

SUBMISSION TO THE TRANSPORT, HOUSING AND LOCAL GOVERNMENT COMMITTEE

INQUIRY INTO CYCLING ISSUES



Brisbane Central Business District Bicycle User Group
GPO Box 2014
Brisbane Qld 4001
www.cbdbug.org.au

26 July 2013

Table of Contents

1	Executive Summary
2	Introduction
2.1	Existing State Government policies on cycling
2.2	Government expenditure on cycling in South East Queensland
2.3	Benefits from investing in cycling
2.4	Current condition of Brisbane's cycling infrastructure
2.5	Current level of cycling in Brisbane
2.6	Perceptions of cycling
3	Comments on 18 June 2013 department briefing
4	Crashes between bike riders and motorists
4.1	Cyclist fatality trends in Queensland: 2006 to 2011
4.2	Cyclist fatalities in Queensland involving heavy vehicles
4.3	A cyclist's first hand account of a cyclist-motorist collision
5	Existing and alternative road rules
5.1	Single file cycling
5.2	Riding on footpaths
5.3	Introduction of additional safety clothing (hi-viz vests) for cyclists
5.4	Banning cyclists from riding on roads with a speed limit greater 60km/h
6	Penalties and sanctions for cyclists and road users
6.1	Disparity in respective risks created by cyclists and motorists
6.2	The deterrence value of increased fines
7	Proposed introduction of bicycle registration
7.1	Disparate views within the community
7.2	What other jurisdictions have implemented bicycle registration and why?
7.3	Analysis of arguments for and against cyclist registration
8	Conclusions
9	Brisbane CBD BUG background information

Appendix 1: CBD BUG proposed changes to the Queensland Road Rules

Cover Photo: **The “ghost bike” at the intersection of Blacon Street and Moggill Road, Kenmore, in memory of cyclist road victim Richard Pollett - killed in a crash with a cement truck on 27 September 2011.**

1 Executive Summary

This submission highlights the multiple failures on the part of all levels of government in terms of their stewardship of road transport network policy, planning and delivery in South East Queensland and across this state.

These failures have occurred through their undue focus on facilitating transport in urban environments via private motor vehicles, to the almost complete exclusion of the sustainable active transport modes of cycling and walking. This approach has been ongoing despite the community repeatedly expressing a desire for governments to enable these alternatives.

There is a wide range of negative outcomes at the societal and individual levels from this inappropriate approach. One of the most immediate is that on a daily basis cycle commuting continues to be a marginalised activity and cyclists are placed at unnecessary risk of injury and death. The tragic and avoidable loss of human life in this manner is inexcusable.

Apart from the lack of safe and direct infrastructure that would make cycling a more widely attractive transport mode, the overwhelming bias towards motorised travel in the Queensland Road Rules is the other major restraint on the growth in cycling's modal share.

The way forward on these issues has been clear for a long time. Overseas examples abound of cities that have made dramatic changes in terms of the action taken to provide more choices for residents in how they will travel - examples include: Bogotá (Colombia); Portland (Oregon, United States); Amsterdam (The Netherlands); and London (England).

These locations and a large body of research show that in the same manner as the induced traffic that occurs when new road capacity is created, after quality cycling infrastructure is installed the cyclists will come.

But before this happens the first and essential step is for governments to develop and apply a genuine will to fostering travel behavioural change.

Recommendations for change are made throughout this submission. The CBD BUG hopes the substantial effort required to write this submission has not been wasted.

2 Introduction

2.1 Existing State Government policies on cycling

The Queensland Government had explicitly recognised the benefits of cycling and that it needs to actively increase the proportion of the population who choose to ride a bicycle for transport (as opposed to recreation and sport) in order to derive the individual and societal benefits. The following section highlighted some of the key Queensland Government documents in this regard.

Queensland Cycle Strategy 2011 – 2021

The *Queensland Cycle Strategy 2011 – 2021* presents the Queensland Government's vision is to increase the level of cycling in the community. This vision is specifically to "get more people to cycle, more often for school, work, recreation, shopping and social trips".

Importantly, this vision clearly states an intention to focus on encouraging the use of cycling as a form of transport i.e. for utility purposes, as opposed to cycling for recreation.

This document states progress will be tracked through a target of doubling cycling's share of commute trips to work by 2021, and tripling these trips by 2031. In seeking to achieve such low growth rate of commuter cycling we regard these targets as hopelessly unambitious and indicative of lack of genuine commitment. Current growth rates will not even meet these low targets.

The baseline against which progress towards the target will be measured is the 2006 level of 1.4% of commute cycle trips per day. According to the data obtained through the ABS 2011 Census Queensland's statewide level of utility cycling was 1.3%, indicating nil progress has been made towards achieving the strategy's target.

This strategy states the benefits flowing to the individual from cycling are:

- improved health and fitness (improving cardiovascular fitness and losing unwanted kilos) **NOTE:** does not mention the psychological benefits from regular cycling.
- save time (by combining exercise with a cycling trip) **NOTE:** does not mention the time saved from not being caught in traffic congestion or waiting for public transport or the time saving to others who choose to drive through the reduction in congestion..
- save money (not having to pay for fuel, parking, registration or insurance) **NOTE:** does not mention one of the major costs of vehicle ownership/usage being depreciation nor does it mention vehicle maintenance.
- environmentally friendly (cycling produces negligible emissions and has minimal impacts on the environment).

As a result of these failing to implement its own policies, TMR has not met its own targets for increasing cycling in Queensland. In 2003 TMR set itself targets of a minimum of 50% increase in the proportion of all trips made by bicycle throughout Queensland, and 8% of all trips to be made by bicycle in south east Queensland by 2011. However, cycling rates in most Queensland local government areas have remained constant or declined over the target period.

The CBD BUG's view is that this strategy is essential for providing the overarching government statement that it intends to increase commuter cycling levels within the community and for setting the key performance target/s.

The target to be achieved for cycling's share of commute trips needs to be changed to a stretch target i.e. cycling to comprise 10% of trips by 2018, to indicate the Queensland Government's genuine intention to grow cycling as a viable transport alternative to the private motor car. A comparable shift of infrastructure funding from motoring to cycling is required to support this commitment.

Department of Transport and Main Roads *Cycling Infrastructure Policy*

This policy (<http://www.tmr.qld.gov.au/Travel-and-transport/Cycling/Cyclists.aspx>) states that along principal cycle routes, the department will positively provide for cyclists in transport infrastructure projects.

On other routes, the department will seek to make state-controlled transport projects cycle-friendly by incorporating cycle-friendly design. This may include the *economical* (emphasis added) retrofitting of roads where necessary to accommodate cyclists.

Positive provision for cyclists under this policy includes marked bicycle lanes, bicycle or shared paths or other suitable facilities. Cyclist-friendly provision involves road design that makes it easier and safer for cyclists to use a particular section of road.

This policy applies to all state-controlled transport projects and corridors, including government funded infrastructure projects, upgrades and sponsored projects at all stages of the transport network infrastructure process.

The CBD BUG views the development of this policy as a positive step. However, it falls well short of the policy that should have been developed to enable cycling's growth. Principal among these shortcomings is that the policy only applies to state-controlled roads i.e. roads controlled by local governments are excluded. Within the Brisbane Local Government Area there are 5,887km of roads, of which only 287km are state-controlled, meaning that this policy applies to less 5% of Brisbane's roads. (Source: http://www.brisbane.qld.gov.au/documents/about%20council/Transport%20Plan%202008-2026/transport_plan_for_brisbane_2008_v3.pdf)

This policy has also been a failure because it has not been applied in the spirit with which it was intended. A prime example of this implementation failure has been the provision of cycling infrastructure paralleling the Gateway Arterial Road. The Queensland Government has continued to direct hundreds of millions of dollars into successive upgrades of the Gateway Arterial Road, while neglecting to provide corresponding cycling infrastructure. It has adopted this approach on the basis that there is existing cycling infrastructure (Bulimba Creek bikeway) along the same corridor. This is despite this cycling infrastructure being in no way comparable to the standard provided for motorists as it is; narrow; in-direct; flood prone; unlit after dark; remote from passive surveillance; and on the whole good for little other than weekend recreational riding.

Another example was that consultation with cyclists was not pursued as part of the delivery of the Airport Link project, and ultimately the project failed to provide any connectivity for cyclists from the northern suburbs of Brisbane to the CBD.

In November 2012 the Queensland Government ignored this policy when it cancelled the previously announced construction of the planned Richlands to Springfield bikeway. This 5km bikeway and 2km footpath was going to be built in conjunction with the Centenary highway upgrade and rail line and would have allowed residents easy access to the rail stations by bicycle as well as access to shops. It would have also linked the Centenary bikeway all the way to Toowong.

Translink's *Public Transport Infrastructure Manual*

As the major coordinating authority overseeing Queensland's public transport system TransLink has recognised the importance of integrating cycling with the public transport network in terms of both its infrastructure and services. (Source: <http://translink.com.au/resources/about-translink/what-we-do/infrastructure-projects/public-transport-infrastructure-manual/2012-05-public-transport-infrastructure-manual.pdf>)

This has been an important step as apart from its ability to reduce demand on public transport services cycling can also complement public transport, most importantly through expanding the catchments of stations and stops through the installation of end-of-trip facilities e.g. bike parking.

The CBD BUG views the development of this policy as a positive step. In addition Translink's formerly siloed approach to cycling i.e. because cycling is not public transport Translink has no responsibility towards fostering this mode, has to a large extent been eliminated.

Nevertheless there are still gaps in Translink's approach that cause the growth in cycling to be impeded. In particular, where land corridors have been recently acquired to enable new busways these have not included sufficient space to also accommodate new cycleways. A prime example is the section of the Eastern Busway that now parallels Old Cleveland Road from O'Keefe Street, Woolloongabba to Main Avenue, Coorparoo. As a result of the marginal additional cost required for a cycleway not being included as part of this project eastern suburb cyclists are now left to continue using the high risk route along Old Cleveland Road – a daunting prospect for potential cyclists. Such windows of opportunity generally only occur once in a lifetime, with the political and economic costs of retrofitting cycling facilities being so prohibitive that it is now doubtful that a bikeway will ever be constructed adjoining this bus infrastructure.

The South East Busway also failed to fully capture the opportunity to build a cycleway at the time of construction. The ultimate cost of this cycleway will be many times what it would have been had it had been constructed at the same time as the busway.

2.2 Government expenditure on cycling in South East Queensland

Department of Transport and Main Roads (TMR) Service Delivery Statement

TMR's annual Service Delivery Statement (SDS) perfectly illustrates the car-centric bias of this department, to the disadvantage of sustainable human powered transport modes such as cycling and walking.

Throughout the TMR 2013-14 SDS there are numerous references to motorways and motorists, while the budget does not contain a single mention of cyclists or pedestrians.

Commencing in 2009-10 there was a performance target in the TMR SDS titled "Bikeways – kilometres completed", which reported on the infrastructure provided via grants to local governments. However, as the following table shows, the target was only achieved once during five years, prior to being discontinued in the 2013-14 SDS.

TMR reported performance against measure "Bikeways – kilometres completed"

Budget year	Previous year target (km)	Estimated Actual (km)	Estimated Actual (%)	Budget year target (km)
2009-10	99	66	66.7%	69
2010-11	69	45	65.2%	41
2011-12	41	45	109.8%	45
2012-13	45	20	44.4%	35
2013-14	35	17	48.6%	N/A
Total	289	193	66.8%	-

The 2013-14 SDS indicates this current financial year TMR will spend in the order of \$2.6 billion on this state's road transport network. The massive imbalance in road transport investment in Queensland is highlighted in TMR's presentation to the committee on 18 June 2013, which indicated that during 2013-14 it will spend a paltry \$30.4 million on cycling and walking cycling infrastructure. This equates to approximately 1.2% of TMR's 2013-14 road transport network expenditure (not even equivalent to the current woeful mode share of cycling). This massive imbalance is a major reason for the lack of growth in cycling's share of trips.

In response to previous questioning by the CBD BUG regarding the total amount TMR spends on cycling, TMR has indicated it is unable to provide an exact cost of the cycling infrastructure it funds, as much of it is bundled into the cost of road projects. TMR's answer to Question on Notice 7 from the Committee is that it cannot "separate expenditure on cycling facilities from overall project expenditure on road works on State-controlled roads".

However, the October 2012 cancellation of the 7km Richlands to Springfield bikeway by TMR to fund two extra northbound lanes of the Centenary Motorway extension (<http://www.brisbanetimes.com.au/queensland/bikeway-axed-for-centenary-motorway-widening-20121010-27d4n.html>) shows that TMR is able to identify its cycling infrastructure budget committed as part a road project.

One of the performance measures in the 2013-TMR SDS reveals the further lack of proper accountability by this department. A measure title "State controlled roads per 100 million vehicle kilometres travelled where the road condition was likely to be a contributing factor" is viewed as completely inappropriate. While the department claims to apply a safe systems approach to its operations that includes a "safe people" component, this measure only covers crashes where the road condition is a factor, thereby excluding fatalities due to human factors – which comprise the overwhelming majority of road crash fatalities.

Furthermore, this measure has an unsuitable denominator, (the major influence in any ratio). With the denominator being based on vehicle kilometres travelled (VKTs) the more kilometre TMR can encourage people to drive the higher the VKTs recorded, effectively making TMR's performance appear improved. The CBD BUG suggests this measure should be complimented with: "Total number of fatal crashes on State controlled roads per capita.

The CBD BUG suggests that until TMR has performance targets set in its SDS reflecting the Queensland Government's target for cycling as detailed in the *Queensland Cycle Strategy 2011 – 2021* TMR will continue to neglect its responsibility to act on enabling cycling as a viable alternative transport mode to the private motor vehicle via the delivery of new cycling infrastructure.

The CBD BUG also views TMR being able to report on its total annual cycling expenditure as vital, on the basis that unless something is reported on it's not seen as important.

The CBD BUG also proposes that there is a rebalancing of the total road expenditure budget - to reprioritise the active transport modes of cycling and walking above motorists in line with international best practice in transport and urban planning.

Brisbane City Council (BCC) cycling expenditure

The current BCC administration has committed to spending \$120 million on cycling from 2012 to 2016.

The 2013-14 BCC budget document indicates Council's 2012-13 cycling capital expenditure was budgeted to be \$31.8 million, while for 2013-14 BCC plans to spend \$75.9 million.

However, the bulk of this investment (\$55 million) will be spent on reinstating the New Farm to Howard Smith Wharves Riverwalk, the cost of which the CBD BUG understands to be largely funded by the Federal Government.

Another \$16.4 million in capital expenditure will go towards constructing key bikeway links in Brisbane suburbs, while a further \$1.3 million will be spent on enhancing safety and cyclist facilities.

Some of the larger BCC cycling capital projects to be funded through this year's budget are:

- Bicentennial Bikeway - Stage 3 Milton \$1.13 million
- Kedron Brook Area 1 (Uxbridge St to Sandgate Rd) Grange, Windsor, Albion \$1.00 million
- Gateway North Connections - Motorway - Schulz Canal Hendra, Nundah, Eagle Farm \$5.42 million
- Bulimba Creek Wishart Stage 3 Wishart \$1.25 million
- Cabbage Tree Creek Bikeway Stage 3 Aspley, Carseldine \$0.56 million
- Moggill Creek Bikeway, Brookfield \$1.65 million

Similar to TMR, much of the previous spending was hidden within road projects.

When viewed in isolation these amounts appear substantial. However, in the broader context of the total 2013-14 BCC transport budget of \$1.3 billion, cycling expenditure (net of the funding to replace the Riverwalk) amounts to just 2.1%.

In an identical fashion to the Queensland Government approach, the BCC transport budget exhibits a massive spending imbalance towards facilitating travel via private motor vehicle. Until there is a rebalancing of BCC's road expenditure budget - to prioritise active transport modes - Brisbane is highly likely to continue to be impacted by urban traffic congestion and the other negative consequences of excessive car dependency.



Cyclist-hostile BCC signage in Woolloongabba: Brisbane's bikeways abound with unnecessary and inappropriate signage telling cyclists to dismount.

2.3 Benefits from investing in cycling

With the ever increasing waistlines of Queensland residents, economic vulnerability to international oil price fluctuations, increased awareness of pollution and climate change coupled with the growing negative impacts of city sprawl: the need to lessen Queenslanders' automobile dependence for private travel has become more and more apparent.

According to research reviewed by the Centre for Accident Research and Road Safety - Queensland (CARRS-Q), every 10 kilometres cycled results in a social benefit of over AUD\$5.00, and a social cost from bicycle crashes of AUD\$0.20: (Source: *Monograph 5: Bicycle helmet research*, November 2010, CARRS-Q, Table 1, Part 2, page 10.)

Type of impact	Benefit (2008 c/bicycle km)
Decongestion benefit	24.28
Savings in user cost	16.39
Parking cost savings	1.00
Travel time costs	0.00
Bicycle crash cost	-2.03
Health benefits	1.42
Air pollution reduction	1.73
Noise reduction	0.85
Infrastructure provision	3.91
Greenhouse gas reduction	0.66
Total Net Benefit	48.22

Source: *Monograph 5: Bicycle helmet research*, November 2010, Centre for Accident Research and Road Safety - Queensland, table 1, Part 2, page 10.

The multiple benefits of cycling from an economic, social and health are manifest and have been widely documented. The following section provides just some of the reasons why cycling should be supported by governments at all levels and draws upon a very small part of the reputable work in this area.

Cycling helps reduce traffic congestion

Encouraging increased levels cycling by community members, as one of the only genuinely sustainable transport modes, counts among the more obvious and important ways to reduce car dependence in Australian cities.

The Federal Government has estimated the total social costs from traffic congestion in Brisbane in 2013 to be \$2.04 billion, rising to \$3.03 billion by 2020. (*Estimating urban traffic and congestion cost trends for Australian cities Working Paper 71 Bureau of Transport and Regional Economics Department of Transport and Regional Services Canberra, Australia*)

Too many cars leads to parking difficulties and traffic congestion and can also restrict the ability of children to travel safely to schools and other amenities without parental supervision (Mees 2000, p. 16). Given the wide range of problems associated with car-dominated cities it is obvious that a transformation of Australia's urban travel habits is required.

Cycling offers a transport option for people on low incomes

Because of the low costs of cycling relative to driving cars and using SEQ's high cost public transport system cycling provides economic and independent travel for those who might otherwise have their travel options restricted. It offers increased mobility to many groups of the population with low rates of car ownership, such as low income earners, unemployed people, seniors and those under 18 years of age.

Cycling provides health benefits

Cycling has significant population health benefits in both the child and adult population. Chief among them are the numerous health impacts associated with increased physical activity.

This benefit is particularly relevant in Queensland at this time in view of 1 in 3 Queensland adults (35.0%) being overweight and nearly 1 in 4 (22.7%) being obese in 2012. (*The Health of Queenslanders 2012*
http://www.health.qld.gov.au/cho_report/2012/documents/2012-cho-report-all.pdf)

The trend of Queenslanders towards being fatter has been recognised in the *Queensland Plan* with one of the priority questions posed to the community in this document being: how do we “embrace responsibility for an active and healthy lifestyle”.

While the community’s increasing rates of being overweight and obese are caused by many factors, one of these is our now sedentary lifestyle. One aspect of this lifestyle is driving cars for very short distances to make trips that only a few decades ago would have been covered by walking, cycling or public transport.

Exercise people derive while simply going about their everyday lives e.g. walking or cycling to work/school/shops etc is “incidental exercise”. It seems a large proportion of the population has been psychologically disabled by the focus of all levels of government on facilitating travel by private motor vehicle, so that the wider community will now not walk anywhere past their letterbox. This has largely eradicated incidental exercise. The incredulous reactions of people to being informed that a short trip has just been effortlessly made by bike are testimony to Australia’s car-centric culture and the manner in which the community has been conditioned to not walking or cycling for transport.

The irony of the current situation is not lost on cyclists when riding past suburban gyms with large carparks full of cars - driven there by people seeking a work-out. Adding to the irony is the fact stationary bike exercises are a common element of people’s gym sessions, while the same effect could have been obtained had these people cycled to the gym instead of driving.

Cycling helps keep down the costs of living

Keeping the costs of living down is another benefit from cycling. Helping families with the costs of living was a key theme used by major party candidates during the 2012 Queensland State Election.

With the costs of both petrol and public transport spiraling upwards cycling is a cheap alternative for households struggling to stay within their budgets.

Transport (15.5%) is second only to food (18.2%) as the largest item of household expenditure in Australia. The family car costs up to 55 cents per kilometre to run. In comparison, the cost of buying and maintaining a bike is around one per cent of the cost of buying and maintaining a car.

The family car costs on average 79 cents per kilometre to operate¹. In comparison, the cost of buying and maintaining a bike is much cheaper, and even if you already own a car, a bicycle is more cost effective than driving if you ride at least 20 kilometres a week².

Four out of 10 Queenslanders own a bike and more than half of all Queenslanders have a bike in working order in their household.

Using a bike for shorter trips may allow you to avoid buying a second car, which will save families thousands of dollars each year. The RACQ estimates that the cost of buying a new car every five years with an average mileage of 15 000 km per year varies from A\$84.63 to A\$194.90 per week.

Cycling 10 km each way to work each day will save about A\$1700 per year in transport costs (including all running costs and depreciation). Also, bicycle parking is usually free, easily accessible and more convenient than car parking. (Source: *Cycling Benefits*, <http://www.tmr.qld.gov.au/Travel-and-transport/Cycling/Benefits.aspx>)

Cycling helps community members re-engage with each other

The first question being asked of the community in the consultation for the Queensland Plan is -“In the context of living in the community, how do we move our focus from me to we?” <http://queenslandplan.qld.gov.au/>

The CBD BUG’s view is that encouraging more people to leave their cars at home and cycle instead would be a major step towards reducing the anti-social attitudes now widely evident in Queensland of “me first” - and the even more distasteful “me only”.

With their comfort and ease-of-use private motor vehicles have been an economic and social benefit through enabling the wider population to travel over distances at speeds that were only possible for previous generations via public transport e.g. trains, trams etc.

However, because of the danger and unpleasantness created by motor cars being driven in and through urban areas, in contrast to previous generations people are now much less inclined to spend their leisure time out in the street. Accordingly, with the exception of the small minority who live in cul-de-sacs and gated communities the overwhelming majority of the population has retreated from the streetscape to the relative peace and safety in their homes and backyards.

This has had tragic consequences for our community connectedness. Queensland towns and cities are now places where people living mere metres from each other, but who happen to be separated by a road carrying large volumes of fast moving traffic, are likely to never even know each other’s names.

In the decades prior to the car taking over the streets from human and animal-powered transport young children were able to play in the streets in front of their homes. With their children playing in the street parents were also drawn out of their homes, where they were likely to then start talking with their neighbours who were also out on the street. This led to neighbours knowing each and community relationships were thereby created and maintained.

For local communities to regain the streets from passing motorists it is therefore essential that motorised traffic is firstly reduced, and the remaining vehicles are slowed down from Queensland’s ridiculously high default urban speed limits.

People driving around in their air conditioned cocoons at the speed limit are also highly unlikely to meet/greet other people they encounter while driving. In comparison, cyclists encounter other cyclists and pedestrians on a human level without the depersonalisation created by steel and glass and as a result exchange greetings with others and even stop to talk.

Travelling around within their car's protection and safely separated from meeting people face-to-face also allows drivers' "inner bully" tendencies to emerge. This is seen every day in on-road situations such as drivers' aggressive use of car horns and tail-gating. This is another major point of difference to bike riders, who are without the physical separation afforded by a car and are much less likely to show aggression towards other people.

Cycling infrastructure is better value for city businesses than car infrastructure

The key question addressed in a case study that examined space utilisation in Lygon Street in Melbourne was "What is the economic value of replacing car parking with bike parking in shopping strips?" (Lee and March, 2007).

This study found that individual car users spend more money than cyclists in shopping strips (\$118 per trip compared to \$62 and \$1.08 per minute compared to \$0.79 per minute). However, because space occupied by cycle parking can accommodate 6 times as many bikes as the same amount of space for parking a car the space used by bikes generates 3.6 times more expenditure than car parking space (\$7 per m²/hr for cars versus \$31 per m²/hr for bikes).

The study also found that the types of businesses that derived the highest economic benefits from bike use were food/drink premises and clothing retailers.

These findings are not surprising, as people who regularly cycle instead of driving save money on their transport, and then have more disposable income to spend on food, entertainment, clothing and other discretionary purchases.

A third finding from the study, which aligns with other Australian data, is that it found 20% of people who drive did not have because they travelled distances that were less than 4 kilometres. The "worst" examples were the 6% of people who drove less than 1.5km: little more than a 5 minute ride when cycling "Dutch style" i.e. slowly and not wearing lycra.

On a dollar for dollar basis cycling infrastructure projects generate more jobs than road projects

An input-output modelling approach was used by in a case study that estimated the employment impacts of various transportation infrastructure projects completed by the city of Baltimore (Garrett-Peltier, 2010). The principal focus of this study was to compare the differences in employment resulting from bicycle and pedestrian infrastructure projects against other types of transportation projects.

Of the five types of infrastructure projects analysed in the City of Baltimore it was found that for a given level of spending on-street bike lanes created the greatest number of jobs. Each \$1 million spent for on-street bike lanes directly created 7.9 jobs and created a total of 14.4 jobs when the indirect and induced job creation effects were included. By comparison, pedestrian projects and bike boulevards created slightly fewer jobs: about 6 direct jobs and 11 total jobs for each \$1 million spent. The two categories of road repairs had the lowest employment effects, with 3 to 4 direct jobs and approximately 7 total jobs created for each \$1 million spent. Therefore, for a given level of spending bike lanes were found to create about twice as many jobs as road construction.

There were two factors identified as underpinning these results. Firstly, cycling and pedestrian projects tend to be more labour intensive and therefore have greater employment impacts than road projects, which involve a greater proportion of their total project budget being spent on materials. Secondly, engineering, a key feature of bicycle infrastructure projects, is a more labour-intensive industry than construction, and therefore has a higher employment multiplier.

Cycling infrastructure increases residential property values and neighbourhood quality of life

A literature review performed for the Delaware Center for Transportation and the State of Delaware Department of Transportation (Racca and Dhanju, 2006) found the majority of studies examined indicated the presence of a bike path/trail either increases property values and ease of sale slightly or has no effect. The review also concluded that neighbours of many bike paths/trails feel the quality of life of their neighbourhood has been improved, the trails were a good use of open space, and in the case of abandoned railways were an improvement from before the trails were installed. The study also found that in some areas a large majority of neighbours are very happy with the new trails, even some who were originally opposed to their construction.

Significantly, in addition to the literature review the project also involved the development of a model to examine that examined factors impacting on Delaware property values and the effects of proximity to a bike path. This model showed that a bicycle path would be expected to slightly increase property values by about \$8,800.

References

Garrett-Peltier, H. December 2010, *Estimating the Employment Impacts of Pedestrian, Bicycle, and Road Infrastructure Case Study: Baltimore*, Political Economy Research Institute, University of Massachusetts, Amherst

Lee, A. and March, A. (2007) *What is the economic contribution of cyclists compared to car drivers in inner Melbourne's shopping strips?*, Unpublished Master of Urban Planning Thesis, University of Melbourne

2.4 Current condition of Brisbane's cycling infrastructure

The progress towards installing Brisbane's cycling network has been painfully slow, and at the current rate will take well over 20 years to complete. The snail's pace rollout of this planned infrastructure contrasts completely with the rapid rate that new tunnels and bridges for motorists costing hundreds of millions of dollars have been delivered over recent years in South East Queensland by both the Queensland Government and Brisbane City Council.

Cycling is such a low priority that even when new / improved cycling infrastructure has been promised as part of major motorist infrastructure projects the cycling component is completed long after the motoring infrastructure. A case in point is the short section of new bikeway to be provided in Bowen Hills as part of the Airport Link project. While the tunnels were opened to motorists in August 2012, as at the end of July 2013 the promised bikeway has still not been opened.

The *Brisbane Active Transport Strategy 2012-2026* claims Brisbane has more than 1,100 kilometres of bikeways, comprised of some 470 kilometres of off-road shared pathways (43%) and 630 kilometres of on-road bikeways (57%).

Much of the network delivered so far has been based on the Queensland Government's *South East Queensland Principal Cycle Network Plan* (November 2007).

http://www.tmr.qld.gov.au/~media/Projects/S/South%20East%20Queensland%20Principal%20Cycle%20Network%20Plan/Pdf_seq_pcnp.pdf.

In terms of the off-road component of this "network" this is typically shared paths installed through parklands that tend to follow waterways. Much of this is meandering and not suited to commuter cycling with some sections may be as short as 50 metres. When it rains these paths are the first public infrastructure inundated and the last to emerge after the water recedes.

Following the 2011 Brisbane flood local cyclists continue to be the disadvantaged by this event, with the replacement of the New Farm to Brisbane CBD Riverwalk replacement project not due to be completed until the mid-2014.

When these bikeways become usable after the water recedes, users then tend to have to endure muddy conditions for many days afterwards, due to the remaining water runoff/silt due to poor drainage. One of the worst examples of this is the section of the Bicentennial Bikeway (Brisbane's busiest bikeway) under the Riverside Motorway. Water runoff from the motorway is funnelled onto the bikeway, so that a light shower results in streams of water running across the bikeway. Sections of this bike also have large amounts of debris deposited on them by king tides (although these are quickly cleared by the BCC after they are reported).

Bikeways sited in parklands and under motorways typically also provide little incentive for females to cycle commute because of concerns about entering such isolated locations alone at anytime, let alone out of hours or when it is dark during winter months.



Bicentennial Bikeway beside Coronation Dr, Miltonm January 2011



Riverside Dr shared path, South Brisbane, January 2011

While off-road paths are the most desirable form of infrastructure in terms of providing the greatest incentive for people to start cycling, installing shared paths through parks has been a relatively easy task because it does not require re-allocating road space from motorists to create more direct cycling routes.

Brisbane's on-road cycling network is even less noteworthy. On the basis of the claimed 630 kilometres of on-road bikeways this network amounts to 10% of Brisbane's roads. However, where roads feature bike lanes these have been typically installed as part of road upgrades targeted at enhancing conditions for motorists. As a result people riding bikes on-road are likely to encounter sections of marked bike lane that begin and end without any connections to the rest of the bikeway network, rather than enjoying continuous and connected bike riding infrastructure.

The majority of the on-road component of Brisbane's cycling network is actually created through road surface markings of yellow bicycle outlines - officially called Bicycle Awareness Zones (BAZ). BAZ are as much about showing the "likely path of travel of experienced cyclists" as they are about creating motorist awareness about the likelihood of cyclists being on-road. According to TMR Technical Note 1_39, they should be used on roads with speed limits less than 60km/h, with traffic volumes less than 3000 per day and "As a last resort, and preferably as a temporary measure to enhance continuity along the cycle route until better facilities can be provided." Most of BCC's treatments involving BAZ do not comply. As such they are little more than a psychological ploy and create little if any genuine additional safety for cyclists.

The following list details samples of the major Brisbane road transport corridors that are currently devoid of continuous / connected cycling infrastructure.

North	Dickson Street (Woolloowin) Enoggera Road Gympie Road Kedron Brook Road Kingsford Smith Drive Lutwyche Road Samford Road Sandgate Road
South	Annerley Road Beaudesert Road Fairfield Road Logan Road
East	Cavendish Road Chatsworth Road Hawthorne Road Lytton Road Old Cleveland Road Stanley Street Vulture Street Wynnum Road
West	Enoggera Terrace Ipswich Road Milton Road Moggill Road Oxley Road Waterworks Road

Furthermore, some of the roads in Brisbane to which BAZ have been applied are so steep as to be unrideable by much of the current cycling population. Examples of such roads include Gallipoli Road, Carina Heights and Bramston Terrace, Herston.

Lastly, it is common for the shoulders of the road along which sections of the planned “cycling network” exists to be occupied by parked cars. This forces people riding bikes away from the kerb and into the path of transiting motor vehicles. The distance cyclists have to ride in from parked cars is increased by their potential to be “doored” by motorists, when they who open car doors without looking for approaching cyclists,

The QRR allows cars to be parked in bike paths. Cycling advocacy groups have experienced opposition at a number of levels to proposals for the removal of on-street parking to allow cyclists the safety of the road shoulder. A recent, salient example of this occurred at the time of BCC’s upgrade of Sylvan Road, Toowong, planned because Sylvan Road is a major route for western suburb cyclists. The upgrade proposed by council officers involved the removal of a small number of on-street car parks. However, this approach was overturned by the local Councillor and as a result cyclists regard the outcome as now presenting more risk to them than prior to the change.

Government and Council like to point to completed major active transport infrastructure projects as examples of the progress being made. Examples of such projects are listed in the table on the following page.

Infrastructure Project	Issue
Kurilpa Bridge (BCC)	Not connected to cycling network at northern end, and planned pedestrian stairway at southern end for pedestrian /cyclist segregation not delivered.
Gateway Bridge (Qld Gov't)	Not connected to cycling network at northern end
Eleanor Schonell Bridge (BCC)	Not connected to cycling network at southern end

While cyclists welcome such projects it is not unusual for these projects to not be connected to the existing cycling network. In contrast it would be inconceivable for a new river crossing for motor vehicles to not be connected to the existing road network.

2.5 Current level of cycling in Brisbane

According to the ABS (4602055002DO002_200903 Environmental Issues: Waste Management and Transport Use, Mar 2009 <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4602.0.55.002Main+Features1Mar%202009>) of Queensland's 1.624 million households, more than 846,000 (52.1%) reported having at least one bicycle in working order.

This proportion of households with working bicycles is the fourth highest among all states and territories being exceeded by the ACT (65.8), Western Australia (58.7%) and the Northern Territory (56.0%). The national average across all states and territories was 50.4%. At 45.5% New South Wales had the lowest level of household working bicycle ownership.

In terms of the changes in bicycle ownership in the last 12 months before these results, all states and territories showed net growth with the ACT (8.1%) showing the greatest net growth in households owning one of more bicycles in working order. At 4.0% Queensland had the fourth highest level of net growth in households reporting one of more bicycles in working order, below the national average across all states and territories of 4.4%. The Northern Territory had the lowest net growth rate of 0.3%.

Slide 4 of the departmental briefing provided to the committee on 18 June 2013 indicated that according to the 2011 National Cycling Participation Survey (<http://www.austroads.com.au/abc/national-cycling-participation-2011>) 17.9% of the Queensland population ride in a typical week.

However, this survey also indicated that recreation was the purpose of cycling for 69% of the respondents who rode a bike within the last week. In comparison, utility cycling was reported as a reason by the following much smaller proportions of respondents: commuting (18%), education (9%), shopping (11%) and visiting friends (6%). This highlights the view currently held by the overwhelming majority of the Queensland population – that cycling is a recreational activity and not transport.

These results are further skewed by the survey finding that more than half of all children aged under ten years of age were reported as riding in the last week, while only 8% of people aged 40 and over reported riding in a typical week.

The validity of this survey is also highly questionable as according to the report the cycling trips recorded through it include cycling around in the backyard or on a velodrome. (Source: <http://www.austroads.com.au/abc/images/pdf/AP-C91-11.pdf>)

While cycling of these types may be useful for health purposes, such "trips" hardly qualify as an activity influenced by transport authorities or as an indicator of the level of cycling as a sustainable form of transport.

The results of the ABS Census 2011 provide yet more insight into the woefully low levels of people traveling by bicycle for utility. In the CBD BUG's view increasing the level of utility trips is critical to broadening the community's recognition of cycling as a normal and everyday form of transport, instead of the private car being the default travel mode.

Sadly, across Australia the ABS 2011 census revealed that only 1.3% of trips to work were made by bike. In comparison to the data obtained through the 2006 Census this result indicated that nationally, cycling's growth in terms of its share of all trips to work increased by just 0.05%, an increase so marginal that the growth in cycling to work can be viewed as stagnating. In both Queensland and Brisbane cycling also only registered 1.3% of trips to work. (Source:

http://www.austroads.com.au/abc/images/pdf/census2011_journey_to_work_by_bicycle.pdf)

ABS Census 2011 Travel to work by bicycle only

Geographic reporting level	% mode share
Australia	1.3%
New South Wales	0.9%
Sydney	0.9%
Victoria	1.5%
Melbourne	1.7%
Queensland	1.3%
Brisbane	1.3%
Western Australia	1.3%
Perth	1.4%
South Australia	1.3%
Adelaide	1.4%
Tasmania	0.8%
Hobart	1.1%
Australian Capital Territory	2.8%
Canberra	2.9%
Northern Territory	3.5%
Darwin	3.1%

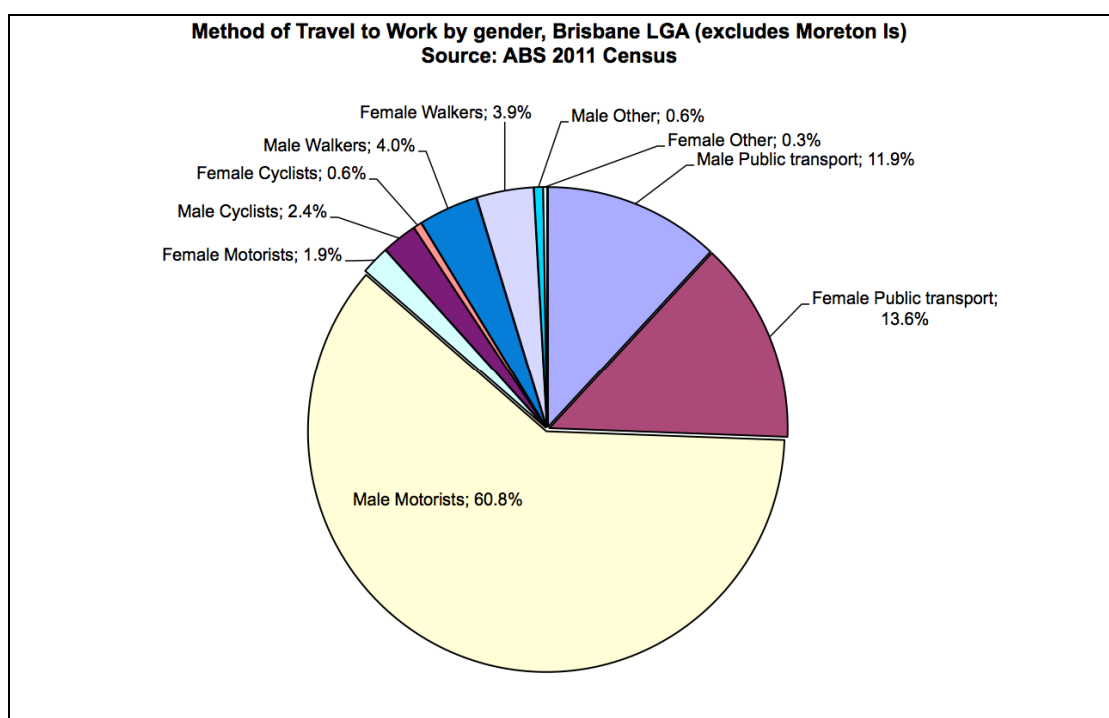
Other ABS data indicates Queensland is the most car-dependant of all Australian jurisdictions. This data shows that at 14,900km Queensland registered motor vehicles travelled the highest average distance in 2012. This figure was 6.45 greater than the 2012 national average figure of 14,000km. The jurisdiction with the lowest average distance was Tasmania with just 11,600km. It could be argued that this average is related to the geographic size of a jurisdiction. However, the fact the Australian Capital Territory has the second highest average (14,300km) and Victoria the third highest (14,200km) average distance travelled annually per registered vehicle indicates this measure is not a determined by a jurisdiction's geographic size. (Source: *ABS 9208.0 - Survey of Motor Vehicle Use, Australia, 12 months ended 30 Jun 2012*

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/9208.012%20months%20ended%2030%20June%202012?OpenDocument>)

Another damning ABS statistic showing Queenslanders' very high car dependency is that in Brisbane 12.5% of the population had an average distance of their usual trip to work or full-time study of less than 5km while a further 21.8% of persons have distances of between 5km to less than 10km to make such trips. For the rest of Queensland the corresponding proportions were 22.2% and 15.7% respectively. (Source: *Australian Bureau of Statistics 4602.0.55.002, Environmental Issues: Waste Management and Transport Use March 2012* <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4602.0.55.002Mar%202012?OpenDocument>)

Trips of these short distances could easily be made via cycling (and even walking), yet there are still the abysmally low levels of people cycling in Queensland for utility trips.

Cycling as mode of travel for work has increased in Brisbane in areas where dedicated off-road cycle facilities have been delivered. This shows that where separated, connected and high volume cycling infrastructure exists, a higher proportion of people will cycle instead of driving. This type of infrastructure is especially important for encouraging all cyclists, including females and children. According to latest census data, while equal amounts of males and females choose walking and public transport for trips to work, only one fifth of cyclists riding to work in the Brisbane local government area are women:



2.6 Perceptions of cycling

The number of women who choose cycling is an indicator of the perception of danger associated with cycling. Anecdotal evidence also suggests that, in Brisbane and other Queensland cities, cycling is perceived to be a dangerous activity.

The principal reason provided by respondents via innumerable surveys for not cycling is their concern about safety due to motor vehicles. Women aged 45 or older are typically the most likely to be put off by the perceived danger of road traffic.

Typically, many people also say they would cycle more often if there were more bicycle lanes, and a smaller proportion say while they would like to bike to work, but cycling isn't practical because of a lack of showers / change (end-of-trip) facilities.

(Sources: *RAC cycling survey results revealed* <http://rac.com.au/About-Us/Media/Media-releases-2011/RAC-cycling-survey-results-revealed.aspx>

Towards Zero --- On a bike

<http://casr.adelaide.edu.au/rsr/RSR2011/2DPaper%2018%20Benz.pdf>

Understanding the fear of bicycle riding in Australia <http://eprints.qut.edu.au/53981/>)

Further evidence of the community's interest in cycle commuting comes from a 2010 office tenant survey conducted by Colliers International, which found "bicycle parking was seen as just as important as car parking". This result was a complete change from the same survey conducted in 2005, when car parking was seen as far more important.

(Source: <http://www.colliers.com.au/Find-Research/~media/Files/Corporate/Research/Speciality%20Reports%20and%20Property%20White%20Papers/Australian%20CBD%20Car%20Park%20White%20Paper%20-%20Autumn%202012.ashx>)

On a related matter, this report also points to the importance building tenants place on being close to public transport. Since 2005, this has remained the most important driver in attracting and retaining staff by tenants when choosing an office location and has steadily increased in importance over time. Here again is highlighted how the prioritisation by TMR (and BCC) of road transport expenditure on the private motor car ahead of public and active transport modes is contradictory to the expressed interests and needs of the community.

Non-cyclists' perceptions of the risks from cycling are regularly reinforced by media news of cyclist road fatalities and injuries, as well as their through own on-road behaviour towards cyclists as motorists.

Since the 1960s Queensland road transport agencies have focused on facilitating travel by motor car, almost to the total exclusion of other travel modes (cycling, walking and public transport). The result of this bias is that the majority of the population now views the car as the default mode for private travel. Within this context cycling is now widely regarded as unsuitable for personal transport because it is too slow and inconvenient compared to cars, and has been relegated in the mind of the majority to being only a recreational activity.

This misconception of cycling continues to prevail despite the average speed of an experienced cyclist in urban areas being between 15km/h to 20km/h, while average speeds of cars during peak hour traffic are between 22km/h to 35km/h. Many people underestimate the time it takes to get somewhere in a car, and overestimate the time it takes on a bike.

The CBD BUG views the community's widespread perception of cycling as a high risk and slow transport mode as another failure by transport authorities to act on bringing about the necessary behavioural change to shift the Queensland community from seeing the car as the default travel mode for private trips and into using the more sustainable travel modes of cycling, walking and public transport.

3 Comments on 18 June 2013 department briefing

The maps of cycling's share of trips at the suburb level for Brisbane presented in slide 8 of the departmental briefing show that there are still many suburbs within an eight kilometre radius of the Brisbane CBD where there has been negligible growth in cycling. This is particularly evident in the north and east sectors where cycling infrastructure has not been provided, or where it has been installed but is not connected to the rest of the "network".

The CBD BUG has noted the departmental briefing provided for the committee on 18 June 2013 contained two slides (numbers 15 and 16) suggesting that three potential amendments to improve road access/safety for cyclists are possible. These amendments are viewed as highly desirable, as for several years the CBD BUG has sought changes to the QRR in order to improve cycling's viability and safety.

However, in view of the QRR being replete with cyclist-hostile provisions these few proposed changes are regarded as token offerings, intended to provide a facade that the department is being responsive to the concerns recently expressed by the Parliament, media and community about cyclist safety.

For a number of years now the CBD BUG and the broader cycling community have been calling for improved cyclist safety via road rule changes. However, TMR has consistently demonstrated inertia in response to these calls.

TMR's inaction on cyclist safety has also been identified by the Centre for Accident Research and Road Safety-Queensland (CARRS-Q) in stating "Road safety interventions implement(ed) as part of the Road Safety Strategy are designed to benefit vehicle occupants, while there are few benefits of cyclists and vulnerable road users in general". (Source: Schramm, Amy J. and Rakotonirainy, Andry and Haworth, Narelle L. (2010) *The role of traffic violations in police-reported bicycle crashes in Queensland*. <http://eprints.qut.edu.au/34208/1/c34208.pdf>)

The Queensland Parliament was petitioned in March 2011 (petition number 1652-11) for a minimum passing distance rule to be introduced. However, the then Transport Minister's tabled response letter simply parroted the same spurious responses the department had previously wheeled out in response to this proposal. (<http://www.parliament.qld.gov.au/Documents/TableOffice/TabledPapers/2011/5311T4277.pdf>)

The CBD BUG also wrote to the Premier on 26 July 2011 calling for, amongst a range of matters, a comprehensive overhaul of the QRR after the coronial inquiry into the tragic and avoidable death of cyclist Dr Hossam El-Shazly, killed in Cairns on 17 January 2009 in a crash with a large truck. However, the response to this letter ignored this issue entirely. <http://www.cbdbug.org.au/wp-content/uploads/correspondence/2011/10/Coronial-inquest-findings-20111010.pdf>.

The CBD BUG has also identified what it believes are several factual errors in the briefing relating to the information provided on the minimum passing distances in overseas jurisdictions. Firstly, the CBD BUG understands that in France there is a 1.0 metre rule for motorists overtaking cyclists on urban roads, and a 1.5M minimum overtaking distance is applicable on rural roads.



Rural road 1.5M minimum overtaking distance sign in France

The CBD BUG also suggests the information provided regarding the number of states of the United States (US) with specific minimum overtaking distance laws may have been incorrect. The briefing indicated 20 US states have such a rule. However, according to the National Conference of State Legislatures, 23 states have such rules, with 21 states having a minimum overtaking distance of 3 feet, while Virginia mandates 2 feet and Pennsylvania stipulates four feet. (Source: <http://www.ncsl.org/issues-research/transport/safely-passing-bicyclists.aspx>)

We also note TMR's use of the figure of 17.4% to indicate the proportion of Queenslanders who cycle. This figure overstates the level of people cycling in the public domain and is a gross inflation compared to the actual level of people travelling to work by bike, which, as noted earlier, is less than 2% . As committee member Mr Woodforth noted, the figure cannot be reconciled with what is obvious to a casual observer of Brisbane's roads. Therefore, it is highly questionable for TMR to present this statistic as an indicator of THE successful delivery of road transport policy.

To conclude, the TMR briefing bears many hallmarks of an attempt at self-justification in the face of a poor record of care for road safety in general and for non-motor vehicle users in particular.

4 Crashes between bike riders and motorists

Contrary to the widely held view among the Queensland motoring public that cyclists are risk-takers who disregard traffic rules and cause crashes, a report published by the Centre for Accident Research and Road Safety - Queensland (CARRS-Q) in 2010 shows that it is motorists who are largely to blame in crashes involving bike riders.

(Source: Schramm, Amy J. and Rakotonirainy, Andry and Haworth, Narelle L. (2010) *The role of traffic violations in police-reported bicycle crashes in Queensland*. <http://eprints.qut.edu.au/34208/1/c34208.pdf>)

This research detailed the findings of a study that looked at the 6,774 bicycle crashes recorded by Queensland Police between January 2000 and December 2008.

This study found that crashes involving bicycles and motor vehicles comprised 93.4% (n= 6,328) of police-recorded bicycle crashes. Of these crashes motorists were deemed to be at fault in 65.6% of the incidents. Significantly, when the motorist was at fault traffic violations were recorded in 85.4% of crashes.

The traffic violations committed by motor vehicle drivers largely related to various forms of failing to give way to cyclists: "disobey give way sign", "fail to give way" and "turn in the face of oncoming traffic".

Not only were motorists responsible for most crashes, more than 85% of those drivers already had blemished traffic records.

In contrast, when cyclists were at fault in bicycle-motor vehicle crashes the contributing factors were more often inattention / negligence or inexperience / lack of expertise, rather than traffic violations.

Critically, where the cyclist was deemed to be at-fault these crashes were more likely to involve younger cyclists (16 years or younger) and elderly cyclists (80+). It is suggested the crashes involving these age groups are more due to a lack of road rule knowledge (for those cyclists younger than the legal driving age) and for the elderly age cohort, age-related cognitive abilities, rather than disobeying traffic regulations.

Apart from cyclists being more likely to be the victim of motorists violating road rules they are also the party more likely incurring the greatest injury severity in bicycle-motor vehicle crashes, with 52% of these crashes resulting in a cyclist fatality while 33.9% resulted in a cyclist being hospitalised.

These findings clearly point to motorists being the greater on-road danger through their much higher road rule violation levels in comparison to cyclist, with cyclists commonly suffering serious injury or death as a result.

Queensland Department of Transport and Main Roads survey statistics support the findings of this study in terms of motorist attitudes towards violating road rules. Some examples include:

- 57% of motorists agree that speeding can be safe in some circumstances
- 60% of motorists admit to sometimes or always driving over the speed limit
- 51% of motorists admit to driving while talking on a hand-held mobile phone
- 28% of motorists admit to texting while driving.

(Sources:

http://www.tmr.qld.gov.au/~media/Safety/safetycampaigns/Driver%20distractions/Distractio ns_campaign_summary.pdf

http://www.tmr.qld.gov.au/~media/Safety/safetycampaigns/Anti%20speeding/2013/Speed_f actsheet.pdf)

Apart from these statistics, common sense and a basic understanding of physics would indicate that it is not cyclists who, in combination with their bikes may weigh perhaps 80kg and travel at perhaps 25 km/h, are a danger to other road users, it is people driving motor vehicles that typically weigh one tonne or more and are travelling at the default urban speed limit of 50km or more. A hypothetical but typical cyclist would have a kinetic energy, or destructive potential of around 1,900 Joules, while this one tonne car would have a kinetic energy of around 96m000 Joules. This is a ratio of around 50 to 1.

4.1 Cyclist fatality trends in Queensland: 2006 to 2011

The data in the following table shows the absolute number of road user type fatalities and their respective proportions of Queensland's total road toll over the six years spanning 2006 to 2011.

All fatalities by road user type, Queensland 2006-2011

Road user type	Fatalities						% of Fatalities					
	2006	2007	2008	2009	2010	2011	2006	2007	2008	2009	2010	2011
Drivers	155	171	140	152	114	108	46.3%	47.5%	42.7%	45.9%	45.8%	40.1%
Passengers	67	64	77	71	50	73	20.0%	17.8%	23.5%	21.5%	20.1%	27.1%
Motor-cyclists	58	73	72	60	50	45	17.3%	20.3%	22.0%	18.1%	20.1%	16.7%
Bicyclists	9	10	7	8	7	9	2.7%	2.8%	2.1%	2.4%	2.8%	3.3%
Pedestrians	46	42	30	40	28	33	13.7%	11.7%	9.1%	12.1%	11.2%	12.3%
Other*	0	0	2	0	0	1	0.0%	0.0%	0.6%	0.0%	0.0%	0.4%
Total	335	360	328	331	249	269	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*Other includes train driver/passenger and animal conveyance

(Source: 2011 Fatal road traffic crashes in Queensland A report on the road toll

http://www.tmr.qld.gov.au/~media/Safety/Transport%20and%20road%20statistics/Road%20safety/Fatal_road_traffic_crashes_in_qld_2011.pdf)

Based on the discussion of the actual level of cycling in Queensland being than 2% of trips (as revealed by ABS data), with the above table pointing to bicycle riders comprising 3.3% of road fatalities in Queensland during 2011 this suggests cyclists are over-represented in Queensland road fatalities. When distance travelled is accounted for, cyclists are much more significantly over-represented.

What is also obvious from the above table is that in growing from 2.1% in 2008 to 3.3% in 2011, cyclist fatalities as a proportion of all road crash fatalities have consistently increased over these four years. This growth in cycling's share of the state's road fatalities has also notably occurred at the same time that there has been an overall decrease in the total Queensland road toll.

4.2 Cyclist fatalities in Queensland involving heavy vehicles

According to data analysis performed by the former Queensland Department of Transport regarding all crashes involving bicycle riders in Queensland from 1994 to 2001, trucks were involved in 3% of crashes involving bicycle riders but accounted for 18% of rider fatalities. The crashes involving trucks (particularly those involving articulated trucks) were more severe than for other bicycle crashes.

Analysis of these fatal crashes also revealed that for the 12 bicycle rider fatalities involving trucks, seven resulted from sideswipes, two from riders pulling out into the traffic, two from a truck pulling out of a driveway and one from unknown circumstances.

The data analysis also showed that for all crashes involving bicycles and trucks 50% of these crashes occurred away from intersections. Sideswiping by vehicles travelling in the same direction and angle crashes with vehicles pulling out of driveways were found to be common causes of crashes. Crashes involving bicycles leaving the footpath were another notable factor.

The table on the following page has been compiled by the CBD BUG to detail the known cyclist fatalities occurring in Queensland since 1999 though crashes involving heavy vehicles. These details have been compiled from publically available information such as media reports and police media statements. Where possible the names of the cyclists involved have been identified in recognition that these cyclists were people and not just road fatality statistics.

The following points can be made from this table.

- All of the cyclists involved in these fatal crashes were old enough to hold a drivers license.
- With only a couple of exceptions these crashes occurred on arterial roads that carry large volumes of traffic through heavily developed urban areas.
- Trucks comprise the majority of the heavy vehicles involved in fatal crashes with cyclists.
- Garbage trucks are over-represented in these crashes
- For the cyclist fatalities where the crash type is known, the nature of the crashes is almost evenly split between "Vehicle approaching from side" and "Sideswiped by overtaking vehicle"
- The rate of these fatal crashes seems to be increasing.

Queensland Cyclist Fatalities Involving Heavy Vehicles, 1999 to 2013

Cyclist	Age	Location	Date	Vehicle type	Crash type
Mr Kerry Fien (BCC Bicycles Program Manager)	Mid 30s	Beams Road, Carseldine	10 September 1999	Truck	Sideswiped by overtaking vehicle
Mrs Penny Croft*	54	Mount Cotton Road, Mount Cotton	2 March 2004	Bus	Sideswiped by overtaking vehicle
Male	Mid 20s	Lytton Road, Hemmant	20 September 2006	Articulated truck	Unknown
Mr Ian Gilmore	38	Nudgee Road, Nudgee Beach	23 February 2008	Garbage truck	Unknown
Dr Hossam El- Shazly	38	Captain Cook Highway, Cairns	17 January 2009	Tip truck with trailer	Sideswiped by overtaking vehicle
Mr Tangi Morgan	37	Lytton Road & Apollo Road, Bulimba	15 February 2010	Courier truck	Vehicle approaching from side
Male	18	Aumuller Street, Cairns	30 September 2010	Articulated sugar truck	Vehicle approaching from side
Mr Richard Pollett	25	Moggill Road Kenmore	27 September 2011	Cement truck	Sideswiped by overtaking vehicle
Mr Francesco (Chich) Leo	82	Kent and James Street, New Farm	14 May 2012	Garbage truck	Vehicle approaching from side
Male	46	Bunya Highway, Murgon	31 October 2012	Truck	Unknown
Male	50	Newell Street, Cairns	9 November 2012	Garbage truck	Vehicle approaching from side
Male	19	Gympie Road and Samsonvale Road, Strathpine	14 January 2013	Garbage truck	Vehicle approaching from side
Ms Sue Bell	58	Shaw Road, Townsville	22 June 2013	Truck	Sideswiped by overtaking vehicle

* To add further to the tragedy for the family of Mrs Croft her stepson Adam was seriously injured approximately one year later while cycling on the Gold Coast through being struck by a motorist.

Other general observations the CBD BUG would make about these involvement of trucks in cyclist fatalities are:

- Heavy vehicle drivers have an elevated seating position compared to light vehicle drivers and should be able to clearly see cyclists before overtaking while traveling along the same road, or who are approaching them while a truck driver is waiting to enter the road.
- Many truck drivers are paid on the basis of the number of trips made and this places undue pressure on them to take driving risks, particularly if they are frustrated or become impatient by being detained by traffic congestion or a cyclist riding on-road.
- Members of the truck driving industry have adopted unsafe practices in an effort to remain in the industry. The New South Government has recently targeted these practices in a crackdown, but there has not been any commensurate reaction from the Queensland Government despite the high likelihood similar practices exist in this state.

Given the over-representation of sideswipes of cyclists by trucks in crash statistics, it is also important to note the potential role of aerodynamic forces in such crashes. Sideswipe crashes can occur without initial collision between the truck and bicycle rider. Instead, the incident can be due to the “blow and suck” effect as the truck passes the bicycle rider. This effect is proportional to a truck’s size, speed and distance from the rider. Aerodynamics becomes of particular importance where traffic speeds exceed 60km/h. (Source: http://www.tmr.qld.gov.au/~media/Travelandtransport/Cycling/Bike%20user%20guide/Technical%20information/C7_Cycling_and_heavy_vehicles.pdf)

4.3 A cyclist’s first hand account of a cyclist-motorist collision

The following is a first hand account of a cyclists/motorist crash provided by Dave E, one of the CBD BUG’s two dozen member “leadership group”.

This is the account of a collision between myself when riding a bicycle and a vehicle on Kedron Brook Road. I ride down Kedron Brook Road about half my trips into work. I go home a different way to avoid traffic. I work five days a week for about 4 -weeks a year. So over the last ten years I have travelled down Kedron Brook Road approximately 1,200 times ($10 \times 48 \times 5 \div 2 = 1,200$).

On this particular occasion a car was waiting on a side street (5th Avenue) and as I was nearing the intersection, the driver started to turn right into Kedron Brook Road in front of me. My hands were already on the brakes (always are on Kedron Brook Road) but on this occasion there was not the time to stop.

Unfortunately for me the driver did not apparently see me until they were half way across Kedron Brook Road, when they then stopped - blocking the lane. I was already trying to steer around the car, but when it stopped the only option was to stand on the pedals and try to go over the top of the stopped car. It was probably my good fortune that the car was a passenger sedan because if it was a van or 4WD it is unlikely I would have been able to go over the bonnet.

This crash was just one more instance of SMIDSY (“Sorry Mate, I Didn’t See You”). Given that Kedron Brook Road is one of the main cycling arterials into the Brisbane CBD, it is not a particularly safe road for cyclists. Over the years I have had many near misses with vehicles cutting corners, cutting me off, doorings and failures to give way.

When gathering the Streetview pictures, however, something became obvious that I had not noticed before - if you start at the Newmarket Road end and work your way up Kedron Brook Road while in Google Streetview, you will notice maybe one vehicle in ten is riding the left hand line on the roadway. It has long been my opinion that most drivers have no idea where their wheels are on the road. In any case, Google Streetview may be an independent source of photographic evidence of why “a metre matters” for cyclists.

Diagram 1 - The Minute Leading Up to the Accident
(http://api.ning.com:80/files/lvqemBCauJGs4xrWpXZ-bNfWKdi3*hucipbbI3BqRMuGL7XgQBxh0KK-4IKxR4MZ*hT5xqltE08s9a0kGdxAVf8Rmxz7G67O/description.jpg)

Diagram 2 - Where Cars Failed to Give Way
(<http://api.ning.com:80/files/lvqemBCauJGHUMZZ7Sv5PCX2h31kAU8DVIWPKzoQYUruFtZzsMEuidExTnkaDpHalWOxPixj6q4MVB0TCMK3dNTkrAobcrtY/diagram2.jpg>)

Diagram 3 - Where Tree Loppers Blocked the Lane
(http://api.ning.com:80/files/lvqemBCauJFcuwi1YaSgyiOoJbQQH4L1RYzzotqkfNqjNVhi-253pc6LrT67rtAA1QXizCbswXC*vJQrFo4Py4bQztlkHOcm/diagram3.jpg)

Diagram 4 - Fifth Avenue Where the Accident Occurred

(http://api.ning.com:80/files/lvqemBCauJHs2Z9ZJ1vZeiXsqiR-VvGtm1rlvvvE4EZF30*aC-gQo7-8udNpS7P2SKZ5h0p2TpJp63QOHkUeLjzOxdcdfCTC/thesceneoftheaccident.jpg)

Because of the higher likelihood of a cyclists fatality arising from a crash with a truck measures the CBD BUG proposes for reducing the risk for cyclists (and other vulnerable roads users) from fatalities involving trucks are:

Introduce mandatory flush mounted side guards for trucks to prevent undercarriage deaths (a 2001 study by the European Transport Safety Council reported that flush-mount side guards would reduce fatalities to pedestrians and cyclists in side collisions by 45%, while also reducing the use and cost of fuel so the initial cost of installation can be recouped within 2 years

The Queensland Department of Transport and Main Roads and Queensland Police should cooperate in a prolonged effort targeting unsafe work and driving practices within the trucking industry.

Safety audits should be completed on roads before large numbers of additional heavy vehicles are allowed along them, such as in case of major infrastructure projects. Associated traffic management plans need to be supported with stringent enforcement to ensure compliance.

To reduce the risk of cycling fatalities from heavy vehicles TMR should increase its cycling expenditure to enable the delivery of appropriate on and off-road cycling infrastructure along major urban roads as per the South East Queensland Principal Cycle Network Plan and Far North Queensland Principal Cycle Network Plan within five years.

5 Existing and alternative road rules

The CBD BUG has identified the large number of provisions within the QRR that are cyclist-hostile. These provisions can be categorised into two types, rules that increase risk to cyclists, and rules that simply make cycling inconvenient and/or unviable. Appendix 1 to this submission lists these provisions and details why they are inappropriate.

Additionally, this section responds to some of the criticisms commonly levelled at cyclists by bon-cyclists. These issues largely arise as a result of Queensland's poor road transport policy / planning process having prioritised private motor car travel at the expense of the active travel modes of cycling and walking and public transport..

5.1 Single file cycling

Some motorists complain about cyclists riding two abreast, apparently without knowing this is legal. From other motorists, who apparently are aware cyclists can legally ride two abreast, there continues to be calls for cyclists to be limited to riding single file. These complaints are understood to be derived from motorists not wanting to be delayed by cyclists.

However, cycling two abreast is a defensive riding technique adopted to make on-road cycling safer for riders. It means motorists usually have to overtake in a proper manner rather than overtaking in the same lane and squeezing cyclists into the kerb and causing them to crash.

Also, if cyclists were required to ride in single file, motorists will often assume they can overtake in places that are not safe and will not leave the cyclist enough room. Being in two files usually prevents this scenario but riding in single file can lead the motorist to think they can overtake on the same side of the road if there are oncoming cars thus not giving the cyclist an adequate and safe amount of space.

Riding two abreast also allows motorists to overtake a group of cyclists in less time, as this reduces the length of the group by about half. This means a motorist will be able to overtake the group - spending less time on the other side of the road and along side the group of cyclists.

By riding two abreast, cyclists also present a larger body, making it easier for motorists to firstly see them and also correctly judge their distance and speed. This is particularly important in poor visibility conditions.

Nevertheless, the CBD BUG has always advocated that all road users act with courtesy and share the road responsibly. On this basis cyclists should not unduly occupy road space, and need to be particularly aware of not creating frustration for following vehicles on long stretches of narrow road where motorists may even find it difficult to safely overtake other motorists.

5.2 Riding on footpaths

Queensland is one of only two Australian states/territories that allow cyclists a virtually universal ability to ride on the footpath. It is essential for cycling's growth that this access is maintained.

Conflict between cyclists and pedestrians typically occurs because both vulnerable road user groups are forced to share inadequate footpaths and pathways due to

1. neglect of the infrastructure needs of these road users by all levels of governments, who prefer instead to direct the overwhelming majority of their transport funding to motorists; and
2. the dangers to these vulnerable road user groups from sharing the roads with motorists.

Significantly, these vulnerable road users are not even safe on the footpath as they are subject to the hazards from motorists driving in/out of premises who are either ignorant of the road rules or who disregard their requirement to give way to footpath users. Highlighting this danger is the 11 year old Western Australian boy killed while cycling along the footpath on 18 June 2013 by a motorist exiting a property.

(Source: *Schoolboy cyclist, 11, killed in morning crash in Nollamara*
(<http://www.perthnow.com.au/news/western-australia/child-seriously-injured-in-morning-crash-in-nollamara/story-fnhocxo3-1226664917033>)

In its obsession with populist hysteria and the pursuit of revenue the mass media has sought to promote the idea of a growing level of conflict between pedestrians and cyclists. Such prejudicial reporting is intended to play to the biases of the non-cycling majority against cyclists.

(*Walkers on war path over cyclists* <http://city-north-news.whereilive.com.au/news/story/walkers-on-war-path-over-cyclists/>)

However, research conducted by CARRS-Q in the Brisbane CBD during 2013 indicates that cyclists had "few conflicts with pedestrians".

(Source: *Trends in cycling patterns and interactions with pedestrians in the city centre*
Amy Schramm and Narelle Haworth, Asia-Pacific Cycle Congress, 2013
(<http://eprints.qut.edu.au/58550/1/58550Pres.pdf>)

Despite the gross inadequacy and often absence of appropriate footpath space in Queensland / Brisbane it is still possible for this space to be shared safely through all users showing respect for others.

To this end the CBD BUG has been active in promoting improved pathway safety through developing and promulgating shared path etiquette, to inform less experienced/informed cyclists about appropriate pathway behaviour.

Because of the woeful under-provision of appropriate infrastructure for off-road cycle commuting any reduction in the current entitlement of Queensland cyclists to ride on the footpath would have an immediate and damaging affect on the number of people cycling.

A range of options has already been identified to address this issue (Source; *Pedestrian-Cyclist Conflict Minimisation on Shared Paths and Footpaths*, Austroads 2006 AP-R287/06 www.austroads.com.au).

TMR have also produced information on this issue, which indicates the first cause of this issue is poor infrastructure planning, design and maintenance.

(Source: *Reducing conflict between bicycle riders and pedestrians*

http://www.tmr.qld.gov.au/~media/Travelandtransport/Cycling/Bike%20user%20guide/Technical%20information/C2_Reducing_conflict_between_bicycle_riders_and_pedestrians.pdf)

5.3 Introduction of additional safety clothing (hi-viz vests) for cyclists

The CBD BUG has noted a suggestion in the recent public discourse on cycling, that cyclists should be obliged to wear additional safety clothing e.g. hi-viz/reflective vests.

The CBD BUG recommends such an approach should be rejected for the following reasons.

- Such a measure would be yet another cost for people wanting to cycle and would prevent people from cycling as it will be another item cyclists would have to carry with them to cycle legally.
- This suggestion can be characterised as yet another punitive approach towards cycling, and would again be putting the onus on cyclists for preserving their safety rather than on the motorists who are the actual source of most risk for cyclists.
- As a viable transport mode cycling would be placed at an even greater disadvantage relative to other transport modes and particularly the private motor vehicle.
- More mandatory cyclist safety equipment would further re-enforce the perception among the non-cycling community that cycling is a dangerous activity.

The outcome of such an approach would be that fewer people would cycle.

5.4 Banning cyclists from riding on roads with a speed limit greater 60km/h

Another motorist-centric suggestion proposed recently has been that people should be banned from riding on roads with a speed limit greater 60km/h.

The CBD BUG's strong view that this approach be rejected is based on the following points.

- This is an unnecessary measure as the vast majority (87.1%) of crashes involving cyclists happen in low speed zones (Source; CARR-Q http://eprints.gut.edu.au/41798/1/Monograph_5.pdf).
- Random and inappropriate occurrences of 70km/h zones on low-level arterial suburban roads such as Fairfield Rd, Moorooka would make compliance by cyclists almost impossible, as alternative routes are not always available, as in the example.

- Banning cyclists in this manner would significantly disadvantage commuter cycling relative to motorised transport.
- What limited cycling tourism that currently exists in Queensland would likely be eliminated.
- This would be another punitive measure and would further penalise people riding bikes who are largely the victim of poor / inappropriate driver behaviour.

6 Penalties and sanctions for cyclists and road users

6.1 Disparity in respective risks created by cyclists and motorists

It is a simple and patently obvious fact that riding a bike is not the same as driving a motor vehicle – because of the substantial differences in the two transport mode's respective potential velocities and masses. Whereas a very small motor vehicle (Suzuki Alto) may still have a kerb weight of more than 700kg, a very heavy bike will typically only weight in the order of just 20kg.

Most cyclists travel at between 20km/h to 25km/h, and will be riding hard over flat ground to achieve a velocity of 40km/h. On the other hand, motorists can drive at Queensland's inordinately high default urban speed limit of 50km/h with ease, with 100km/h an equally effortless achievement.

Motorists and their passengers also enjoy a large amount of physical protection while in their cars - in the form of seat belts, airbags, bull bars, bumper bars, anti-intrusion bars, roll bars, metal panels and glass. By comparison, cyclists are exposed to the elements and have only a helmet and clothing for protection.

Because of the asymmetry in their respective levels of personal protection and the physical threat posed to others, bike riders present a very small risk to other road users when compared to the risk caused by motorists.

Hence there is a significantly different level of moral hazard experienced by these two road user groups. In the case of motorists they are aware of the significant amount of physical protection provided by their vehicles and thus are enabled to perform manoeuvres that cause great physical risk to other people with almost no physical risk to themselves e.g. overtaking cyclists at dangerously close distances; speeding in school zones; not observing give way rules towards cyclists at intersections; exiting/entering premises without regard for footpath users, failing to give way to pedestrians on a marked foot crossing etc.

Cyclists, on the other hand, not only pose a much lower threat towards other road users, but must always be conscious of their own vulnerability.

Therefore, it is only appropriate that these two transport modes have different rules and penalties applied. This is already recognised in the rules applying to driving motor vehicles in Queensland, with some of the key differences highlighted in the following table.

Motor vehicle driving	Bicycle riding
Vehicles require a safety certificate before registration is granted	No safety certificate required for bicycles
Drivers license required with licensing requirements increasing as vehicle length/mass increases	No license required
Age limited	No age limit
Speed limits apply: <ul style="list-style-type: none"> • 50km/h default urban speed limit, and • 110km/h Qld statewide speed limit 	Speed limits apply: <ul style="list-style-type: none"> • 50km/h default urban speed limit, • 110km/h Qld statewide speed limit, and • No speed limit on bike paths / shared paths / footpaths
Driving on a footpath generally prohibited, with some limited exceptions (refer QRR 288).	Allowed on footpath unless a local law or a sign otherwise provides

The CBD BUG has noted that the departmental briefing provided to the committee on 18 June 2013 detailed a range of traffic offences and the differential penalties applicable to cyclists and motor vehicle drivers. The CBD BUG has also noted that specific bicycle offences also exist e.g., a cyclist failing to wear a securely fitted bicycle helmet, bicycle rider causing a hazard on a footpath, and failure to have a warning device fitted.

CARRS-Q research has already shown that in crashes between adult cyclists and motorists it is overwhelmingly motorists who cause such crashes (as noted in an earlier section of this submission). On this basis there is no demonstrated need for any changes to the penalties applying to cyclist road rule breaches.

The CBD BUG's view is that where the bicycle rider penalties are lower than the equivalent penalty for motor vehicle drivers this is entirely appropriate because the risk arising from breaking these rules differs vastly between cyclists and motorists. Further to this the CBD BUG proposes that some of the penalties for cyclists should be removed or reduced, such as "Fail to stop at a stop sign intersection" (Rule 67(2), which should be amended to accord with the proposed Idaho-style stop law.

6.2 The deterrence value of increased fines

Given the vastly lower rates of crashes caused by cyclists disobeying road rules in compared to motorists previously pointed to in this submission, proposals for heavier penalties for non-compliance by cyclists can easily be characterised as simply a punitive proposal from the non-cycling/motoring majority who would like to see all cyclists driven off the roads. Such proposals also indicate a preference towards further punishing of the victims, as it is cyclists who are more likely to be killed or injured as a result of non-compliance with the road rules by any party.

There are innumerable reputable papers that have been published in Australia and overseas showing that increased penalties, do not of themselves lead to increased road rule compliance.

Road rule enforcement can be an effective road safety countermeasure but should be regarded as the final solution in the attempt to reduce the level of inappropriate road user behaviour. Authorities should endeavour to develop a coordinated approach in which enforcement is used to support other road safety measures such as education programs, engineering solutions and modification of the social and physical environment.

It should also be the case that fines/penalties are in proportion to the risk caused by the offence. In the case of cyclists this means that penalties should be lower, because in comparison to motorists they do not cause a similar risk level.

More importantly, if apprehension risk is low then penalty severity and immediacy of punishment may have only a limited impact on road user behaviour. Anecdotal and research based evidence indicates that in Queensland (and Australia more widely) there is a prevalent cowboy culture in relation to motorist behaviour. This can be attributed to there generally being a slim chance of the rules being enforced due to an inadequate police presence.

7 Proposed introduction of bicycle registration

7.1 Disparate views within the community

Calls for the imposition of registration on push bikes and/or licensing of cyclists need to be viewed in the context of the typical responses obtained through surveys asking people if they believe they pay too much tax and if other individuals/groups should pay more tax. Sadly, the current domination of a “me first” mentality in the Australian community means the majority of responses to such questions typically are that people think they pay too much tax, and that other individuals/groups do not pay enough tax, and therefore should pay more.

A recent example of this is Per Capita's annual tax survey, released in March 2013, which found that fully half of all Australians believe they pay too much tax, up from 42 per cent three years ago (http://www.percapita.org.au/01_cms/details.asp?ID=578)

In a similar manner, a majority of Australian survey respondents are typically found to think that other groups or activities in/with which they are not involved should be subjected to more stringent government regulations, while their own activities/groups should have reduced government controls.

7.2 What other jurisdictions have implemented bicycle registration and why?

The table on the following page details the jurisdictions the CBD BUG has found to have government-operated bicycle registration systems. The underlying reasons for these systems and the fees charged are also provided.

In addition to these government programs, a number of United States universities also require bicycles ridden/parked on their campuses to be registered. Among these are: Penn State: Cost = Free (<http://www.transportation.psu.edu/transportation/alt-transportation/bicycles/registration.cfm>) and the University of Colorado Boulder: Cost: one-off \$10 fee (<http://www.colorado.edu/pts/bikeprogram>). These programs have been introduced to reduce bicycle theft, control bike parking and levels of abandoned bicycles.

Until 2012 Switzerland had a mandatory bicycle registration system that provided third party insurance coverage for riders, when it was phased out in preference for cover against damage caused to third parties in an accident involving a bicycle being provided by cyclist's personal liability insurance (Source: <https://www.ch.ch/en/cycling-switzerland/>).

Jurisdiction	Applies to	Reason	Fees	Source
Japan	All bicycles	Anti-bike theft measure, help police locate owners when stolen bikes are recovered and controlling abandoned bicycles	Y500	http://www.tokyo-icc.jp/guide_eng/info/09.html
City and County of Honolulu, Hawaii, USA	All bicycles with 20" or larger wheels	Revenue raising - registration fees are deposited in a special bikeway fund which can only be used for bicycle-related City projects and programs	One-time fee of \$15 & \$5 fee when transferring bicycle ownership	http://www1.honolulu.gov/dts/bikereg.htm
City of Milwaukee, Wisconsin, USA	All bicycles	Anti-bike theft measure	Free	http://itmdapps.ci.mil.wi.us/bicyclelicenseweb/FrequentQuestions.htm
California, USA	All bicycles with wheels 20" in diameter or having a frame size of at least 14".	Unknown	\$4 per new registration \$2 per transfer \$2 re replacement registration certificate \$2 per registration renewal	http://www.dmv.ca.gov/pubs/vctop/vc/tocd16_7.htm

7.3 Analysis of arguments for and against cyclist registration

Cyclists should be registered so they pay for their use of the roads

It is a popular myth that motorists pay for the roads through their registration and that because cyclists do not pay registration, they are "free riders".

However, the truth in Queensland is that motorists do not pay their way with their registration. This has been shown again this year in the 2013-14 Department of Transport and Main Roads Service Delivery Statement. Page 19 of this document shows that in 2013-14 the Queensland Government expects to receive \$1.5 billion in motor vehicle registration revenue. This same document indicates the department has budgeted to spend at least \$2.6 billion of Queensland Government funding on roads, a difference of \$1.1 billion.

On top of this cyclists are actually already subsidising motorists. This is occurring through the motor vehicle registration paid by the estimated 80%-plus of cyclists who are also car owners. Cyclists who own cars but who leave them at home and cycle instead are paying for the repairs to roads through their car registration that is caused by motorists.

Cyclists should be registered so that they are covered by insurance

The Compulsory Third Party (CTP) insurance component of Queensland's road vehicle registration system is designed to cover victims of motor vehicle accidents other than the at-fault driver.

As the majority of police-recorded bicycle crashes involved motor vehicles who were at-fault, and crashes involving bicycles and motor-vehicles rarely result in motor-vehicle occupants being injured, the CTP component of the Queensland motor-vehicle registration would seem to be an unnecessary expense. In the rare instance of a driver or their passengers being injured in a crash where an uninsured cyclist is at fault, these people may still claim against the Nominal Defendant.

Despite this, many cyclists hold injury and liability insurance through their membership of Bicycle Queensland and Cycling Queensland / Cycling Australia, or through other insurance providers.

It should be noted that cyclists are also typically covered by workers compensation insurance when riding between their home and workplace.

Cyclist registration would be more red tape

Bike or cyclist registration would simply create yet more bureaucratic red tape, which Premier Campbell Newman promised to reduce before he came to office. Moreover, the administrative costs of such a scheme would almost certainly exceed the revenues on whatever scale of fees that could reasonably be imposed.

Which cyclists should pay registration?

Cycling is a simple and relatively safe activity enjoyed by people from as their early childhood young as three years of age to people aged well into their eighties, and in on and off-road settings. This inherently presents difficulty in determining the boundaries of where pushbike registration would be drawn.

Should registration have to be paid for children to cycle? What about people who only ride bikes in parks, and/or on bikeways or the footpath?

Registration would reduce cycling when the governments has committed increasing cycling levels

The introduction of registration on push bikes and/or licensing of cyclists would essentially be the imposition of a tax on cycling. This would have the effect of increasing the “price” of cycling, both in terms of the direct financial costs and the indirect cost through the additional compliance requirements.

By introducing a financial and administrative burden, registration would discourage people from cycling. Families would particularly suffer: riding a bicycle might become an unaffordable luxury for many kids. There is also a delineation to be made for children about whether they would have to register their bikes? When it is considered that many regular cyclists own multiple bikes another factor to be considered would how should registration be applied to those bike riders?

One of the fundamental laws of economics is that as price increases demand will decrease - meaning there would be a reduction in the number of people cycling.

This outcome would be in direct opposition to the vision stated in the *Queensland Cycle Strategy 2011-2021* which is for “more cycling, more often” (Source: http://www.tmr.qld.gov.au/~media/Travelandtransport/Cycling/Strategy/QCS%202011%20to%202021/MIP_QCS_web.pdf)

Because of the price increase people currently cycling would likely re-evaluate their transport mode decisions and could well return to driving their cars (creating even more traffic congestion) and/or putting yet more pressure on SEQ's highly expensive and already stretched public transport services.

If we register cyclists we should also register pedestrians

Roads, footpaths, bike paths and shared paths are public resources available to anyone who wants to use them. The argument that cyclists need to be registered to pay for their use of this space could logically be extended to pedestrians. If cyclists are to be charged registration to use these facilities then all users should be similarly charged.

Registration does not reduce rule transgressions

Another reason people call for bicycles to be registered is to make bicycle riders accountable for their behaviour. However, this overlooks the fact that motor vehicles are currently registered and yet road rule breaking continues to be widespread. While some bicycle riders do break the law, other ways to address this issue are likely to be more effective than registration such as additional police enforcement.

Faked registration is a problem for motor vehicles - it would be at least as difficult with bicycles, if not more so, because many people wouldn't take registration seriously for bikes when one can be purchased second hand for as little as \$50.

Displaying registration plates on bicycles would also be difficult, with such a variety of different shaped bikes in use. Whereas motor-vehicles have large rearward and forward-facing areas suitable for licence plate display, bicycles are typically designed aerodynamically, with as small a cross-section as possible.

Cyclists already pay for road use and are actually saving the community money by riding while motorists cost the community money

The CBD BUG has been unable to locate any Australian studies examining the level of cyclists who also own motor vehicles. However, a survey performed in Oregon in the United States indicated a level of 80-plus percent. Given Queensland's very high car ownership level it is highly likely the situation would be similar here.

On the basis that the overwhelming majority of Queensland bicycle riders are motorists as well, and therefore pay motor vehicle registration and drivers licence fees, by replacing car trips with bicycle trips but paying the same these cyclists are actually subsidise full-time motorists.

Regardless of the lack of local data on cyclists' car ownership levels, the situation with respect to who pays for the roads in Brisbane is very clear. With 95% of Brisbane's road network being owned/maintained by the Brisbane City Council, it is ratepayers and not motorists, who pay for the overwhelming majority of Brisbane's roads.

Cyclists do not damage roads in the same way as motor vehicles

Because a person riding a bike weighs little more than a pedestrian, cyclists cause an insignificantly marginal additional amount of damage to the road. The weight of a small motor vehicle driven on the road is typically 66 times the weight of an "average" push bike. The laws of physics are such that the damage inflicted on increases with increases in relation to the kerb weight of vehicles at a rate of x^4 i.e. doubling the mass of the body increases the damage to the road 16 times ($2^4 = 2 \times 2 \times 2 \times 2$).

To charge cyclists on a proportional basis relative to the damage they cause to the road would then result in insignificant fees being levied, which would increase the extent to which the revenue would be likely be exceeded by the administration costs of imposing the registration charges.

8 Conclusions

- The range of government policies, strategies, plans etc regarding increasing commuter cycling as a proportion of all commuter trips have not been underpinned by sufficient actions to show genuine intention.
- This assessment is based on the Queensland Government's failure to make any progress towards achieving its very conservative growth target/s for cycling share of trips.
- Continuing to direct the overwhelming majority of government urban road transport investment into expanding/improving infrastructure for private motor vehicles is a short term and futile approach to solving traffic congestion and the associated massive economic and social losses that will result of the long term.
- Continuing to delay removing the raft of cyclist-hostile provisions from the Queensland Road Rules will lead to further unnecessary cyclist fatalities – creating more tragedy for families and resulting in millions of economic and social costs for the community.
- People who do not currently ride bikes will then, unsurprisingly, continue to see bike riding as too dangerous for them to adopt.
- The Department of Transport and Main Roads has been derelict in not acting to address the level of cyclist fatalities, in contradiction to the department's claimed "safe systems approach".
- People who ride bikes just want to exercise their right to go about their daily lives without fearing for their health and safety due to the inappropriate, anti-social and dangerous driving behaviour of some people driving motor vehicles.
- Cultural/behavioural change is long overdue in terms of the wider motoring community's perspectives on their own driving behaviour, and the impacts of their driving on cyclists. Clarification of cyclists' rights in both the QRR and government transport-related publications would be a necessary first-step to initiate this change.
- It is recognised there will always be a need for people to make trips by private motor vehicle.
- However, the range of statistics presented in this submission and daily urban traffic congestion levels are clearly evidence of the need for a change away from Queenslanders' over-use of private motor vehicles for short trips to regular destinations.
- The current QRR remain a major barrier to any government achieving their targets for reducing the mode share of private car journeys in Queensland's cities, especially in South East Queensland.
- Without wholesale reform to level the playing field for non-motor vehicles on our roads, the immense costs to households and the community of over-dependence on motor cars will continue to be borne by us all.

9 Brisbane CBD BUG background information

The Brisbane CBD BUG was established in early 2005 to:

- monitor and identify CBD cycling facilities (and deficiencies);
- act as a resource for CBD commuter cyclists;
- lobby for improvements; and
- act as a network of cycle commuters and other cycle users in the CBD.

The CBD BUG is a grass roots volunteer organisation of more than 700 members, representing the interests of the very large number of Brisbane residents who ride bicycles to, from and within the Brisbane city centre. The CBD BUG actively seeks policy decisions at all levels of government that support cycling. In particular, CBD BUG seeks improved infrastructure, end-of trip facilities, integration of cycling with other transport modes and a cyclist-friendly regulatory environment.

CBD BUG members meet monthly to exchange information and ideas, discuss issues of relevance and develop consensus on actions that can benefit the interests of cyclists. The CBD BUG advocates directly in response to issues raised by both members and cyclists generally.

The Brisbane CBD BUG is one of, if not the most active cyclist advocacy group in Queensland and a member of QBUGs, Queensland's statewide BUG network.

The CBD BUG is wholly focused on advocating on behalf of cyclists. Its advocacy activities include letter writing, making submissions to council and governments, issuing media statements, meeting with politicians and bureaucrats as issues and opportunities arise, connecting with the broader cycling community via its multiple social media and digital channels, and holding monthly general meetings with members.

While the CBD BUG has a constitution and a bank account, it is not incorporated, does not have a Tax File Number or Australian Business Number. Accordingly, the organisation has not been required to compile financial statements, tax returns or Business Activity Statements.

The CBD BUG eschews revenue raising of all types as a deliberate strategy, to avoid its members being distracted from the organisation's primary mission of advocating for improved conditions for cyclists. This means the CBD BUG has relied on contributions of labour and goods from its volunteer members to enable its operations. While somewhat limiting its capabilities, this strategy has also been important in enabling the CBD BUG to candidly critique the performance of governments in terms of the gaps between their stated aims regarding increasing cycling and their actual performance, unlike other organisations that are compromised in this regard because of their reliance on direct and indirect government support.

The CBD BUG has been granted financial hardship status under the Right to Information Act (RTI Act) by the Queensland Office of the Information Commission. This has enabled the CBD BUG to obtain access to government documents without having to pay the exorbitantly high fees that typically prevent individuals/organisation from using RTI access. The CBD BUG understands it was the second organisation to be granted such status, only being preceded by the Cape York Land Council.

CBD BUG PROPOSED CHANGES TO THE QUEENSLAND ROAD RULES

This document has been prepared by the Brisbane Central Business District Bicycle User Group (CBD BUG) to detail the large number of cyclist-hostile provisions currently present in the Queensland Road Rules (QRR).

This appendix is comprised of two sections. The first contains proposed amendments to the QRR. The second section contains feedback on the process by which the QRR are developed and reviewed.

Section 1: Proposed amendments to remove the bicycle rider hostile provisions of the Queensland Road Rules.

Cyclists are vulnerable road users and as such require protection from the risks posed to them from motor vehicles that have far greater masses and tend to be driven at considerably greater speeds than cyclists typically travel. This submission focuses on the changes to the QRR that would offer increased safety to cyclists, as well as on removing rules that hinder the adoption of cycling on a much wider basis by the community. This section will discuss the reasons for the following recommended changes:

The CBD BUG views many of the current QRR as being hostile towards bicycle riders because they:

- give bicycle riders a status lower than that of other legitimate road users, either because certain provisions actively discriminate against bicycle riders, or because bicycle riders are omitted from some provisions;
- create dangerous situations for bicycle riders;
- treat bicycle riders as infants - unable to make rational decisions in their own interest and safety; and/or
- unnecessarily inconvenience bicycle riders, thereby making the bicycle less viable as an alternative mode of transport in comparison to the private motor vehicle.

The concern about the dangers to bike riders caused by the pro-car bias evident throughout the QRR has also been recognised by academics e.g. *It's not just about bike lanes*, Jan Garrard, <http://www.abc.net.au/environment/articles/2011/09/08/3312420.htm>.

There is a wealth of evidence from numerous reputable surveys undertaken in Queensland that clearly indicates the primary reason people choose to not ride a bike is their concern about danger from motor vehicles. The CBD BUG views the amending of the QRR as essential so the risks to bicycle riders from motor vehicles, both real and perceived, are minimised and do not continue to restrict cycling's growth as a healthy and sustainable transport mode. Given that increasing cycling's mode share by substantial amounts is a policy goal across governments, the amendment of road rules to allow achievement of targets for cycling's growth is essential.

The amendments proposed by the CBD BUG would undermine the current "might is right" approach adopted by some motorists. Importantly, bicycle riders and other vulnerable road users would be encouraged by the inherent message that motorists must take every care when driving in proximity to bicycle riders, pedestrians and other vulnerable road users. These amendments are part of the necessary transition for Queensland to successfully change from its excessive car dependence, and meet the aims of the National Cycling Strategy - to double the number of people riding bicycles for transport over the next five years i.e. by 2016. Our proposed amendments will also bring our vulnerable road user fatality rate into line with more exemplary parts of the OECD.

While all road users have a responsibility to act safely while using the road, as the operators of potentially lethal machines the primary responsibility for road safety must lie with motor

vehicle drivers. The current road rules must be amended to improve safety for bicycle riders by placing the onus on motor vehicle drivers to maintain appropriate driving behaviour and operate their vehicles safely in the proximity of vulnerable road users, who are particularly exposed to death or serious injury caused by drivers' lack of care and / or attentiveness. This is presently the case in Western Europe and must also be here.

The CBD BUG views many of these rules as typifying the obsolete, car-centric philosophy - that bicycle riders are a danger to other road users and are childish in their behaviours – still dominating much of road transport policy decision making. This approach is paternalistic and inappropriate when Queensland must transition to being a less car dependant society to relieve the community of the associated obesity and related health issues, anti-social behaviour, pollution, road trauma and other economic, environmental and societal losses.

The CBD BUG anticipates a number of objections will be raised to these proposed rules changes. In anticipation the following comments are offered.

OBJECTION

There is a lack of, or no evidence, to support the proposed changes.

RESPONSE

The lack of evidence has not been an issue when rules have been introduced that disadvantaged bicycle riders or other non-motorists that appear to have the intention of suppressing alternatives to the car.

Examples of this approach are:

- the introduction during the late 1990's of mandatory helmets for bicycle riders, and
- from 31 August 2011 banning scooters, skateboards and skates being used on roads after dark.

On the positive side, there is much supporting evidence for our proposals from countries where much greater proportions of people ride bicycles for transport.

OBJECTION

Cycling is a dangerous activity and needs to be regulated to maintain safety.

RESPONSE

Crash statistics, the laws of physics and common sense indicate motorists are a far greater danger to other road users, and particularly vulnerable users, than are bicycle riders.

In fact riding a bicycle is marginally more dangerous than walking, as evidenced by the small number of single vehicle cycling fatalities.

Summary of changes to protect and encourage bike riders / riding

- Modify the definition of "road" to be inclusive of cyclists.
- Reduce the default urban speed limit from 50km/h to 30km/h.
- Expand the ban on mobile phone use while driving to include hands-free.
- Modify the give way rules for shared zones such that motorists must give way to cyclists and pedestrians, and cyclists must give way to pedestrians.
- Modify the rules for a multi-lane roundabout to require exiting motorists to give way to cyclists.

- Modify the rules on turning to require motorists to give way to cyclists as well as pedestrians.
- Remove the requirement for bicycle riders to use bicycle lanes.
- Modify the rules regarding obstructions and hazards to place the primary onus for safety on motorists
- Disallow stopping or parking motor vehicles in bicycle lanes.
- Introduce strict liability of motorists involved in a crash with vulnerable road users so that unless proven otherwise the motorist will be held to have caused the crash.
- Introduce a minimum safe passing distance of 1.0 metre for a driver overtaking a cyclist in zones with a speed limit up to and including a 60km/h, and a minimum safe passing distance of 1.5 metres for a driver overtaking a cyclist in zones with speed limits greater than 60km/h
- Permit cyclists to travel straight through an intersection from a lane marked "left turn only" where it is the rightmost such lane.
- Legal recognition of Local Traffic Areas.

Summary of changes to remove impediments to cycling

- Permit cyclists to ride across a road on a crossing
- Amend Queensland's mandatory helmet law for cyclists to include the following exemptions:
 - A) Exemption for people aged >17 years using public bicycle hire schemes e.g. CityCycle
 - B) Exemption for people aged >17 years riding in parks and on footpaths and shared/cycle paths
 - C) Exemption for people aged >17 years riding bicycles on roads with a speed limit of 50km/h or less
- Amend the meaning of an *approved bicycle helmet* to include the following standards:
 - A) European (EN1078) & US Standards (Snell B95) for bicycle helmets.
- Clarify the rules regarding bicycle use to affirm a cyclist may stand up on the pedals
- Remove the requirement for a bicycle to be equipped with a warning device additional to the rider's voice
- Introduce a rolling stop / give way rule for cyclists
- Permit cyclists to ride on traffic islands

Changes to protect cyclists

- Modify the definition of "road" to be inclusive of cyclists.

Current rule

- 12 *What is a road*
 (1) *A road is an area that is open to or used by the public and is developed for, or has as one of its main uses, the driving or riding of motor vehicles*

Explanation

The current wording of Rule 12 recognises motor cyclists through the word "riding". However, inclusion of the word "motor" sets up everything else that follows in the rules, and implies that if a road user is not using a vehicle propelled by a motor, they don't belong on the road.

Accordingly, the word "motor" must be removed from Rule 12 to specifically recognise the legitimate presence of cyclists on the road.

- Reduce the default urban speed limit from 50km/h to 30km/h.

Current rule

25 *Speed-limit elsewhere*

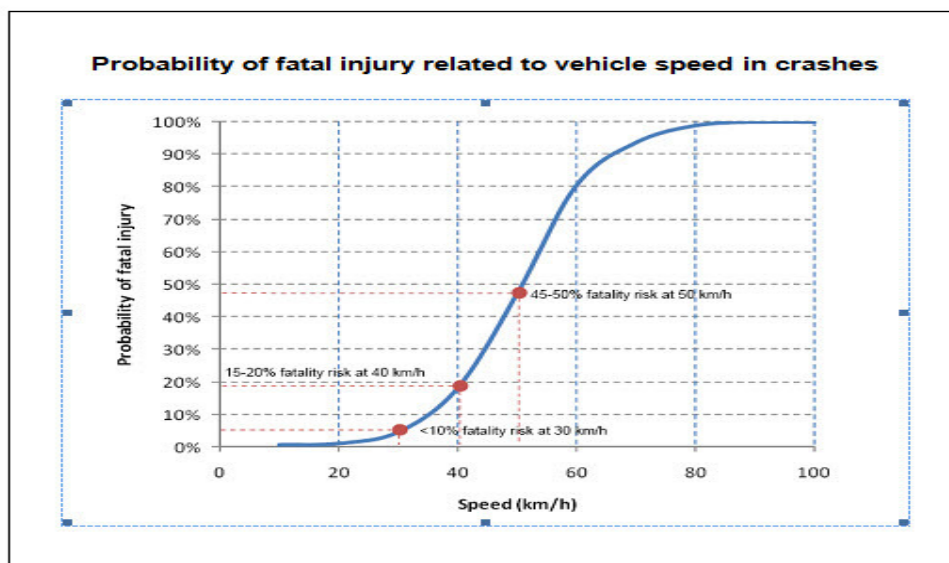
(1) *If a speed-limit sign does not apply to a length of road and the length of road is not in a speed-limited area, school zone or shared zone, the speed-limit applying to a driver for the length of road is the default speed limit.*

(2) *The default speed-limit applying to a driver for a length of road in a built-up area is 50 kilometres per hour.*

Explanation

Despite the considerable body of research that has been acknowledged even in Queensland (Queensland Government School Transport Safety Task Force, http://www.carrsq.qut.edu.au/community/school_transport_safety/index.asp) urban speed limits in this state remain inordinately high.

Research suggests that, generally, speeds need to be below 30kph for adult pedestrians to have a chance of avoiding serious injury in a crash. If an adult pedestrian is struck at a speed of 50kph, they are eight times more likely to sustain fatal injuries than if struck at a speed of 30kph. For child pedestrians, the speed at which they are likely to sustain fatal injuries is lower. Scandinavian countries set school zone speed limits at 25kph and have lower child fatality and injury rates (



Source: <http://www.stonnington.vic.gov.au/residents-and-services/community-health-and-safety/community-safety/speed-advisory-trailers/>

Sadly, despite the weight of evidence and the claimed “safe systems” approach of the Department of Transport and Main Roads Queensland’s default urban speed limit continues to be set at 50km/h. This is also the case despite a reduction in the urban speed limit having only a marginal impact on individual travel times and the large benefits to the community from reduced road trauma.

The CBD BUG suggests that hand in hand with the Sisyphean task of trying to tackle traffic congestion by expanding the road network, Queensland’s inappropriately high default urban speed limit has been retained for political purposes - to avoid offending the motoring majority who now expect to drive to their destinations at or above the speed limit irrespective of the danger they present to others (and particularly vulnerable road users).

Many cyclists seek to avoid major roads because of their large volumes of fast moving traffic that also includes heavy vehicles. However, even in what should be quiet back streets they are exposed to the risks created by motorists because of the high default urban speed limit, which is further exacerbated the up to 50% of the driving population reported as not complying with posted speed limits. Department of Transport and Main Roads *Speed Management Strategy 2010–2013*

<http://www.tmr.qld.gov.au/~media/Safety/Driver%20guide/Speeding/Speedstrategyfactsheet20102013.pdf>

Confirmation of the danger present in low speed zones (that should be the safest zones) is evident in the *Queensland Road Safety Action Plan 2013–2015*
<http://www.tmr.qld.gov.au/~media/Safety/roadsafety/Strategy%20and%20action%20plans/roadsafetyactionplan.pdf>, which at page 4 shows that over the years 2008 to 2012 0-50km/h speed zones had more serious casualties as a result of crashes than both 70km/h and 80-90km/h speed zones.

The CBD BUG's position on this issue is unequivocal, that the default built-up area speed limit be reduced to 30km/h.

- Expand the ban on mobile phone use while driving to include hands-free.

Current rule

300 Use of mobile phones

(1) The driver of a vehicle (except an emergency vehicle or police vehicle) must not use a mobile phone that the driver is holding in the driver's hand

Explanation

The 2011 National Transport Commission (NTC) Discussion Paper on the Australian Road Rules Review points to 61% of drivers continuing to use handheld mobile phones while driving, despite this behaviour being illegal in Australia (page 5). The rampant and flagrant use of hand held mobile phones by a large proportion of motorists while driving is also witnessed every day by bicycle riders.

Despite the wealth of evidence showing that driving while using a hands free phone is every bit as dangerous as using a handheld phone, authorities have failed to act on this issue(4). This would appear to be inadequate stewardship of road user safety due to concerns about the political ramifications.

As vulnerable road users bicycle riders are particularly concerned at the risks to their health and safety from motorists being distracted by telephone use.

Accordingly, it is essential that Rule 300 is expanded to make all use of mobile phones illegal while driving.

- Modify the give way rules for shared zones such that motorists must give way to cyclists and pedestrians, and cyclists must give way to pedestrians.

Current rule

83 Giving way to pedestrians in a shared zone

A driver driving in a shared zone must give way to any pedestrian in the zone.

Explanation

Like pedestrians, bicycle riders are vulnerable road users and the onus needs be placed on motorists to give way to bicycle riders in a shared zone.

In turn though, it is recognised that bicycle riders need to continue to give way to pedestrians in these zones and this should be reflected in the amended rule. For example, the present rule could be amended as follows:

“A driver driving in a shared zone must give way to any cyclist or pedestrian in the zone. A cyclist riding in a shared zone must give way to any pedestrian in the zone”.

- Modify the rules for a multi-lane roundabout to require exiting motorists to give way to cyclists.

Current rule

119 Giving way by the rider of a bicycle or animal to a vehicle leaving a roundabout. The rider of a bicycle or animal who is riding in the far left marked lane of a roundabout with 2 or more marked lanes, or the far left line of traffic in a roundabout with room for 2 or more lines of traffic, other than animals, bicycles, motorbikes or motorised wheelchairs, must give way to any vehicle leaving the roundabout.

Explanation

Rule 119 causes additional and unnecessary risk for bicycle riders when they are travelling through multi-lane roundabouts. This rule appears to exist to prevent slower moving cyclists from impeding faster moving motor-vehicles.

This rule has impossible inconsistency. First, there is no definition of the point a bicycle rider must reach before being allowed to proceed to the next entry/exit. At what point does the bicycle rider's obligation to give way cease? Clearly the bicycle rider half way across the exit cannot give way to a car exiting the roundabout. Nor can a bicycle rider suddenly stop when a motor vehicle approaches the exit by veering into the exit lane immediately before the exit. This rule is therefore impossible to enforce.

Secondly, because Rule 119 obliges a bicycle rider who is approaching an entry / exit point on a multi-lane roundabout to be looking backwards over their right shoulder for motorists travelling in the inside lane, or about to move into the inside lane, who are expecting the bicycle rider to give way to them so they can exit the roundabout. However, at the same time the bicycle rider also needs to be looking ahead for motorists entering the roundabout in case they do not give way.

This rule encourages dangerous behaviour from motorists driving in the inside lane of a roundabout to 'left-hook' cyclists who are legitimately travelling straight-ahead in the left-hand lane. Unfortunately this behaviour is not hypothetical, as some of our members can give first-hand accounts.

This rule may also foster a perception among some motorists that cyclists are not equal users of any roundabout and could contribute to other 'failure-to-give-way' incidents.

Finally, this rule creates different rules about giving way for bicycle riders and vehicles on multi-lane roundabouts, increasing uncertainty in a zone in which many motorists are already uncertain of their responsibilities, not to mention the responsibilities of other road users.

The rule should be amended to require motorists to treat bicycle riders the same as motor vehicles (as is currently the case in the Netherlands), or to “In all cases watch out for and give plenty of room to ... cyclists and horse riders who may stay in the left-hand lane and signal right if they intend to continue round the roundabout. Allow them to do so.” as stated in the British Highway Code. (Source: <https://www.gov.uk/using-the-road-159-to-203/roundabouts-184-to-190>)

- Modify the rules on turning to require motorists to give way to cyclists as well as pedestrians.

Current rule

- 72 *Giving way at an intersection (except a T-intersection or roundabout)*
 (3) *If the driver is turning left (except if the driver is using a slip lane), the driver must give way to—*
 (b) *any pedestrian at or near the intersection on the road the driver is entering.*
 (4) *If the driver is turning left using a slip lane, the driver must give way to—*
 (b) *any pedestrian on the slip lane.*
 (5) *If the driver is turning right, the driver must give way to—*
 (c) *any pedestrian at or near the intersection on the road the driver is entering.*
- 73 *Giving way at a T-intersection*
 (1) *A driver at a T–intersection who is not facing traffic lights or a stop sign, stop line, give way sign, or give way line, must give way in accordance with this section.*
 (2) *If the driver is turning left (except if the driver is using a slip lane) or right from the terminating road into the continuing road, the driver must give way to—*
 (b) *any pedestrian on the continuing road at or near the intersection.*
 (3) *If the driver is turning left from the terminating road into the continuing road using a slip lane, the driver must give way to*
 (b) *any pedestrian on the slip lane.*
 (4) *If the driver is turning left (except if the driver is using a slip lane) from the continuing road into the terminating road, the driver must give way to any pedestrian on the terminating road at or near the intersection.*
 (5) *If the driver is turning from the continuing road into the terminating road using a slip lane, the driver must give way to—*
 (b) *any pedestrian on the slip lane.*
 (6) *If the driver is turning right from the continuing road into the terminating road, the driver must give way to—*
 (b) *any pedestrian on the terminating road at or near the intersection.*

Explanation

Rule 72 obliges drivers turning left or right at intersections under specific circumstances to give way to pedestrians who are on the road. Bicycle riders are vulnerable road users like pedestrians and warrant the same status under the road rules, with the onus needing to be placed on motorists to give way to, and take care around, bicycle riders.

As an aside, the widespread lack of awareness / observation by motorists of this rule in its current form is a clear example of the inadequacy of driver licence testing procedures, and the dominant culture that roads are constructed to facilitate the movement of cars, to the exclusion people using active transport modes. Rule 73 should parallel the amendments proposed in relation to Rule 72, so that give way rules are consistently applied across all relevant intersections.

- Remove the requirement for bicycle riders to use bicycle lanes.

Current rule

247 *Riding in a bicycle lane on a road*

- (1) *The rider of a bicycle riding on a length of road with a bicycle lane designed for bicycles travelling in the same direction as the rider must ride in the bicycle lane unless it is impracticable to do so.*

Explanation

Rule 247 causes bicycle riders concern from several perspectives. Firstly, the need for this rule is not clear. In and around central business districts, which is where these lanes are most commonly found, bicycle riders can easily travel at the same speed as motorised traffic and should legally be allowed to adopt a defensive riding position by travelling in the line of traffic, regardless of the presence of a bicycle lane on the road.

Inadequate standards for bicycle lanes, past and present, mean that parallel parked vehicles are a danger to bicycle riders riding in the “door zone”, due to motorists opening car doors without checking for approaching bicycle riders. This was the cause (the coroner’s word) of one recent death in Melbourne. Other hazards in the same area of the road in which bicycle lanes are marked include broken glass, gravel, underground utility access holes or simply the rougher edges of the road.

The term ‘impracticable’ has no precise definition, rendering this rule arbitrary, simply the opinion of police officers and introduces the potential for bicycle riders to be issued penalties by police applying their own interpretation of this rule.

- Modify the rules regarding obstructions and hazards to place the primary onus for safety on motorists

Current rules

125 *Unreasonably obstructing drivers or pedestrians*

- (1) *A driver must not unreasonably obstruct the path of another driver or a pedestrian.*
- (2) *For this section, a driver does not unreasonably obstruct the path of another driver or a pedestrian only because—*
 - (a) the driver is stopped in traffic; or*
 - (b) the driver is driving more slowly than other vehicles (unless the driver is driving abnormally slowly in the circumstances).*

236 *Pedestrians not to cause a traffic hazard or obstruction*

- (1) *A pedestrian must not cause a traffic hazard by moving into the path of a driver.*
- (2) *A pedestrian must not unreasonably obstruct the path of any driver or another pedestrian.*
- (3) *For subsection (2), a pedestrian does not unreasonably obstruct the path of another pedestrian only by travelling more slowly than other pedestrians.*

253 *Bicycle riders not to cause a traffic hazard*

The rider of a bicycle must not cause a traffic hazard by moving into the path of a driver or pedestrian.

Explanation

While motorists are only precluded from causing an obstruction to another driver or a pedestrian, bicycle riders have the much higher requirement of not causing a hazard, while pedestrians, the most vulnerable of all road users, have the greatest requirement of not causing an obstruction or a hazard.

The rules should be redrafted to place the onus of greatest responsibility on motorists. They have the greatest potential to cause harm to others, hence they should be required to take the greatest care.

- Disallow stopping or parking motor vehicles in bicycle lanes.

Current rule

- 187 *Stopping in a bicycle lane, bus lane, tram lane, tramway, transit lane, truck lane or on tram tracks*
 (2) *A driver must not stop in a bicycle lane unless:*
 (a) *the driver:*
 (i) *is driving a public bus, public minibus or taxi, and is dropping off or picking up, passengers; and*
 (ii) *is permitted to drive in the lane under the Queensland Road Rules or another law of this jurisdiction; or*
 (b) *the driver is permitted to stop or park in the Bicycle lane under another law of this jurisdiction.*

Explanation

Rule 187(2) allows vehicles to stop in bicycle lanes – creating unnecessary inconvenience and/or risk to bicycle riders by forcing them to either stop or to merge back into the traffic lane. Bicycle lanes should be kept clear as measure to both improve road safety and to encourage cycling.

Even where the still limited Brisbane bicycle network has resulted in the installation of on-road bike lanes, these are commonly rendered unusable by being occupied by parked cars. Cyclists are thereby forced back out into the transit lane and into the path of motorists. Thus, even the parking convenience of motorists is allowed to over-ride the safety of cyclists.

The CBD BUG wants a new provision in the Queensland Road Rules banning car parking in bike lanes during the relevant morning/evening peak travelling period.

- Introduce strict liability of motorists involved in a crash with vulnerable road users so that unless proven otherwise the motorist will be held to have caused the crash.

Explanation

This law can be explained quite simply in the following terms legislation - the person operating the heaviest vehicle is responsible to operate their vehicle in such a manner that they ensure the safety of the more vulnerable users with whom they are sharing the public domain.

Simply put, if motorist hits a cyclist, the motorist is at fault. Most bicycle-friendly countries in Europe have found this sort of policy to be effective. Vulnerable user policy is applicable to every kind of roadway rather than lend itself to be overruled under certain road conditions.

Strict liability recognises that motorists are the principal source of risk for bicycle riders and other vulnerable road users. Therefore, they must take the greatest responsibility for ensuring the potentially lethal machinery they are operating is used safely, especially when they are in proximity to vulnerable road users.

Strict liability is a key element of making bicycle riding safer as it places the onus of proof on the motorist to show that they were taking account of the possibility of colliding with a pedestrian or bicycle riders and avoiding that possibility.

This rule must be introduced to address the appalling level of callousness evident among motorists towards bicycle riders and pedestrians, and in particular children and the elderly. This attitude is based on motorists thinking they “own the road” and all bicycle riders (and pedestrians) must stay out of their way.

This thinking clearly does not recognise the additional vulnerability of bicycle riders and pedestrians. Children are especially vulnerable because even when trained in the road rules, they can still step onto the road unexpectedly e.g. if they are scared by a dog. In other more civilised countries where the community cares about the health and safety of children, motorists are obliged to drive with caution whenever there are children around, and accordingly are held automatically at fault if they run down a child.

- Introduce a minimum safe passing distance of 1.0 metre for a driver overtaking a cyclist in zones with a speed limit up to and including a 60km/h, and a minimum safe passing distance of 1.5 metres for a driver overtaking a cyclist in zones with speed limits greater than 60km/h

Current rule

140 *No overtaking unless safe to do so*
 A driver must not overtake a vehicle unless—
 (a) the driver has a clear view of any approaching traffic; and
 (b) the driver can safely overtake the vehicle.

Explanation

The need for a change to this rule to clearly specify the safe passing distance for a driver overtaking a cyclist is derived from the fact that bicycle riders are frequently subjected to motorists, either deliberately or unintentionally, leaving an unacceptably small and unsafe gap between their vehicle and bicycle riders they are overtaking.

Within the cycling community such overtaking manoeuvres are commonly called “punishment passes”. This title is in recognition that when this behaviour occurs on a road where there is no rational reason for such close overtaking it is assumed motorists adopt this approach as a punitive measure in response to a cyclist being on the road.

Bicycle riders are vulnerable road users and bicycle riding is a viable, alternative form of transport that all governments should be encouraging as much as possible in order to reduce chronic traffic congestion. Therefore, bicycle riders deserve every protection the road rules can afford them. It is also notable that many jurisdictions in Europe that have high levels of trips being made by bike have seen fit to introduce a minimum safe distance between bicycle riders and overtaking vehicles of one metre, while some have a 1.5 metre minimum safe overtaking distance.

An anticipated argument against this proposal is that it will slow down motor vehicle traffic as drivers will have to wait longer to overtake a cyclist under this rule and this will exacerbate the existing chronic traffic congestion. The response to that supposed negative outcome is

that the few extra seconds a motorist will lose while waiting for the safe opportunity to overtake a cyclist as required under this rule will pale beside the loss to the individuals involved and society as a whole if a cyclist is killed or injured by an unsafe passing manoeuvre. In any case the real situation is that congestion is primarily caused by the overuse of private motor vehicles, with excessive levels being driven as single occupant vehicles i.e. nationally >75% of people use their car as the main form of transport used on usual trip to work or fulltime study (ABS Nov 2009).

Another argument against this proposal is that motorists will have difficulty in correctly determining the safe distance between their vehicles and bicycle riders they want to overtake. This is a spurious argument as maintaining this distance will require the same judgement used for other situations drivers already deal with successfully every day i.e. maintaining a safe distance between their vehicle and the one they are following as required under Rule 126.

One final fallacious argument against this proposed rule is that it cannot be enforced. In fact the enforcement of this rule will be no different to the aforementioned Rule 126 regarding maintaining a safe distance between vehicles.

- Permit bicycle riders to travel straight through an intersection from a lane marked “left turn only” where it is the rightmost such lane.

Explanation

Bicycle riders are required under the road rules to ride as near as is safely possible to the far left side of the road. Travelling outside of the line of faster moving motorised traffic also suits many bicycle riders.

However, at some intersections the left hand lane is signed/marked indicating it is for left hand turns only; requiring bicycle riders wishing to travel straight ahead through the intersection to merge with the traffic travelling in the right hand lane. These intersections also commonly have a shoulder on the other side sufficiently wide enough to safely accommodate bicycle riders.

This rule is particularly necessary for situations where there are two left hand turn only lanes. One example is the north bound section of Logan Road at its intersection with Juliette Street in Greenslopes.

While a bicycle rider is merging into the right hand lane but has not yet exited the left hand lane some motorists will overtake to the bicycle rider's left - a dangerous and frightening situation for bicycle riders

This situation would be made safer for bicycle riders via by a new rule allowing bicycle riders to travel straight though an intersection in a lane marked left turn only where it is the rightmost such lane.

- Legal recognition of Local Traffic Areas.

Explanation

Local government authorities establish Local Traffic Areas (LTAs) by installing signage and traffic calming in residential and “shopping village” precincts to reduce traffic volumes and speeds. Despite these measures, motorists still persist in using LTAs as “rat runs”. This behaviour both impacts on the improved amenity sought from implementing LTAs and jeopardises the safety of bicycle riders who commonly use LTAs as refuges from regional/arterial road traffic.

While there are penalties under the road rules for motorists who exceed the speed limit in LTAs, the Queensland Police have advised they have no legislative basis under which to impose a penalty on motorists who use LTAs as “rat runs”. In fact, LTAs are not even mentioned in the current road rules, meaning signage erected by local councils such as “Local Traffic Only” has no standing under the law. It is also the case that while many LTAs have traffic calming they still have the 50km/h default speed limit. Motorists tend to rush between the calming devices, reducing the effectiveness of the LTA. This is a clear anomaly in the road rules and should be corrected through the inclusion of reduced speed limits, much as school zones have a reduced speed limit.

Changes to remove impediments to bicycle riding

- Permit cyclists to ride across a road on a crossing

Current rule

248 *No riding across a road on a crossing*
 (1) *The rider of a bicycle must not ride across a road, or a part of a road, on a children’s crossing or a pedestrian crossing.*
 (2) *The rider of a bicycle must not ride across a road, or part of a road, on a marked foot crossing, unless there are bicycle crossing lights at the crossing showing a green bicycle crossing light.*

Explanation

It is thought Rule 248 was intended to protect pedestrians from cyclists and cyclists from motorists, but is unnecessary on both counts, is burdensome for cyclists and introduces its own set of hazards. In paying no regard to the needs and behaviours of bicycle riders it is broken by countless bicycle riders every day. If Rule 248 was observed to the letter it would render cycling impractical for transport, as bicycle riders would be obliged to dismount every time they needed to cross a road at a pedestrian crossing.

The ridiculousness of this rule is its impacts on cyclists is perfectly demonstrated by an examination of the Centenary Bikeway’s crossing at Moggill Road, Kenmore. An aerial photograph of this intersection is provided on the following page.

Firstly, it should be pointed out that despite this is one of the most important bikeways in Brisbane and ongoing calls for cyclists for the installation of their own flyover across Moggill Road (to parallel the amenity of motorists driving on the Centenary Motorway), no such flyover has been delivered and cyclists are forced to continue using the Moggill Road crossings.

Should a cyclist (riding north or south along the bikeway) observe the QRR to the letter at this intersection they would:

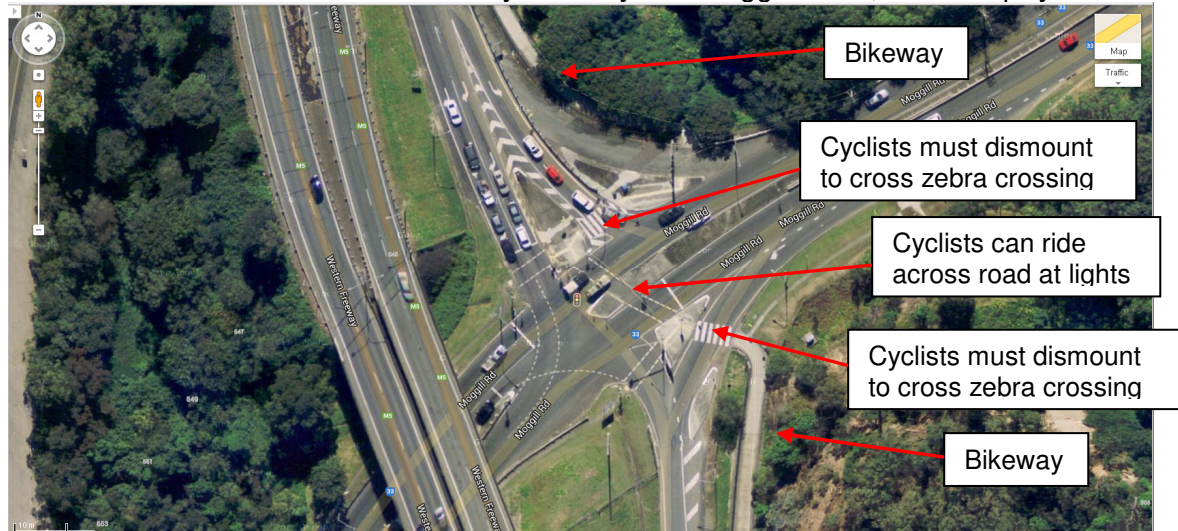
- 1) have to dismount at the zebra crossing to traverse a motorway on/off-ramp,
- 2) could then remount and ride across Moggill Road via the cyclist crossing lights; and
- 3) then have to again dismount at the second zebra crossing to traverse the other motorway on/off-ramp.

The overwhelming majority of cyclists are aware of the absurdity of these requirements and continuing riding for this entire section of their trip in safety. However, this is a clear demonstration of the QRR not being relevant to the safety amenity needs of cyclists.

It is also important to point out that this intersection has recently been the site of police “theatre enforcement” with numerous cyclists being booked for riding across the motorway

ramps via the zebra crossings, apparently in response to complaints from motorists. While technically correct this action has done little credit to the Queensland Police, and occurred despite there being holding rails in place at these zebra crossings, which are designed to enable cyclists to stop without taking their feet out or off their pedals while waiting for a safe opportunity to cross.

Aerial view of intersection of Centenary Bikeway and Moggill Road, Indooroopilly



This rule is especially discriminatory against less confident/experienced bicycle riders who prefer to ride on the footpath rather than on-road. Furthermore, this rule ignores the fact that an increasing number of bicycle riders are wearing cleated shoes, making it uncomfortable, impractical and at times even more dangerous to walk in comparison to riding.

Bicycle riders report that motorists are currently uncertain about this rule, as when a cyclist approaches a pedestrian crossing vehicles commonly slow and/or stop. Amending this rule would remove this ambiguity and reinforce what is already occurring on a wide spread basis.

A reason previously put forward for maintaining this rule is that bicycle riders travel much faster than pedestrians and if allowed to ride across pedestrian crossings they will ride out in front of motorists before they can stop. However, this is a paternalistic attitude towards bicycle riders based on the ridiculous notion that bicycle riders are child-like and/or impulsive and will not be able to restrain themselves from recklessly riding out in front of moving traffic. Children are trained to use pedestrian crossings appropriately, yet people riding bicycles cannot apparently be trusted to act in the same manner.

Another defence of this rule is that children are being taught to obey it. Our response to this is that this approach is inappropriate as children are being taught they cannot safely ride on the road. Changing this rule would simply require that children be taught they have to wait for the traffic to stop before they ride across the road, the same message they are given in how to behave when walking.

Yet another reason suggested for not changing this rule is bicycle riders cannot safely share with pedestrians the “scramble” that is allowed at a handful of intersections in central business districts. The CBD BUG agrees with this position, but argues that this insignificant percentage of intersections should not result in bicycle riders being banned from riding on all pedestrian crossings.

Another suggestion to address this problem has been that signal lanterns can be installed that would legally allow bicycle riders to ride on crossings. Due to the thousands of crossings requiring such treatment the CBD BUG views this suggestion as disingenuous and a massive waste of the very limited funding provided for cycling infrastructure, especially in view of the fact that this issue can be easily addressed via regulatory amendment.

It should be noted that in an extensive investigation of this rule in Canberra it was found that well over 95% of cyclists ignored it and no accidents were reported, despite over a decade of data. This evidence was thoroughly aired at meetings of the then Queensland State Cycle Committee of TMR in 2004. Its recommendation was ignored.

Finally, it has been proposed that bicycle riders who do not want to break this rule should simply ride around intersections by crossing the road at point near to the marked crossing. However, even for highly competent bicycle riders this option is not always available because of traffic and/or road conditions. Furthermore, this approach would add distance and time to cycling trips, again making cycling less viable as an alternative to the car.

Current rule

- 81 *Giving way at a pedestrian crossing*
 (2) *A driver must give way to any pedestrian on a pedestrian crossing.*

Explanation

With the amendment of Rule 248, to enable bicycle riders to legally ride across a road on a pedestrian crossing or children's crossing, Rule 81 will require amendment to oblige a driver to also give way to bicycle riders using a pedestrian crossing or children's crossing.

- Amend Queensland's mandatory helmet law for cyclists to include the following exemptions:
 - A) Exemption for people aged >17 years using public bicycle hire schemes e.g. CityCycle
 - B) Exemption for people aged >17 years riding in parks and on footpaths and shared/cycle paths
 - C) Exemption for people aged >17 years riding bicycles on roads with a speed limit of 50km/h or less
- Amend the meaning of an *approved bicycle helmet* to include the following standards:
 - A) European (EN1078) & US Standards (Snell B95) for bicycle helmets.

Current rule

- 256 *Bicycle helmets*
 (1) *The rider of a bicycle must wear an approved bicycle helmet securely fitted and fastened on the rider's head, unless the rider is exempt from wearing a bicycle helmet under another law of this jurisdiction.*
 (2) *A passenger on a bicycle that is moving, or is stationary but not parked, must wear an approved bicycle helmet securely fitted and fastened on the passenger's head, unless the passenger is:*
 (a) a paying passenger on a three or four-wheeled bicycle; or
 (b) exempt from wearing a bicycle helmet under another law of this jurisdiction.
 (3) *The rider of a bicycle must not ride with a passenger on the bicycle unless the passenger complies with subrule (2).*

Schedule 5 Dictionary

approved bicycle helmet means a helmet that complies with —

(a) AS 2063.1 and 2063.2; or

(b) another standard the chief executive considers is at least equal to that standard.

Explanation

Riding a bicycle, even for short transport trips, is good for the health of the individual, the local environment & society broadly. These benefits outweigh the risks (in locations without helmet laws) from anywhere between 20:1 or 77:1 and helmet laws themselves have a negative impact of public health.

(Sources:

Rojas-Rueda, D. et al. *The health risks and benefits of cycling in urban environments compared with car use: health impact assessment study*. BMJ 2011;343:d4521

Pucher, J. et al. *Infrastructure, programs, and policies to increase bicycling: An international review*. Preventive Medicine 50 (2010) S106–S125

de Jong, P. *The health impact of mandatory bicycle helmet laws*. Risk Anal. 2012 May; 32(5):782-90))

Any intervention which decreases cycling, particularly for transport (not sport & recreation), is something that should be discouraged. Mandatory bicycle helmet laws discourage cycling and change the demography of cycling. (Source: <http://www.cycle-helmets.com/cycling-1985-2011-study.html>)

S86 of the Northern Territory Traffic Regulations allows cyclists aged 17 years or more to ride without a helmet when riding in a park, on a footpath or on a bikepath. (Sources: [http://notes.nt.gov.au/dcm/legislat/legislat.nsf/d7583963f055c335482561cf00181d19/5a4b7f36844c2bb269257b04007d5e7e/\\$FILE/Rept009R1.pdf](http://notes.nt.gov.au/dcm/legislat/legislat.nsf/d7583963f055c335482561cf00181d19/5a4b7f36844c2bb269257b04007d5e7e/$FILE/Rept009R1.pdf))

The result is the Northern Territory has the highest modal share for cycling in the country, the highest female participation rate and a different cycling demographic to the other states and territories - more 'transport/everyday cycling' in normal clothes at slow speeds - and they pay no safety penalty for this approach. (Source: <http://www.cyclehelmets.org/1114.html>)

This is a sensible approach because the principal risk to cyclists arises from crashes involving motor vehicles, and when cyclists are not on-road they experience an insignificant level of risk of serious injury or death. When riding off road it is suggested cyclists would be safer by wearing a broad brimmed hat to prevent potential skin cancer from sun exposure, than from wearing a helmet.

Currently, users of wheeled recreational devices, who are not compelled by law to wear helmets, are legally allowed to use foot-paths, cycle-paths and roads with speed limits below 50km/h.

The CBD BUG understands that Mandatory bicycle helmet laws were accepted by the states twenty years ago as part of a larger package of safety measures to ensure they received black spot road funding from the then Federal Labor Government.

Australia is one of only three countries with an enforced, all-age mandatory bicycle helmet law. The others being New Zealand & the UAE. After twenty years, only a handful of Canadian & US jurisdictions have followed suit and when they have done so the requirement has been largely limited to children. A recent, comprehensive study published in 2013 in the British Medical Journal states that the contribution of helmet legislation throughout Canadian Provinces “has been minimal”. (Sources: Dennis, J. et al. *Helmet legislation and admissions to hospital for cycling related head injuries in Canadian provinces and territories: interrupted time series analysis*. BMJ 2013;346:f2674 and Goldacre, B. *Bicycle helmets and the law*. BMJ 2013;346:f3817)

Australia’s bicycle helmet laws can be seen as an example of what not to do to improve cyclist safety.

Australia’s contributions to the discussion have been hindered by confirmation bias and flawed methodology. Many studies observe helmet use after an accident, ignoring the effect of compulsion on cycling rates, and draw inappropriate conclusions from tiny data sets, ignoring confounding factors that are probably more relevant (alcohol use, etc). These include the Queensland Government-sponsored (and -edited), non-peer-reviewed CARRS-Q report and a recent publication from UNSW as a letter to the editor of the Medical Journal of Australia. (Sources: <http://helmetfreedom.org/1531/carrs-q-research-part-one/> and Dinh, M. *The effectiveness of helmets in reducing head injuries and hospital treatment costs: a multicentre study*. MJA 198 (8) 2013

Injuries to pedal cyclists, including head injuries, had been decreasing in the decade before bicycle helmet legislation and there was no appreciable difference in this trend following the law’s introduction. (Source: <http://helmetfreedom.org/572/how-much-safer-to-helmet-laws-make-us/>). The rate of head injuries for other road users, including pedestrians, followed this trend as well, despite no requirement for them to wear helmets.

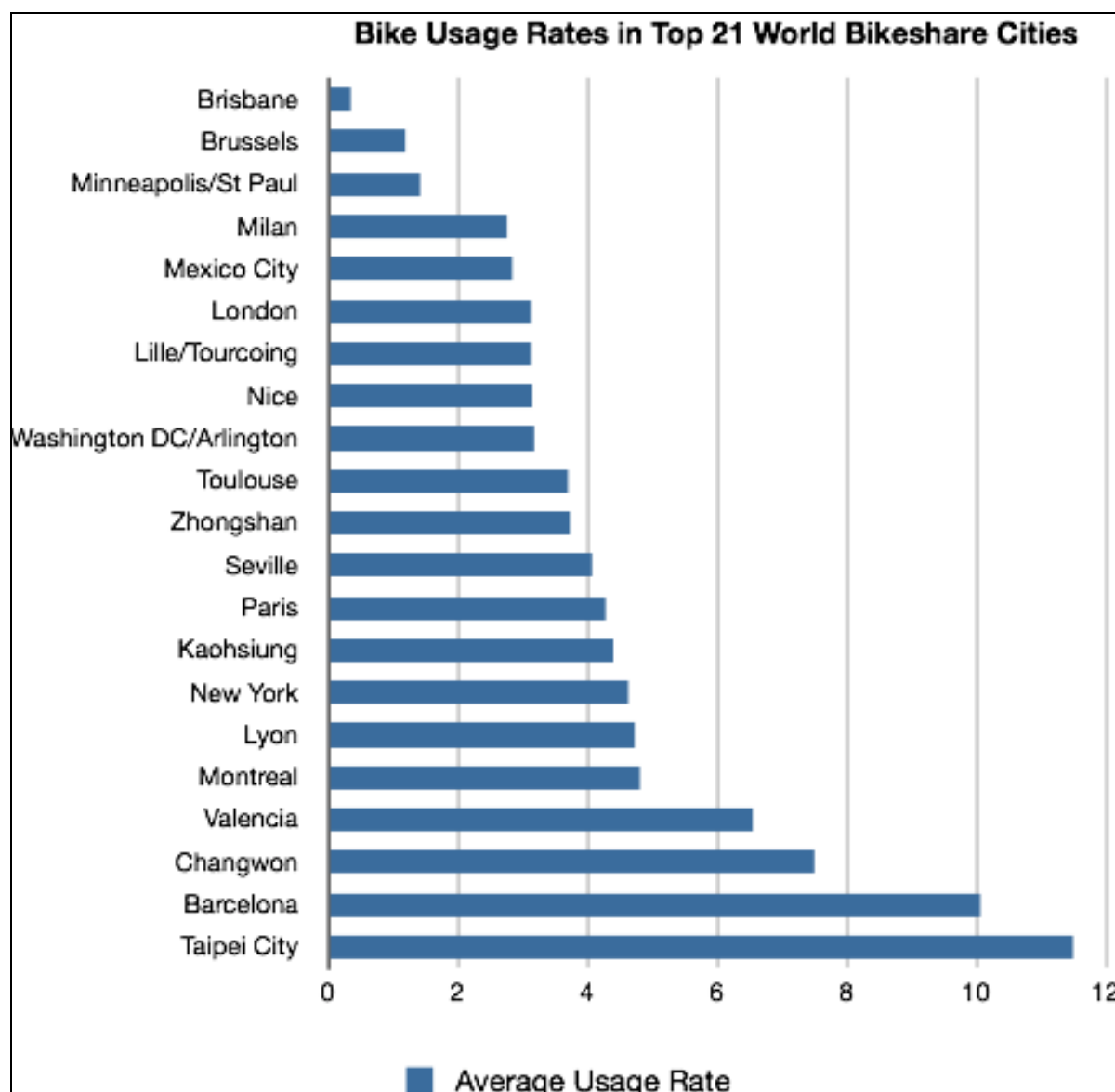
Reanalysis of the data recently has shown that even the protection afforded by bicycle helmets has been grossly overstated, with the US Government’s Department of Transportation’s National Highway Traffic Safety Authority this year withdrawing the claim that they reduce 85% of head injuries. (Source: <http://bike.risingsea.net/docs/Legislation/helmet/NHTSA-response-to-Titus.pdf>).

An exemption for public bike share (CityCycle) would not be without precedent. Both Mexico City and Tel Aviv have repealed their helmet laws for cyclists to enable their bike share schemes to flourish (Source: <http://www.ecf.com/wp-content/uploads/2011/09/Mexico-City-Repeal-of-the-helmet-law.pdf>).

Only Australia’s two public bicycle hire schemes are burdened with helmet compulsion and they have the lowest usage rates in the world. The CBD BUG has undertaken the following detailed analysis of the performance of Brisbane’s CityCycles scheme compared to other major schemes.

Bike sharing in Brisbane: the experience compared to other world cities

The figure below shows the average number of times each bike is used per day in the twenty-one largest bike share schemes in the world. The numbers have been estimated over the period May to July 2013, and the list of schemes was obtained from Oliver O’Brien’s list at <http://oliverobrien.co.uk/2013/05/the-top-world-bikeshare-cities/>. On this list, Brisbane’s CityCycle is the 18th largest scheme in the world for which live data is available.



The usage rates are measured by changes in the number of bikes at each station, using live data, and hence include some redistribution. However, comparing press reports of Brisbane usage to these figures shows the redistribution rate compared to total usage is less than 3%, which is insignificant for the purposes of this analysis. The usage rates are calculated daily based on the maximum number of bikes available in each scheme. This maximum available bikes metric is the same as used in the paper "*Mining bicycle sharing data for generating insights into sustainable transport systems*" by O'Brien et al (Journal of Transport Geography, 2013 - <http://dx.doi.org/10.1016/j.jtrangeo.2013.06.007>).

An exception was made for a few cities. Washington DC and Kaohsiung figures used trip data available from the scheme websites - Washington for the last four quarters and Kaohsiung for June 2013 (<http://www.capitalbikeshare.com/system-data> and <http://www.c-bike.com.tw/english/NewsShow.aspx?nid=316>).

The Citibike New York City blog provided data for June 2013 (<http://citibikenyc.com/system-data>); the data showed that usage was approximately 10% higher than the live data estimate. The actual data was used. This indicates that the estimates in the figure above are conservative.

Similarly, a very conservative estimate of the Taipei usage was used: <http://www.asianews.it/news-en/Cycling-to-reduce-smog-in-Taipei-28387.html> stated that more than 800,000 trips were taken in June 2013, with a total of 2,324 bicycles, which leads

to the figure of 11.5 trips per bike per day. The recent daily maximum bicycle count has ranged from 1,120 to 1,823, suggesting an even higher actual usage rate of approximately 20 trips per bike per day. The highest maximum daily bicycle count is very similar to that of CityCycle - a maximum of 1,899 was observed historically in Brisbane. On 7 June 2013 a record 34,670 trips were made. Live data shows that between 6:43 pm and 6:53 pm (Taipei local time) on 16 July 2013 619 trips were made. This means Taipei achieved approximately the same number of trips per bike in 10 minutes as Brisbane achieves in an average day.

Barcelona's *Bicing* scheme recorded 16,178,349 trips taken in 2012 (<http://www.sindicadegreugesbcn.cat/pdf/resoluciones/ActuacioOfici.Bicing.1212.pdf>). With an estimated daily maximum bicycle average of 4,197 in May-July 2013 this translates to 10.5 trips per bike per day again indicating that the Barcelona estimate above is conservative.

Except for Brisbane, these are all northern hemisphere schemes with slightly higher usage rates in summer. The seasonal usage rate differences do not affect this analysis, as Brisbane's historical monthly usage rate since April 2012 (the scheme completion) has ranged from 0.26 to 0.41 trips per bike per day. Of the above schemes, only the Minneapolis scheme is closed in winter months (https://www.niceridemn.org/how_it_works/).

Since the list was made, the Chicago scheme has opened. More than 10,000 trips were taken in the first week and more than 25,000 in the first two weeks according to <http://divvybikes.tumblr.com>. The Chicago "Divvy" scheme is still expanding. It had approximately 370 bikes in the first two weeks, but plans to expand to 4,000 bikes. This translates to a usage rate of approximately 4.8 trips per bike per day.

The long-term usage rate for Brisbane CityCycle bikes is approximately 0.35 trips per bike per day. The historical daily usage rate has ranged from 0.01 to 0.57 trips per bike per day during this time.

There are many factors involved in the differing usage between cities, and every scheme faces different challenges and natural advantages. Some schemes like Taipei are virtually victims of their own success (see <http://www.taipeitimes.com/News/taiwan/archives/2013/04/29/2003561004>) as redistribution becomes very challenging. In Taipei, at times approximately 90% of all the bikes are in use, as the scheme continues to expand.

However, Brisbane's CityCycle scheme has a very low usage rate compared to its peers. Its potential is almost completely unrealised and this is a source of great frustration to many members of CBD BUG.

The benefits of bike sharing schemes

Bike sharing schemes have enormous benefits for scheme users, private bike users, motor vehicle drivers and public health in general. According to urban transport advisor Peter Midgley, "bike sharing has experienced the fastest growth of any mode of transport in the history of the planet" (http://www.earth-policy.org/plan_b_updates/2013/update112).

On the following page is list of positive effects is from a report on Spanish bike sharing schemes by Esther Anaya and Alberto Castro. (<http://bicicletapublica.files.wordpress.com/2013/03/balance-general-de-la-bp-en-espac3b1a.pdf>)

Positive Effect	Optimisation
Reduction of car traffic	Congestion charge or limitation of car traffic in cities Location of stations in origin and destination of frequent car routes and park and ride infrastructures Combination with car-sharing
Promotion of public transport	Informative integration Physical integration Operational integration Discounts for intermodal users
Increase of cycling	Avoid decrease of quantity and quality of private bicycle infrastructure Common elements for public and private bicycle (e.g. Traffic calm, cycle ways, maps, signposting ...) Compensatory measures (e.g. Cycle parking inside and outside buildings, security against theft, maintenance courses...)
Reduction of pollution	Reduction of car traffic Optimization of redistribution “Green” redistribution and repair vehicles
Improvement of public health	Integrated health policies including bike-sharing Promotion of the positive effects of cycling on health
Increase of traffic safety	Reminder of traffic rules (e.g. On the handlebar) Traffic safety campaigns Insurances covering accident risk
Enhance local economy	Hire local staff Integrate bike-sharing with social projects Involve retailers

The authors comment that schemes are actually a way to make cycling safer in a given city. This is because bike sharing is safer than riding a private bike and as the number of bike riders increases, the “safety in numbers” effect comes into play.

The 2011 Australian Census showed how large this effect could be. The CityCycle scheme is present in 14 Brisbane suburbs (Brisbane City, Fortitude Valley, Teneriffe, New Farm, Newstead, Kangaroo Point, South Brisbane, Highgate Hill, Dutton Park, West End, Milton, Auchenflower, Toowong and St Lucia). These are some of the top suburbs for commuting cycling in Queensland. In fact, in terms of absolute numbers for commuting in Queensland, the top suburbs in descending order are: West End, Toowong, New Farm, Highgate Hill, and St Lucia with bicycle modal shares between 4% and 8%. There were a total of 1,916 trips on Census Day 2011 with an average modal share of 4.3% of all workers over all 14 suburbs.

CityCycle usage data indicates that 17.8% of trips are taken between 7 am and 9 am and 18.8% of trips are taken between 4 pm and 6 pm. Using these as a proxy for commuting trips, if CityCycle achieved 4.5 trips per day (the average usage rate of the other large schemes) instead of 0.35, with the average of 1,827 bicycles available, this would be 2,775 extra trips by bicycle during these hours within these suburbs. The commuting modal share by bicycle would then be 10.5% instead of 4.3%. This would, for these suburbs, exceed the Brisbane City Council's former 2000 target of 8% of trips to be made by bike. Even if the rate increased to the next lowest value (Brussels, 1.15 trips per bike per day), an extra 535 trips would be made, raising the modal share to 5.3%.

Lack of political will at local and state level to help scheme reach potential

Despite these benefits, there has not been a determined effort to make the Brisbane scheme succeed. There has been a lack of political will at the highest levels to make the required changes, despite the same party controlling both local and state government. The Go Card link was added last year but has made no difference to usage rates at all. Trial helmets and lowering the daily charge in 2011 had a significant effect.

Brisbane Lord Mayor Graham Quirk recently justified the scheme as a way to provide advertising for Brisbane in other world cities. He commented on 612 ABC radio in June 2013 that “if [CityCycle] had taken off big time I would have had motorists down my throat for clogging up the city streets”. Although the statement was made in jest, it shows that some political leaders in Queensland perceive bicycles as a problem and something that causes congestion rather than a solution to congestion and pollution.

Differences between Brisbane and other schemes and CBD BUG recommended actions

The major differences between Brisbane and other schemes worldwide were summarised in a talk to the Brisbane Institute in November 2010 by CBD BUG member and economist, Dr John Nightingale (<http://www.brisinst.org.au/past-issues/november-2010-issue>). The two major impediments are the mandatory helmet law for cyclists, and the “extremely aggressive road environment into which the user is launched”.

These two impediments were also the most common “Perceived Barriers to Public Bikeshare Program Adoption” in a survey conducted for an honours thesis by Joshua Forrest in 2012 (see Table 9 and Table 10 of <http://bit.ly/joshua4008>). More than 80% of current bike share scheme users agreed that the top perceived barrier was “helmet laws prevent spontaneous use of public bikes”. The next most popular barriers suggested were “helmets are not always available” and “current quality of road and bikeway infrastructure discourages public bikeshare adoption”.

A third difference is the 10pm - 5am closing of the scheme. Apart from Barcelona, none of the other schemes in the largest 21 have this limitation (Barcelona hires are not available from 2 am-5 am Monday to Thursday and 3 am-5 am on Friday). Also, 21 of the 27 JCDecaux Cyclocity schemes are 24 hour schemes. Brisbane is by far the largest scheme with this limitation; in the other Cyclocity schemes, approximately 16% of weekend trips are between these hours. The reason for the closure was given by Cr Peter Matic in a May 2013 interview on 612 ABC radio as 1) noise and 2) a lack of demand. CBD BUG notes that all stations are present where cars and motorbikes pass and so noise is a complete non-issue. Melbourne’s scheme is also a 24 hour scheme. On the CBD BUG proposes that **the immediate removal of this limitation of hours**.

Other suggested reasons for the low usage rate in Brisbane do not stand up under scrutiny. Washington DC’s population density does not differ greatly to Brisbane’s (3,500 vs 2,300 people per square kilometre), the topography of its scheme is steeper on average, it snows six months of the year, and weekly and daily trips are more expensive. However, its usage rate exceeds three trips per bike per day. Similarly, other cities that are consistently hotter and more humid than Brisbane, such as Rio de Janeiro and Taipei, have schemes with usage rates exceeding 8 and 11 trips per bike per day respectively. Further discussion can be found at <http://www.brisbanecyclist.com/forum/topics/comparing-brisbane-and-washington-dc-bike-share>.

As the terms of reference refer to changes to state cycling laws, the CBD BUG urges **a trial exemption to the mandatory helmet laws for the Brisbane CityCycle scheme, in order to allow it to reach its potential**. This would be an exemption to Section 256 of the Queensland Road Rules concerning bicycle helmets. If users find the road environment too

aggressive, footpath cycling is legal in Queensland. Footpath cycling works successfully in much denser cities such as Tokyo.

In order to allay safety concerns, multiple studies have found that using shared bikes is safer than using a private bike. Most recently the issue was examined on Crikey's blog "The Urbanist" at <http://blogs.crikey.com.au/theurbanist/2013/07/08/why-is-bikeshare-safer-than-regular-cycling/>.

To summarise:

New York's new scheme had only 3 minor injuries in the first 500,000 rides

Transport for London found that bike share users' serious injury rate was one-third the rate of other cyclists

Washington DC's scheme had half as many crashes per trip as private bikes

Mexico City had only three users requiring a trip to the hospital after 1,600,000 trips. In fact, Mexico, along with Israel, repealed its mandatory bicycle helmet laws in order to give their bike sharing schemes a chance (see http://www.ecf.com/wp-content/uploads/2011/09/Mexico_City_Repeal_of_the_helmet_law.pdf and http://www.ecf.com/wp-content/uploads/2011/09/Israel_helmet_law.pdf). Tel Aviv's scheme is now achieving a usage rate of over six trips per bike per day.

A 2011 British Medical Journal article by Rojas-Rueda et al

(<http://www.bmj.com/content/343/bmj.d4521>) estimated that for the Barcelona bike sharing scheme Bicing, where no helmet law is in force, the benefits exceeded the risks by a ratio of 77 to 1. The conclusion was that "Public bicycle sharing initiatives such as Bicing in Barcelona have greater benefits than risks to health and reduce carbon dioxide emissions."

In addition, an article by Noah Kazis at Streetsblog

(<http://www.streetsblog.org/2011/06/16/from-london-to-d-c-bike-sharing-is-safer-than-riding-your-own-bike/>) pointed out that "cycling [is] safer overall once shared bikes are added to the mix." Removing the requirement for mandatory helmets for CityCycles would make cycling safer for all Brisbane bike users due to the "safety in numbers" effect.

As of July 2013, the Bike Sharing World Map (see <http://bike-sharing.blogspot.com>) lists 575 operational schemes worldwide in more than 50 countries. The only two large scale systems that require mandatory helmets are the Brisbane and Melbourne schemes. There are also two Nextbike systems with two stations each in Auckland and Christchurch, and Dubai does not appear to be enforcing their helmet law for their scheme. Melbourne's usage rate is also well below par, averaging approximately 0.8 trips per bike per day recently. This is as predicted in the Brisbane Institute talk, "given [Melbourne's] more significant and longer standing commuter cycling culture than [Brisbane]."

The CityCycle bikes each weigh 25 kg, have solid rear tyres, an upright seating posture for maximum visibility, and a step-through frame so that the user can easily step off if they come into difficulties. The lights and brakes are constantly maintained. They are not designed for "fast" travel or fitness, but for reliable commuting. The nature of the trips taken are completely different to "cycling as sport" as in the original "Heroes Wear Helmets" Queensland Transport ads. Trips taken with CityCycles would be inherently safer than typical commuting trips taken with road or mountain bikes.

This suggestion of an exemption to the helmet law has been raised in the media by Michael O'Reilly of Fairfax (<http://www.smh.com.au/executive-style/fitness/blogs/on-your-bike/share-bike-schemes-need-to-lose-the-lids-20120920-267wg.html>) and Wade Robson of Cycling Tips (<http://www.smh.com.au/sport/cycling/blogs/cycling-tips/change-of-tune-20110817-1iwx4.html>). An exemption for adults was suggested by Kathleen Noonan in the Brisbane Courier Mail (<http://www.couriermail.com.au/news/opinion/citycycle-just-doesnt-quite-make-it-as-a-bike-scheme/story-fnihsr9v-1226678626086>).

In a recent ABC story, journalist Emily Stewart reported on why bike sharing in Europe is “streets ahead of Australia”, focusing on helmet laws (<http://www.abc.net.au/news/2013-07-08/bike-sharingwhy-europe-is-streets-ahead-of/4807306>). It was reported there (and also on the Nextbike Polska Facebook page) that Warsaw’s scheme has a peak usage rate of 15,000 trips per day. Warsaw does not provide live data which can be used in an analysis, but based on its size it would be among the top 20 in the first figure. It is the largest of the 74 Nextbike schemes. Warsaw currently has 155 stations and 2,984 racks, which is very similar to Brisbane’s 150 stations and 3,092 racks. However, Brisbane’s peak usage rate has been around 1,000 trips per day. O’Brien et al indicates that operators usually aim for a maximum load factor of just below 50% (that is, one bicycle for two racks) and so it is fair to assume the number of bicycles is very similar in both systems.

In order to counter the aggressive road environment that CityCycle users must cycle in, CBD BUG calls for **lower speed limits in the CBD** where the density of stations is greatest. When the Dublin scheme was introduced, the CBD speed limit there was reduced to 30km/h, which is world’s best practice. Dublin’s bike share scheme also achieves an average of approximately eight trips per bike per day. The UK campaign “20’s plenty for us” (<http://www.20splentyforus.org.uk>) calls for the adoption of this speed limit (20m/h = 30km/h) in residential areas and it is the standard speed limit in residential areas in many parts of Europe. This call for 30km/h residential speed limits is one of the key advocacy campaigns of the European Cyclists’ Federation - <http://www.ecf.com/advocary/mobility/traffic-calming30-kh/>.

- Clarify the rules regarding bicycle use to affirm a cyclist may stand up on the pedals

Current rule

245 *Riding a bicycle*

The rider of a bicycle must:

- (a) sit astride the rider’s seat facing forwards (except if the bicycle is not built to be ridden astride); and*
- (b) ride with at least 1 hand on the handlebars; and*
- (c) if the bicycle is equipped with a seat — not ride the bicycle seated in any other position on the bicycle.*

Explanation

This rule was identified by the NTC in its 2011 road rules review discussion paper as poorly worded and requiring amendment, on the basis that it makes it illegal for a cyclist riding a bike to stand up on the pedals.

- Remove the requirement for a bicycle to be equipped with a warning device additional to the rider’s voice

Current rule

258 *Equipment on a bicycle*

A person must not ride a bicycle or powered wheeled recreational device that does not have—

- (a) at least 1 effective brake; and*
- (b) a bell, horn or similar warning device in working order.*

Explanation

The requirement under this rule for a bicycle to have a bell, horn or similar “warning device” in working order lacks relevance to contemporary road conditions experienced by bicycle riders.

When riding on-road using a bell or horn typically fitted to a bike to warn motorists is a complete waste of time because it simply won’t be heard by motorists, especially motorists who have chosen to isolate themselves by having their car windows up and listening to loud music via car stereo speakers or even headphones.

Similarly, when cycling off-road on footpaths, bike paths or shared paths an experienced cyclist will not use their bell or horn to warn other path users, as the muted noises emitted by typical “warning” devices will often not be heard or heeded.

Experienced bicycle riders instead use their voice to warn other path users of their approach. This is because a vocal warning is much less likely to be misinterpreted by the recipient, unlike the sounding of a horn or bell, which are commonly misinterpreted as an aggressive warning e.g. “get out of the way”, reflecting the manner in which motorists typically use their vehicle horns.

- Introduce a rolling stop / give way rule for cyclists (Idaho Stop).

Explanation

This rule would allow oblige cyclists riding on-road to act in the following way when encountering stop signs and red stop lights.

- a) Approaching a stop sign - slow down and, if required for safety, stop before entering the intersection. After slowing to a reasonable speed and yielding the right-of-way if required, the cyclist may cautiously make a turn or proceed through the intersection without stopping.
- b) Approaching a red stop light - stop before entering the intersection and yield to all other traffic. Once the cyclist has yielded, they may proceed through the steady red light by proceeding through the intersection without stopping or may cautiously make a turn.

This would mirror a law that has operated successfully in Idaho, USA for over two decades. The rule recognises that bicycle riders are greatly disadvantaged by repeatedly stopping - through losing their momentum. Furthermore, bicycle riders also tend to prefer using quieter residential streets, where there is less traffic but more frequent stops.

Another problem addressed by this rule is that bicycle riders frequently have difficulty activating sensors set below the road surface to change traffic lights and can therefore be obliged to wait until a motor vehicle arrives to set off a signal change if they want to proceed legally through such an intersection. Finally, this rule’s introduction simply recognises the widespread practice that is already happening on the road.

Cyclists have a higher seating position relative to most motorists and do not have their vision hindered by vehicle A-pillars such as motorists experience. On this basis cyclists are ideally positioned to see when there is no other traffic approaching an intersection at a different direction to them, thereby enabling cyclists to proceed safely through the intersection without stopping.

The following responses seek to address anticipated concerns with this proposal:

1. There cannot be different rules for bicycle riders from those for motorists. In fact, there already are numerous differences between the rules applying to bicycle riders and motor vehicles. For example, in Queensland bicycle riders can ride on the footpath and use bus lanes unless there is a sign stating otherwise.
2. It will encourage bicycle riders to recklessly ride through intersections and cause crashes. Cyclists are highly aware of their vulnerable position as road users and therefore are unlikely to take undue risks. This has been demonstrated to be the case in the Idaho experience.
3. Cyclists will become confused about how they should behave in approaching stop signs and/or stop lights if/when they are driving. As stated above, there already are numerous differences in road rules depending on the mode of transport. These existing differences are being managed without causing problems.

In a similar fashion to other sites along major cycling corridors, police have recently performed “theatre enforcement” by booking numerous cyclists for not stopping at the stop sign at the intersection of Ivory La and Boundary Rd, in Fortitude Valley. It should be noted that Ivory Lane has seen an increase in cyclists since the New Farm to CBD Riverwalk, which provided a bypass of this intersection, was destroyed by the 2011 Brisbane flood.

This police action has apparently occurred in response to complaints (in all probability from motorists) about cyclists not stopping at this stop sign. However, TMR road traffic crash data covering the period 1 January 2006 to 31 May 2013 requested by the CBD BUG in July 2013 has revealed there have been no crashes recorded at this intersection (Data request no rqc18071).

So, despite cyclists technically breaking the road rules by not stopping at the bottom of Ivory Lane, it is clear they are still travelling through this intersection safely. This behaviour accords with the fact that cyclists are not inclined to make illegal manoeuvres that would cause a crash because of the risk to themselves, unlike motorists who on a widespread basis cause crashes through illegal manoeuvres that cause risk to other road users i.e. cyclists and pedestrians that do not risk their own health/safety.

- Permit cyclists to ride on traffic islands

Current rule

290 *Driving on a traffic island*

A driver must not drive on a traffic island (except the central traffic island in a roundabout), unless the traffic island is designed to allow vehicles to be driven on it.

Schedule 5 Dictionary

Traffic island means a structure on a road to direct traffic, but does not include a road marking or painted island.

Explanation

Traffic islands provide an important form of refuge for vulnerable road users from motor vehicles, particularly when crossing roads where there are long distances between designated crossing points.

Accordingly, pedestrians are permitted to walk on traffic islands. However, the combination of rule 290 and the definition of a traffic island in QRR Schedule 5 currently prohibits cyclists from legally riding on a traffic island.

The need to amend the QRR to enable cyclists to legally ride on traffic island is also required to combine with the change required for cyclists to ride across a road on a crossing. This is because it is common for a road crossing to be accessed and/or completed via traffic island in the case of a multi lane road, and where there is a slip lane accompanied by a sign allowing a "left turn any time with care" for motorists.

Section 2: Comments on the Queensland Road Rules process.

The outcomes claimed by transport officials from the road rules are improved road safety and efficiency of the road network. However, from a cyclist's perspective the current rules and the process through which they are developed have been a failure.

It is only in the post-World War 2 period that people who drive cars have become the dominant road users. During this period the road rules evolved for the regulation of motorised traffic, with side-conditions to allow for other users. Queensland should be moving toward a more plural use of roads and to the reclaiming of residential roads by residents as people who walk and people who ride bicycles. These so-called 'vulnerable road users' deserve to be treated as legitimate users, and in being slower moving and not protected by tons of metal, their needs should have first priority. People who drive cars can then be inserted carefully into the environment of the people who ride bikes and/or walk. 'Motor vehicles must give way to pedestrians and cyclists' should become common signs on residential roads and in the vicinity of schools."

In 1999 Queensland adopted the Australian Road Rules (ARR) into state legislation. This means that the road rules in all jurisdictions of Australia, including rules about the distance between cyclists and vehicles, are essentially uniform. The road traffic authorities in each state or territory must agree to any significant changes to the ARR in order to preserve that uniformity. Once the ARR have been amended, these changes are then incorporated in the legislation of each state and territory. In the case of Queensland, this is the Queensland Road Rules (QRR).

The process through which Queensland and other states and territories maintain a "nationally uniform" set of road rules modelled on the *Australian Road Rules* is viewed by the CBD BUG as a major cause of the current problems for cyclists and other vulnerable road users. This process can be summarised in the following terms:

- highly bureaucratic (in being focused on process rather than outcomes),
- lacking public transparency (changes have been announced without public input), and
- stifling innovation and the adoption of international best practice (through requiring a consensus between jurisdictions before changes can this occur).

This major outcome of this process is that Queensland's rules are overwhelmingly car-centric. The CBD BUG suggests there is a strong and direct link between these cyclist-hostile rules and the number one reason consistently given in response to surveys asking why people do not cycle - being that they are concerned about their safety.

In terms of efficiency the road rules have also failed - again because of their focus on facilitating motor vehicle based transport. The complete dominance of urban roads by private motor vehicles began several decades ago when the levels of cycling and walking as proportions of overall trips began to decline. Despite the traffic congestion produced inefficiency of the Queensland urban road transport network being obvious, and quantified for Brisbane alone by the Bureau of Transport and Regional Economics (Working Paper 71) as being \$2.04 billion in 2013, there has been no reaction from road transport authorities in terms of adopting a different approach to create a safer road environment for bicycle riders and pedestrians in order to address the current modal share imbalance.

Another negative outcome of the road rules development process is that it has served to stifle the development of road rules proposed by local user groups. Queensland bicycle

riders have previously proposed road rules amendments with the objective of reducing the risks to bicycle riders and making cycling more viable. However, these requests have been dismissed without examination, on the basis that this state cannot unilaterally change its road rules because of the need to maintain a nationally consistent set of road rules. Despite the alleged need for a nationally consistent set of road rules this has not been a barrier to this state unilaterally enacting rule changes to restrict the use of alternatives to the motor car.

Furthermore, the car-centric policy agenda can clearly be seen through the consistent banning of new/alternative travel modes to the car, as happened in the case of Segways, and the unduly restrictive rules being imposed on other alternatives, such as limiting the power output of electric bikes to 200 watts.

One final piece of evidence against the current process in terms of its pro-car bias is the use of anecdotal evidence (or no evidence at all) to support changes that favour the status quo of the motor car's road dominance. An example of this was Queensland's banning of bicycles powered by internal combustion engines in late 2011, regardless of their power output.

Prior to this change such bicycles could legally be ridden in the public domain in the same manner as pedalled bikes as long as they did not exceed a power output of 200 watts. When personally questioned on this ban, which was announced without any public consultation, transport officials replied that these bikes were regarded as "being too similar to motorcycles". The Department of Transport and Main Roads website currently states "These vehicles are classed as non-compliant motorbikes"

This ridiculousness of these statements and the arbitrary nature of road transport policy decision making in Queensland is clear when it is realised that the 200 watt output of an internal combustion powered bike is equivalent to only 1.1% of the typical power output of an 80cc moped (=18,000 watts) and less than 0.2% of the power of a typical 900cc motorcycle (=104,000 watts).

The Queensland Government has identified the need to deliver a modal shift towards cycling (and other active/sustainable transport modes). In order to achieve a balanced approach to road usage, non-motorised road users must be provided with the regulatory environment conducive to maintaining their safety while on roads and road-related areas. Accordingly, the following order should be applied in determining the prioritisation of road user needs and thereby directing the future refinement of the QRR.

1. pedestrians
2. bicycle riders
3. public transport
4. motorists.

Notes

- (1) *The Impact of Lowered Speed Limits in Urban and Metropolitan Areas*, Monash University Accident Research Centre, January 2008,
<http://www.monash.edu.au/miri/research/reports/muarc276.pdf>
- (2) *World Report on Road Traffic Injury Prevention*, World Health Organisation, 2004,
http://www.who.int/violence_injury_prevention/publications/road_traffic/world_report/chapter3.pdf
- (3) *Safe Roads and Roadside: Fact Sheet 7*, Curtin-Monash Accident Research Centre, August 2010, <http://cmarc.curtin.edu.au/local/docs/CMARC%20Fact%20Sheet%207%20Safe%20Roads%20and%20Roadsides.pdf>
- (4) *Using Mobile Telephones While Driving: Fact Sheet 11*, Curtin-Monash Accident Research Centre, June 2011,
http://cmarc.curtin.edu.au/local/docs/CMARC_Fact_Sheet_11_Mobile_phones.pdf
- (5) *Cycling Infrastructure for Queensland Cities*, Infrastructure Australia. March 2009,
http://www.infrastructureaustralia.gov.au/publications/files/Cycling_Infrastructure_Background_Paper_16Mar09_WEB.pdf