareness of bicycles and education about bicycle safety, including greater provision and accessibility of training and instruction in safe bicycle use for school children.
- Acknowledgement of the benefits of increased bicycle use to health and the environment and a strategy to bring about a cultural change to embrace bicycling.

With the near-perfect environment in WA for bicycle riding, appropriate enabling policies and initiatives that address the key impediments to bicycle use can lead to significant improvements.

2.0

BACKGROUND

Western Australia has the highest level of car ownership in Australia. This over-dependence on cars is causing major social, environmental and economic costs to our communities through pollution, greenhouse gas emissions, high oil consumption, physical inactivity, respiratory and other health problems, road trauma, and equity of access issues for those without a car.

Despite the obvious potential for bicycles to counter many of these problems, their needs have not been adequately met.

Only about 6 per cent of trips in Perth are made by bicycle, yet half of all car trips are within cycling or walking distance of their destination (compare this with some cities in the Netherlands where bicycles account for up to half of all trips).

To increase bike use, numerous studies have shown the importance of creating safe bicycling environments. This can be done by improving driver behaviour, road design, bicycling facilities, designing more liveable neighbourhoods and better land use planning. Community awareness also needs development. Investment in bicycle transport is a 'no-regrets' option – it is justified and cost effective now and promotes future sustainability and health, and environmental, social and community values.

Bicycling benefits include health and well being, reduced individual transport costs, greater independence and mobility, and reduced traffic congestion. Environmental benefits include reductions in air and water pollution and greenhouse gases.

Two key policy documents recognise the importance of bicycling at Commonwealth and State Government levels, providing a framework for delivery of programs to increase participation in, and improve the safety and convenience of, bicycling. Those documents are: *1999-2004 Australia Cycling: The National Strategy* (Austroads, 2000) and *Bike Ahead: Bicycle Strategy for the 21st Century*[1] (WA Government, 1996). The National Strategy is still waiting to be implemented. The State Strategy has been implemented to some extent, remains highly relevant and should be reviewed, updated and implemented with an associated increase in overall annual budget. The *Western Australian State Sustainability Strategy* (2003) provides a useful supplement to the *Bike Ahead Strategy.*

3.0

CHILD MOBILITY AND HEALTH

Fewer and fewer children cycle or walk to school or for recreational purposes because of fears of harm from cars, bullies or strangers, even though statistics show children are more likely to be involved in a car accident than harmed by a stranger. In 1986, almost one-third of primary school children went by car; now it is almost two thirds. Tragically, parents driving their children add to congestion and traffic and safety problems.

Sedentary transportation of children contributes significantly to childhood obesity. Over 20 per cent of boys and girls aged between 10 and 17 years are obese, according to the Heart Foundation. This increase in body weight and decrease in physical activity will have a serious long-term impact on Australia's health.

Active children have better managed weight, lower blood pressure, healthier blood cholesterol levels, fewer mental health problems and increased energy, attention and well being. Physical exercise also provides important opportunities for physical and social skill development[2].

Bicycling and walking can therefore be important in children's physical, social and psychological development[3]. Fostering active transport habits in children gives them a healthy start in life and is more efficient than trying to change their habits as adults.

Fostering bicycle use amongst children requires safe access to local streets.

Recommendations

- Every school to encourage increased cycling and walking to school.
- Increase funding for initiatives such as the *Perth Bicycle Network* and *Safe Routes to School.*

[1] Available at: **http://www.dpi.wa.gov.au/metro/information/publications/cycling.htm**

[2,3] Government of WA (2001) *Getting Western Australians More Active – A Strategic Direction Report from the Premier's Physical Activity Taskforce.*

- Make more widely available training for children in effective bicycle use and safety and integrate it into school programs. Programs such as Bike-Ed and the Vacation Bicycle Safety Education Program provide proper training and instruction in safe bicycle use for school children, but access to these programs is inadequate.
- Develop and implement a Statement of Planning Policy that incorporates integrated planning (for more detail, see Section 6.0). What use is a bike if a main road or a rail line without a crossing breaks the trip to school?
- Modify the *Road Traffic Code 2000* to allow adults and children to ride on all footpaths (currently only children under 12 may): their separation creates hazards and discourages riding to school. This will bring WA into line with Queensland, Tasmania, the ACT and Northern Territory.
- Develop a code of behaviour for shared paths.
- Path width and design should accommodate safe integration of bicycles and pedestrians, especially near schools; street furniture, signs, vegetation and poles should not constrict this space.
- Provide secure bicycle storage facilities at schools.

4.0

ENVIRONMENTAL AND HEALTH BENEFITS

Perth's dependency on cars is exposing the city to many of the problems faced by other cities with heavy car use, such as Los Angeles. Car emissions are a major source of Perth's growing air pollution problem, causing 49 percent of nitrous oxides and 40 percent of reactive organic compound emissions, and 13 per cent of the State's greenhouse emissions.

A growing body of evidence demonstrates the harmful effects of vehicle emissions on health, including major respiratory problems, cancer, premature death and health care expenses. The burden of disease attributable to traffic pollution may be at least as great as that caused by road crashes[4].

Traffic volume, speed and noise reduce the liveability of our suburbs, cause community dislocation and increase stress, death and injuries from road crashes.

Car dependency makes Western Australia vulnerable to oil supply shocks. Cheap oil availability is declining[5] and Australia's self-sufficiency is expected to decline to 32 per cent by 2015. Substantial petrol price rises are inevitable, with repercussions for household budgets and energy-dependent industries

By just walking or riding one kilometre to a railway station, a person can save 0.2-0.3 kilograms of greenhouse emissions and other pollutants[6]. The *National Greenhouse Strategy* acknowledges that alternative forms of transport such as bicycling and walking will contribute to improved air quality and reduced traffic congestion. Increasing bicycle riding is a relevant action under the Cities for Climate Protection Program.

Cycling to work can be a most effective way to achieve large health gains[7]. Bicycle riding and walking are recognised by Active Australia for their health benefits. Improving health can be a key incentive for people to start or continue bicycling. Increasing the physical activity of the workforce can have substantial benefits, including improved productivity and reduced sick leave: if an extra 10 per cent of the WA population became physically active, productivity gains of approximately $60 million would accrue each year[8]. Cycling to work has been suggested as more acceptable and more cost-effective than formal work-site exercise classes, with improvements in employee morale, productivity and loyalty. The British Medical Association estimates that there is a 20:1 advantage in years of life gained by bicycle transport users compared to the risks of death from crash injuries.

Eighty four percent of people in the Perth metropolitan area want transport policy and planning to favour environmentally friendly modes, and half of the population believes planners have an exaggerated impression of the community's demand for car-oriented planning (Transport, 2000: *TravelSmart 2001, a 10 Year Plan*). Present transport planning priorities clearly need to be reversed, placing non-motorised transport first.

[4] Woodward, A, Hales, S. and Hill, S.E. (2002) *The motor car and public health: are we exhausting the environment?* MJA 177 (11/12) 592-593. Accessed at: http://www.mja.com.au/public/issues/177_11_021202/woo10480_fm.html (June 2003).

[5] Bourne, Greg (2003). *Sustainable transport*. Speech delivered to the 5th World Energy Conference. Perth, March 2003. Available at: http://www.bp.com.au/news_information/speeches/speeches.asp (accessed May 2003).

[6] Government of WA (2001) *Getting Western Australians More Active – A Strategic Direction Report from the Premier's Physical Activity Taskforce.*

[7] Cavill, N. and Davis, A. (2003) *Cycling and Health – A Briefing Paper for the Regional Cycling Development Team (UK)*. Accessed at http://agbu.une.edu.au/~drobinso/UKCycling_health.pdf May 2003.

[8] Government of WA (2001) *Getting Western Australians More Active – A Strategic Direction Report from the Premier's Physical Activity Taskforce.*

Recommendations

- Increase funding and support for policies and programs that encourage active and less environmentally damaging forms of transport, such as *Cycle Instead, Perth Bicycle Network, TravelSmart, and Safe Routes to School*. In South Perth, TravelSmart achieved a 17 per cent reduction in car use and a 61 per cent increase in bicycle use. Cycling volumes on Perth shared paths have doubled over the last four years.
- Develop urban design policies to encourage bicycle use and reduce the relative convenience of car travel. For example, reduce speed limits and parking, encourage intensive development on under utilised inner suburban land, and plan for people to live closer to destinations such as schools and shops.
- Increase the costs of motoring (eg fuel prices, parking and congestion charging), to reflect the true costs to society in land use, pollution and greenhouse gas emissions, road trauma and reduced neighbourhood liveability.
- Initiatives to increase bicycle use should receive greater recognition and attract assistance under environmental improvement schemes, focussing on greenhouse gasses, pollution, energy and physical activity.
- The public health and physical activity network should embrace bicycling as a proactive means of improving community health and fitness.
- Container deposit legislation should be introduced for WA. Broken bottles are a significant hazard for bicyclists. There is also a significant cost to the community in collection and recycling of bottles. Container deposit legislation operates successfully in South Australia; it has been estimated its introduction in NSW would lead to a net benefit of $70-100 million each year and provide an additional 1,000-1,500 full time jobs.

5.0

GOVERNMENT MANAGEMENT OF BICYCLE TRANSPORT AND INFRASTRUCTURE

Bikewest was established in 1987 to develop and administer State Government programs and to encourage increased use and safety of bicycle travel. Its success has been widely recognised, but its staffing and resources have been dwindling. Its functions were:

- Implementing policies related to the use of bicycles in the State
- Coordinating and guiding activities of State and Local Government and community groups
- Increasing public awareness of the advantages of bicycle use and the need for bicycle safety
- Progressing programs to improve engineering, education, safety and law enforcement

Bikewest did not take over delivery of bicycle programs and services from the many Government Departments with bicycle-related roles, but influenced delivery through financial leverage and its technical credibility. Roles that evolved for Bikewest included designing and constructing the Perth Bicycle Network (PBN), reviewing major land sub-divisions from a bicycle perspective, providing engineering advice on bicycle projects and issues, coordinating hazard reporting, monitoring bike use, bicycle safety education and safe routes and modal integration programs, bike week activities, bike maps, brochures and information and bicycle use surveys. Unfortunately significant gaps are appearing in Government bicycle management.

Cycling is a relatively immature form of travel in WA and needs coordinated, dedicated, specific support and expertise that is not otherwise available. Cycling is not only a transport issue; increased cycling can deliver benefits across a range of government responsibilities; it impacts on health, sport, recreation, the environment, land use planning, tourism, education and policing. However, a clear focal point for expertise on, and responsibility for, bicycle transport matters and policy, for coherent championing of the rights, requirements and benefits of bicycle transport usage, and for research, development and implementation of best practice and innovation, and evaluation of programs needs to be re-established.

Government should use its position to facilitate, enable and encourage greater bicycle use. It can play a role in advocacy, technical advice, quality control and implementation of standards and guidelines.

Guidelines could contain information on bicycle needs and engineering recommendations, focusing on design and installation of safe and effective facilities, and uniform engineering practices. They could also support evaluation of proposed infrastructure projects, to reduce costs of checking, rejecting, revising and retrofitting. This needs to be subject to adaptive evolution so that best practice is the norm.

Recommendations

- All regional, subdivision and major infrastructure development applications should be individually checked to ensure that bicycle transport is both practical and encouraged. Minimum standards should be developed.
- All urban, regional centre and country town transport planning should provide safe, convenient access for bicycle transport. Upgrades for other modes should enhance bicycle transport functionality. Detailed structures and mechanisms are needed to ensure that bicycle transport is no longer overlooked.

- Government advocacy and intervention is required to ensure an integrated approach is achieved in construction and design of bicycle routes, achieving continuity and consistency of standard. This role includes preventing closure, disruption or hazard construction on bicycle routes. Similarly, a body to lobby against a growing tendency to close small sections of network to bicycles, shifting liabilities and risks from one administration to another and to other parts of the system without concern for the bigger picture risks issues.
- Provide assistance to responsible authorities in WA in the selection, design and implementation of engineering facilities for bicycle traffic. This would include provision of technical resources and professional advice.
- A cooperative whole of Government approach is needed for the broad benefits of cycling to begin to be realised and ensure that greater attention is given to sustainable transport modes.
- The effectiveness of the WA Bicycle Committee should be reassessed, including whether it should report directly to the Minister and its level of resourcing. If the WABC is to maintain a strategic charter, then there is also a clear need for a body with operational oversight.
- Opportunities to use urban rail reserves for longitudinal bicycle paths need to be exploited, along with provision of greater transverse access to bikes and pedestrians.
- Government must continue publicity and promotion of bicycles use. Publicity should emphasise the environmental, recreational, health and economic benefits of cycling; disseminate maps and information on bicycle path networks and cycling facilities; make all road users aware of the needs of bicycles and promote better on- and off-road behaviour by cyclists; educate motorists and cyclists about their legal rights and road safety obligations; and promote bicycles as a preferred form of travel for short trips to school, work, shops, recreation and entertainment.
- Build the capacity of local Bicycle User Groups who are best placed to foster grassroots bicycle use and engage with authorities to identify opportunities and weaknesses in the bicycle transport system. Local governments, which play a key role in delivering bicycle facilities, should take advantage of Bicycle User Groups to harness a unique understanding of local bicycle needs.

Some examples where shortcomings in Government responsibilities create problems for bicycles:

- Harvest Lakes subdivision prevents practical bicycle access to the shopping centre and proposed Cockburn Train Station.
- No bicycle paths were provided to the Rous Head Rottnest Ferry terminal; roads were designed for cars and container trucks but not for families riding bicycles to catch the ferry to Rottnest.
- Perth City Council and the Kings Park and Botanic Gardens Authority will not allow bicycles to use the Mount Street bridge and Mount Elisa path respectively as safe and simple access routes.
- Transport to Shenton College issues were handballed between departments and levels of government, leading to flawed facilities that have subsequently had to go through expensive retrofitting.
- Decisions to change or close rail crossings, that seemingly shift liabilities away from the rail sector but disregard the consequential hazards to cyclists using alternative routes and fracturing of the community.

Railway reserve principal shared path.

6.0

ROAD DESIGN AND PLANNING

Integrated planning is vital to achieve a safe, bicycle friendly environment in urban areas that will entice would-be cyclists onto bicycles for local and commuter trips. Good planning features include separated, car-free, on- and off-road provision for bicycles.

Transport planning that gives priority to cars can restrict access to work, shops, community facilities and social support services for the half of the community that does not have a driver's license. It also exacerbates the shift in personal travel mode choices from active options to motorised transport.

Urban design, landscaping and engineering objectives should be sensitive to bicycle transport and adopt appropriate tools.

The costs for cyclist hospitalisations show that serious consideration in planning is imperative: the five-year average of cyclist hospitalisations in WA is 3,200 per annum (26 per cent of all road crash hospitalisations). With an estimated cost per hospitalisation of $360,000[9], cyclist crashes cost the State more than $1 billion per year, and this ignores fatalities ($1.8 million each) and accidents requiring out-of-hospital treatment.

Low cycling activity is often correlated with transport policies that pay little attention to the safety of cyclists. York City Council (UK) developed a transport strategy that placed 'vulnerable' road users at the top of the road user hierarchy and implemented appropriate traffic restraint measures. As a result, bicycle trips rose from 16 to 19 per cent between 1991 and 2000, car use declined from 55 to 53 per cent and there were 30 per cent fewer bicycle casualties[10].

Most roads in Perth do not comply with the principles of spatial requirements for bicycles as developed in the *Austroads Guide to Engineering Practice Part 14 for Bicycles*, yet there is excessive provision for motor traffic. The principle that "every street is a bicycle street", espoused in the *Bike Ahead Strategy*[11], needs to be imbedded in operational road planning and design. Appropriate road design standards must be applied to the construction and maintenance of road works undertaken by State and Local Governments.

Integrated planning requires commitment from all levels of government and allocation of priority to pedestrians and bicycles in city planning.

A Statement of Planning Policy that requires provision for bicycling on all roads (except freeways) would enable adoption of guidelines and standards across all levels of government. Guidelines and standards could form a code of practice (analogous to the Australian Building Code). Standards could include:

Contrast coloured bikelane between kerb and vehicle lane provides safe space for cyclists.

- Provision of adequate operational space for bicyclists. Where space is not practical, speed limits and road design should be used to promote cycling.
- Requirement for all major road (except freeways) and rail projects to provide for cycling, with bicycle lanes or paths. Highways must have sufficient shoulders or bicycle lanes, justifiable on road trauma costs alone where traffic flow exceeds 360 vehicles per day[12].
- Recognition of the importance of cycling and walking in local transport plans and road design and provisions to ensure safety while riding on local roads.
- Provision for safe, high-quality shared paths that meet the needs of all potential users, including cyclists, pedestrians and people with disabilities. Conflicts between users are usually a product of design that can be overcome with adequate operational space.
- Adequate, safe crossing points at major roads and railway lines.

Full nib squeezes cyclists into traffic.

- Appropriate road design and calming devices. Kerb extensions (nibs) and solid centre (blister) islands are becoming common but, when inappropriately used, create significant dangers to bicycles by leaving inadequate space for both cars and bicycles.
- Other good design principles: well-maintained environment (bike lanes and paths regularly cleaned of debris, such as broken bottles) and direct routes, separation and clear demarcation of bicycle lanes from other traffic. Good signage to indicate bicycle access. Adequate and well-sited facilities should be provided for bicycles (access, parking, showers).

Half nib gives more space to cyclists. Mountable kerb offers greater safety.

[9] Road Safety Council (2000) *Reported Road Crashes in Western Australia 2000*. Government of Western Australia: Perth, WA.

[10] Cavill, N. and Davis, A. (2003) *Cycling and Health – A Briefing Paper for the Regional Cycling Development Team* (UK). Accessed at http://agbu.une.edu.au/~drobinso/UKCycling_health.pdf May, 2003.

[11] *Bike Ahead: Bicycle Strategy for the 21st Century.* WA Government, 1996

[12] Ogden, KW (1997) *The Effects of Paved Shoulders on Accidents on Rural Highways*, Accident Analysis and Prevention, 29 no. 3.

Recommendations

- Review standards and guidelines for cycling-related infrastructure[13] and incorporate them into a code of practice through a Statement of Planning Policy.
- State transport funding to local authorities should prioritise healthy transport modes and be conditional on road and path facilities complying with the code of practice.
- Encourage bicycling on local roads by good design and amenity.
- Commission an independent bicycle safety audit on traffic calming devices used in WA, with subsequent, clear recommendations to local governments concerning acceptable designs and modifications to existing structures to improve safety for bicycles.
- Reduce urban sprawl. As the average trip length to work increases, so the potential to substitute bicycle journeys for motor vehicle journeys decreases.
- Engineering projects for roads and for bicycle facilities should be subject to rigorous professional checking for safety and efficiency of bicycle transport. It is not appropriate to expect community groups to detect and seek rectification of design mistakes – consultation should be no substitute for good initial design.
- Road safety audits should be undertaken by auditors with demonstrated competency in bicycle and pedestrian needs and safety.
- Provide professional training to emphasise the need to design for bicycles on roads and thus build the capacity of road planners, designers, auditors, engineers and contractors to integrate bicycle infrastructure needs into transport planning. This should focus on bridging the gap between conventional and emerging best practice road design, including bicycle and pedestrian facilities. A good basis for this is the Main Roads WA course, *Infrastructure for Non-Motorised Transport – Cycling*, with the addition of a requirement to demonstrate competency.
- The hazard reporting system should be maintained and used more proactively to identify and rectify problem areas and facilities, and underlying design, construction and maintenance issues.
- Greater use should be made of Roads to Recovery Funding for local bicycle needs. The funding provides for construction, upgrade or maintenance of roads and can include bicycle/pedestrian paths, bridges and tunnels.

- Reduce use of kerbside parking, particularly in residential areas, or change the road configuration to provide segregated transit space for bicycles. The assumption that car owners have a 'right' to leave vehicles stored on road space that bicycles could otherwise use requires challenge; bike lanes are a more reasonable expectation than on-road parking facilities. Furthermore, the number of child casualties goes up exponentially when more than 50 per cent of the kerb is obscured by parked cars[14].
- Traffic signal controllers should recognise a bicycle as a vehicle at all intersections – the current practice ignores the legitimacy of bicycles and their standing within the *Road Traffic Code*.
- Appropriate criteria need to be developed and used and driver behaviour changed before installing parallel walk phases that permit vehicles to turn across the path of people walking their bikes across a road with a green pedestrian light.
- Transport infrastructure project evaluation should adopt triple bottom line criteria and include transport externalities such as road trauma, greenhouse emissions, pollution, noise, health and exercise.

Some examples of recent road design and planning shortcomings:

- A driveway between Stirling Highway and Methodist Ladies College that gives motorists higher priority than cyclists in a bicycling environment.
- A flawed assessment system of safety treatments that uses criteria involving current usage (of an unsafe local environment) by vulnerable road users, rather than potential usage if the environment was safer.

[13] Austroads (1999) *Guide to Traffic and Engineering Practice Part 14 Bicycles*. Austroads, Sydney.

[14] Adams, S (2003). *Road Crashes and Child Injury Trends*. National Roads and Motorists' Association Limited and the Motor Accidents Authority. Accessed at: http://www.mynrma.com.au/member_centre/your_nrma/community/mobility_safety/pdf/adamspaper.pdf May, 2003.

Level bike crossing.

7.0

PERTH BICYCLE NETWORK AND BICYCLE INFRASTRUCTURE

Bicycle network facilities need to take into account the special operating characteristics of the bicycle and the diversity of users and their needs. Key issues are:

- Reducing encounters between people who ride bikes and high volumes of fast moving traffic. The best practice method of achieving this is by separation, e.g. marked bicycle lanes and shared paths.
- Reducing the speed difference between bicycles and other modes where separation is impractical or undesirable. This applies to roads shared with cars and pathways shared by bicycles and pedestrians.
- Treating crossing a street or road by a shared path as an intersection, which is designed and built according to normal intersection design principles.
- Building and managing all off road bicycle facilities as recognised transport facilities.
- Designing bicycle network facilities for efficiency, comfort and safety to suit the wide range of people who ride bicycles.

The Perth Bicycle Network (PBN) is an integrated network of on- and off-road facilities for bicycles. At the 2001 State election, the Australian Labor Party committed $20 million for development of the Perth Bicycle Network in Perth and regional centres over four years. Stage 1 was recently completed but another $25 million is needed to complete Stage 2, while Stages 3 and 4 are unfunded.

A lack of amenities for bicycles and cyclists is often stated as a major barrier to cycling. Amenities should include appropriate bicycle rack designs, sheltered racks, secure storage, lockers, access to showers and a changing area. Preventing theft by siting bicycle racks in well supervised areas is an efficient form of security. Failure to include bicycle amenities in town planning schemes means they are rarely provided, while facilities for car parking are always considered.

Communities and transport systems that provide safe, comfortable, attractive, coherent and direct routes for bicycle riders have demonstrated higher levels of cycling.

Recommendations

- Provide financial support of $10 million per year for the PBN (an insignificant sum in a capital works budget that runs to billions of dollars). The doubling of bicycle riding on PBN shared paths over the last four years demonstrates the value of this investment.
- Provide appropriate signage and pavement marking on bicycle paths. Paths that are not properly signed make it impossible for cyclists to determine whether or not they may ride on them.
- Protection and management of *PBN* routes and conditions on them is needed to prevent them being severed or hazards created on them. What use is a bike if banned from sections of major routes with no comparable alternative?

- End-of-trip facilities for bicycle transport should be part of all new town planning schemes, including for large and small commercial developments and office buildings. This should feature in the *Australian Model Code on Residential Development and the Australian Model Code on Urban Housing*.
- Employers should be encouraged to provide adequate bicycle facilities such as secure bicycle storage and showers.

8.0

DEMAND MANAGEMENT

The State Government's TravelSmart program is an innovative approach to managing car use and promoting alternative transport modes. It seeks to reduce car use by encouraging and facilitating the use of sustainable transport alternatives. Piloted in South Perth, it achieved a 17 percent reduction in car use and increased bicycle use by 61 percent, with a cost benefit ratio of 44:1 over 10 years[15]. Substantial benefits were recognised in a number of areas: public transport fare revenues, improved health and fitness, greenhouse gas emissions and pollution, road capacity requirements and road trauma.

In Copenhagen, one third of the population commutes to work by bicycle and bike use is expected to continue growing as city planners increase already high parking fees by 3 per cent annually, impose high fuel taxes and vehicle registration costs and concentrate future development around rail lines.

Recommendations

- The *Cycle Instead* and *TravelSmart* programs are important and need greater funding.
- Fund more transport development workers, with skills in cycling and walking planning and advocacy. These positions would work as advocates with bicycle organisations and bicycle user groups to increase the level of cycling and walking in the community.
- Car parking policy should focus on maximum parking bays, rather than minimum, and parking should be priced to discourage car use.
- Reduce traffic capacity of roads. Recent studies have shown that reducing capacity leads to traffic evaporation[16].

[15] Kerr, I (2002) *Preliminary Evaluation of the Financial Impacts and Outcomes of the TravelSmart Individualised Marketing Program – Update*. WA Department of Planning and Infrastructure.

[16] *Traffic Evaporation in Urban Areas*, DG Environment, EC 2000

[17] Richard Denniss (2003). *Implementing policies to increase the sustainability of transport in Australia*. In Proceedings of the Western Australian Beyond Oil Conference. Sustainable Transport Coalition, February 2003.

- Encourage bicycle travel to work, by eliminating GST on bicycles, reducing employer-sponsored personal use of cars, and offering alternatives such as salary packaged bicycles.
- Reform Fringe Benefits Tax arrangements that provide perverse incentives for excessive road travel, while providing no incentives for bicycle use or public transport[17]. The use of company cars for private use is taxed concessionally, despite the recommendation of the Ralph review of business taxation.
- Promotional and encouragement activities, such as provision of bike maps, bike week, bike to work breakfast, to continue.

9.0

MODAL INTEGRATION

Combining the bicycle with public transport realises benefits for the rider and passenger and the public transport operator. Effective bike linkages with public transport can extend the range and usefulness of bicycles, especially for commuting but also for activities such as tourism. The bicycle can potentially be used at both ends of public transport trips. Public transport operators can significantly increase the catchment areas for their system by providing for bicycles and thereby also promote reduced car use.

Bike park-and-ride has been mainly responsible for a 12 per cent increase in workday train travel in the Netherlands[18]; it has shown that bike/rail is a good way of substituting for long urban car trips.

In Berlin, a strategy to promote bikes on trains has resulted in 1 in 26 passengers being accompanied by a bicycle.

Provision for wheelchairs, prams and bicycles is a common feature of trains in Europe, and Brisbane has introduced a BikeBus with front mounted bike racks.

Recommendations

- All public transport to be designed to allow and encourage use by cyclists at all times. Provision of designed facilities to overcome operational and spatial conflicts should be an essential requirement for all new or upgraded public transport infrastructure and services.
- Commitment to more rolling stock and buses that allow access for people who need to bring bicycles, wheelchairs, and prams aboard. Spring-up seats can provide 'common space' areas on trains.

[18] ECMT (2001) *National Peer Review: The Netherlands*. Implementing sustainable urban travel policies, European Conference of Ministers of Transport, OECD Publications Service, Paris.

- Secure and accessible bicycle storage and parking facilities to be provided at bus and train stations to encourage riding rather than driving to the station.
- Safe and comfortable shared access routes should be provided to public transport.
- The Building Better Stations program should ensure that stations are designed to facilitate access for bicycles. This should include railway crossings and underpasses that cater for bicycles, so as not to fragment bicycle routes and communities.
- Bicycle infrastructure should be planned and allowed for within the New Metropolitan Rail project.
- Bus lanes must not exclude bicycles from sections of roads. Provision for bicycles can be ensured either by allowing dual use of bus lanes or by providing an off road path.

Some examples of shortcomings in integration between bicycles and other transport modes:

- The Kwinana Freeway failed to provide separation for cyclists at intersections with Leach Highway and South Street.
- Designs for Victoria Park and Carlisle station upgrades do not show any provision for bicycle access for the Perth-Armadale shared path.
- Bus lanes in Hampton Road, Fremantle, endanger cyclists by commandeering the kerbside lane and forcing bicycles into the central lane of a busy road. Bicycles successfully share bus lanes in many parts of the world, including Paris, Toronto and Vancouver.
- Current rolling stock for the rail network has inadequate provision for bicycles and policies that restrict carriage of bicycles at peak hour.

Bicycles share bus lane in Paris.

10.0

SUBURBAN ROAD SPEED LIMITS

We welcome the recent speed limit reduction to 50 kph for local roads, but due to inadequate enforcement and education, little real reduction in vehicle speeds has been achieved.

- It takes 42 metres (several suburban house blocks) for a car travelling at 50 kph to stop, so 50 kph is still too fast.
- At 32 kph only about 5 per cent of people struck are killed and injuries are minor; at 48 kph 50 per cent are killed and many seriously injured; while at 80 kph most do not survive.
- Metrication of Australia's speed limits from 35 mph to 60 kph instead of 50 kph is likely to have caused about 2,000 extra pedestrian deaths since 1974[19].

It has been widely documented in Australia, Europe and North America that where speed limits have been reduced, significant reductions in accidents and fatalities have been achieved. There is also a reduction in traffic noise, air pollutants and fuel usage and less travel time advantage over public transport. Many American and European cities already have 40 kph and even 30 kph limits in residential streets (eg the Hague in the Netherlands). The European Transport Safety Council recommends that member states adopt a 30 kph or lower speed limit in residential areas. A review of 20 mph zones in England, Wales and Scotland found, among other things, that crashes involving cyclists had fallen by 29 per cent20. Unley in South Australia has had a 40 kph limit since 1999 following surveys showing 70 per cent community support. Reducing local speed limits effectively creates wealth through reduced road crashes and fuel use and more liveable neighbourhoods.

Recommendations

- Local speed limits should be further reduced, for 'home zone' areas where there are no significant trip attractors and there is majority support from residents. Local speed limits should be set to encourage an environment conducive to cycling and walking.
- The general urban speed limit on arterial roads, distributor roads and most urban highways should be lowered to 50 kph.
- A performance indicator of the effectiveness of speed reductions should not only be crash statistics but also frequency of people walking and riding.
- Less engineering and more promotion, education and, as necessary, enforcement to obtain real speed reductions on local roads.

[19] McLean et al (1999) *Speed and the risk of crash involvement*. Road Safety Conference. Accessed at http://www.officeofroadsafety.wa.gov.au/Facts/papers/contents.html.

[20] Cavill, N. and Davis, A. (2003) *Cycling and Health – A Briefing Paper for the Regional Cycling Development Team* (UK). Accessed at http://agbu.une.edu.au/~drobinso/UKCycling_health.pdf May, 2003

11.0

ROAD SAFETY AND BICYCLE AND DRIVER EDUCATION

The Road Safety Council does not adequately address issues related to cycling. Little leadership has been shown by the Council to rectify road hazards that greet users of active transport, and monitoring of bicycle accidents has been less rigorous than for motorised modes.

There are two forms of crash statistics: data recorded by police as hospital admissions and data from the hospital system. Data gathered by the police suffers from significant under reporting, particularly of bicycle crashes, and hospital data is more reliable (in 2000, 749 cyclists were admitted to hospital but police statistics only recorded 70). Use of police crash statistics leads to serious under-estimation of the need for attention to bicycle safety.

Twenty six per cent of WA's road crash hospital admissions are pedal cyclists, but almost none of the funds of either State or Federal Black Spot programs (www.dotars.gov.au) are allocated to facilities to reduce bicycle crashes. Further, black Spot projects often make the road system less safe for bicycles, particularly through construction of traffic calming devices that are hazardous to bikes.

We need planning for bicycle safety through effective regulations and improved facilities, and education for cyclists and motorists about safety and laws relating to cycling.

Some driver issues for cyclists include: car doors opened into the path of cyclists; local speed limits; affirmation of the legitimacy of cyclists on roads; encouraging motorists to give enough space to bicycles. The 'share the road' slogan has a lot going for it.

Recommendations

- The Road User Representative on the Road Safety Council should represent all road users, especially bicycle riders and pedestrians. This reiterates Action 3.2 in the State Government's 1996 Bicycle Strategy document[21]. Practical and effective guidelines and accountability must be established for the Road User Representative on the Road Safety Council to much better represent the needs and rights of cyclists and pedestrians.
- Encourage bicycle friendly local area traffic management through professional training and road safety audits to ensure that road designs and modifications to roadways do not reduce safety for cyclists but enhance it.
- Review bicycle traffic laws, especially for riding on footpaths (see section 3.0 recommendations on Road Traffic Code 2000).
- Modify car insurance laws, so that in the event of an accident involving bicycles or pedestrians, drivers would be deemed to be at fault unless proven otherwise, as is the case across most of Europe[22]. In the Netherlands, for example, in the event of an accident, to avoid liability the motorist must prove that the cyclist ignored traffic regulations and acted recklessly. The reasoning is that cyclists are in a weaker position with respect to potential injury. The Dutch government sees this as another way to encourage people to leave their cars at home[23].
- Provide for an adequate level of enforcement of road traffic laws, especially relating to cyclists and pedestrians.
- Modify the Motor Vehicle (Third Party Insurance) Act to remove the anomaly that means that in the event of a car door being opened by a passenger into the path of a cyclist, negligence needs to be proven against the driver or owner of the motor vehicle.
- Develop and widely apply educational programs aimed at improving skills and attitudes and promoting safe and legal cycling and driver behaviour.
- Adopt hospital crash statistics (rather than police crash statistics) when considering resource allocation priorities.
- Black Spot funds must be aimed at improving the safety of all road users, not just for cars, and should be distributed more equitably to rectify road and path issues affecting cyclists and pedestrians.
- Along with the adage that 'every street is a bicycle street', every program of government is potentially a bicycle program and those that deliver them need to be aware of potential impacts on bicycles and delivered appropriately. Key Performance Indicators should include measures of enhanced bicycle and pedestrian access and safety.

[21] *Bike Ahead: Bicycle Strategy for the 21st Century.* WA Government, 1996

[22] BTRE (2002) *Greenhouse Policy Options for Transport* http://www.btre.gov.au/docs/r105/index.htm)

[23] http://www.transalt.org/press/magazine/982MarApr/10auto-free.html

Some examples of shortcomings in road safety and consideration of legal rights of cyclists:

- Most traffic lights deny right-of-way to cyclists: they have to wait for a car or ride through a red light.
- Marking of bicycle and shared paths is erratic so cyclists are not certain which paths they may legally ride on.
- The Road Safety Council has only one 'Road User Representative', currently a staff member of the RAC, leading to a potential conflict of interest as far as bicycles are concerned.
- In WA, turning traffic rarely gives way to pedestrians or bikes (with rider on foot) at intersections, despite requirements to the contrary in the Road Traffic Code.

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