Submission 58

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Dear Ms McGuckin,

Please find herewith my submission to the Transport, Housing and Local Government Committee's inquiry into cycling issues.

Please do not hesitate to contact me if you believe any further clarification or consultation would be helpful

Sincerely,

113/1

24 July 2013

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Introduction

I am 44 years old, married with two children aged 5 and 2 years. I have ridden bicycles all my life. A staple of my childhood was 'bush-bashing' through tracks west of Ipswich and to and from school, and as an adult I have spent a significant amount of time riding road bikes and mountain bikes for fitness and leisure. I am now a strong proponent of 'utility' cycling. I use a bicycle every day to travel 30km to and from work, from Brisbane's northern suburbs to the CBD. Most of my other trips, such as shopping, visiting friends or taking children to kindergarten and day care, are either by bicycle alone or a combination of bicycle and train. I have been involved in cycling advocacy for many years. I have travelled widely around Australia and overseas. I hope my experience and observations of cycling in various jurisdictions will provide some depth to this inquiry.

The first part of my submission discusses the policy background and the resultant state of cycling in Queensland. Queensland government policy is core to any effective change to cycling in Queensland. Policy can significantly enhance cyclist safety while encouraging cycling broadly within our communities, thereby providing a solution to a number of other challenges we face including congestion, pollution, and obesity.

The bulk of my submission then addresses the first two categories referred to the Committee by the Legislative Assembly: trends in cycling injuries and fatalities, and road rules governing the interaction between cyclists and other road users. I have also provided brief comment on the remaining two issues referred to the Committee.

Where relevant in my submission I have summarised solutions for the issues I raise, for the convenience of the Committee.

Policy background and the value of cycling

The current provision of infrastructure

It is evident that high-level policy documents of the Department of Transport and Main Roads (TMR) recognise cyclists as legitimate users of Queensland transport networks.¹ TMR policy recognises that cycling benefits the Queensland community in a number of ways including managing congestion, improving quality of life, reducing pollution, and providing equitable access to jobs and services.²

However, the implementation of TMR cycling policies has failed to achieve policy outcomes. It is clear from actually delivered projects that cyclists are often not afforded appropriate consideration. Many State Government road infrastructure projects reduce or omit cycling considerations to reduce costs.

For example, agreed consultation with cyclists was not pursued as part of the delivery of the Airport Link project, despite the project originally having a significant amount of cycling infrastructure linking existing pathways to the Royal Brisbane and Women's Hospital Cycling Centre and beyond.³ Ultimately the project failed to provide any connectivity for cyclists from the northern suburbs of Brisbane, with the only cycling infrastructure delivered being the reinstatement of paths in parklands that were removed at the beginning of the project.

One section of new path, linking the re-named Mann Park to Campbell Street, Bowen Hills, still remains fenced off despite the project being completed more than a year ago.

Another example is the State Government's decision to remove important bicycle infrastructure from the Centenary Highway Richlands to Springfield project.⁴ Other important projects such as the North Brisbane Cycleway continue to be unfunded despite their recognised importance to cycling.⁵

¹ *Cycling infrastructure policy organisational policy*, Department of Transport and Main Roads, 2011, Chapter 1, page 5.

² *Queensland Cycle Strategy 2011-2021*, Department of Transport and Main Roads, Part A, page 14.

³ *Minutes of the Bowen Hills Community Liaison Group*, Brisconnections, 22 October 2008.

⁴ *LNP review delivers Centenary Highway boost,* Minister for Transport and Main Roads the Honourable Scott Emerson, Media statement 10 October 2012.

⁵ Northern cycleway planning route study, Connell Wagner Pty Ltd, 6 March 2007; North Brisbane cycleway concept design study and staged implementation plan, AECOM, 29 October 2010; Queensland Cycle Strategy 2011-2021, Department of Transport and Main Roads, Part A, page 27.

Solution 1: Existing policy encouraging the provision of cycling infrastructure in all new and upgrade projects be made mandatory requirements for both state and local government projects, any existing exemptions or loopholes for large projects be removed, and minimum standards of provision be introduced that reflect world best practice and promote cyclist safety.

Where cycling infrastructure is provided, it is usually unconnected and consists of the cheapest, easiest option that doesn't interfere with private motor vehicle usage. An example of this is the prevalence of on-road bike lanes instead of separated paths with appropriate intersection design.

Often cyclists are diverted to indirect, meandering routes, making cycling significantly more inconvenient than driving. Where signalled cyclist crossings are installed, light changes are not automatic which means cyclists have to press a button to activate the lights, then wait an entire cycle of light changes before being allowed to progress.

The longer the wait, the more likely a cyclist or pedestrian will cross illegally.⁶ These situations add to cyclists' frustration and often result in cyclists riding where convenient, not where they are safe.

New road works in Gympie Road, Kedron, provides an example of poor bicycle infrastructure:

Photograph of Gympie Road, Kedron, looking south to intersection of Lutwyche Road⁷



⁶ *Traffic: why we drive the way we do and what it says about us*, 2008, Tom Vanderbilt.

⁷ Source: the author.

Photograph of Gympie Road, Kedron, looking north to intersection of Stafford Road⁸



In the above examples, cyclists are expected to cross fast moving traffic lanes with vehicles approaching from behind, and ride within centimetres of motorised vehicles overtaking them on both sides. This type of infrastructure creates dangerous interactions. It is only suitable for the most confident cyclists, if any. Neither children nor the elderly would attempt to use this type of infrastructure.

A few hundred metres either direction from this section of Gympie Road there is no provision for cyclists at all. This is a typical example of TMR's positive provision for cyclists on new roads.

As a result, highly visible infrastructure such as this is not used. This entrenches the public perception that spending on bicycle infrastructure is not warranted.

⁸ Source: the author.

Solution 2: Legislation requiring the provision of separated bike paths for any designated cycling routes that align with roads other than local roads.

As a result of these types of failings to implement its own high-level policies, TMR has failed to meet 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 2011.⁹ However cycling rates in most Queensland local government areas have remained constant or declined over the target period.¹⁰

The resultant perceptions of safety

Cycling as mode of travel for work has, however, increased in Brisbane in areas where dedicated cycle facilities have been delivered.¹¹ This shows that where separated, connected and convenient cycling infrastructure exists, a relatively high proportion of travellers will choose to cycle as an alternative to private car use. This type of infrastructure is especially important for encouraging all cyclists, including females and children. According to latest census data, while similar percentages of males and females choose driving, walking and public transport for trips to work, only one fifth of cyclists riding to work in the Brisbane local government area are women:

Method of travel to work by gender by percentage, Brisbane local government area¹²

Mode type	Male	Female
Private car	41.9%	33.1%
Public transport	8.0%	9.1%
Walking	2.7%	2.6%
Cycling	1.6%	0.4%
Other	0.4%	0.2%

The number of women who choose cycling is a good indicator of the perception of danger associated with cycling.¹³

⁹ *Queensland Cycle Strategy,* Department of Transport and Main Roads, 2003, Part 3, page 13.

¹⁰ *Queensland Cycle Strategy 2011-2021*, Department of Transport and Main Roads, Part A, page 20.

¹¹ *Queensland Cycle Strategy 2011-2021*, Department of Transport and Main Roads, Part A, page 20; Transport, Housing and Local Government Committee public briefing - inquiry into cycling issues: Department of Transport and Main Roads presentation, page 8.

¹² Source: Australian Bureau of Statistics 2011 census.

¹³ *Promoting transportation cycling for women: the role of bicycle infrastructure*, 20018, Jan Garrard et al, Preventative Medicine vol.46 no.1.

Solution 3: Accountability for TMR to meet modal share targets be increased, and the introduction of targets for female participation rates.

The need for cyclists to share the roads with motorists because of a lack of suitable infrastructure, and the resulting low percentage of trips undertaken by bicycle, means that cyclists are a social minority. Accordingly, cyclists are adversely perceived by other road users as a result of the social processes of stereotyping and confirmation bias.¹⁴ Cyclists are perceived to be rule-breakers and risk takers.¹⁵ These perceptions are inconsistent with research that confirms drivers are at fault for most crashes involving cyclists.¹⁶

These perceptions are exacerbated by many existing Queensland laws, which mandate sporting equipment for cyclists and strictly categorise cyclists as vehicles akin to automobiles, trucks and buses and not a distinct transport mode.¹⁷ This forces cyclists to share limited road space with faster moving automobiles. Most people are unable or unwilling to pretend to be a vehicle, competing with automobiles on the road. Those that do try to compete are perceived as risk takers and illegitimate road users.

These factors have also resulted in the visible image of cycling being a maleoriented, exercise activity for sports cyclists (leading for example to the social stereotype of the 'MAMIL': the 'middle-aged man in lycra'). This focus on sport and leisure in turn further entrenches the public perception that cyclists, taking up road space for merely recreational activities, are not legitimate road users.

These public perceptions lead to cyclists being denied respect and understanding on Queensland's roads. The resulting small number of people choosing to cycle means that drivers lack an awareness of cyclists' needs on the road. I submit that these perceptions and lack of awareness are the primary causes of cyclist injuries and fatalities.

¹⁴ Biased processing of stereotype-incongruency is greater for low than high status groups, 2001, Diana Sekaquaptewa and Penelope Espinoza, Journal of Experimental Social Psychology.

¹⁵ *The role of traffic violations in police-reported bicycle crashes in Queensland,* 2010, Amy Schramm, Andry Rakotonirainy, and Narelle Haworth, Journal of the Australasian College of Road Safety.

¹⁶ *The role of traffic violations in police-reported bicycle crashes in Queensland,* 2010, Amy Schramm, Andry Rakotonirainy, and Narelle Haworth, Journal of the Australasian College of Road Safety.

¹⁷ *Transport Operations (Road Use Management - Road Rules) Regulation 2009*, subsection 15(b).

Advantages of more cycling, more often, for everyday transport

A significant increase in 'utility cycling' (cycling for everyday transport purposes, such as local errands, visiting friends and family, and commuting to work, school or tertiary study) will also mean a noticeable decrease in private automobile use in urban and suburban environments. A significant decrease in traffic in these environments means a safer community for all road users.

A growing problem in our suburbs is the chaos of large family cars picking up and dropping of children at school, while once –full bicycle racks collect dust or are removed from schools altogether.

Facilitating the integration of cycling with public transport further decreases automobile use in suburban areas that are well services by public transport, but outside a comfortable cycling distance from urban centres.

Cycling is also widely accepted as the most energy efficient and environmentally friendly transport mode for the average Australian household.¹⁸ Cycling also increases an individual's health and wellbeing, which in turn results in savings in community healthcare.

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\$0.20:¹⁹

¹⁸ *Environmental benefits of cycling* fact sheet, 2007, Cycling Promotion Fund; *National kilowatt of household energy use,* 2002, Australian Greenhouse Office/CSIRO.

¹⁹ *Monograph 5: Bicycle helmet research,* November 2010, Centre for Accident Research and Road Safety - Queensland, 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

Research also confirms that, at a personal level, the health benefits associated with cycling far outweigh the risks of injury, and significant increases in cycling lead to a proven 'safety in numbers' effect which further enhances the safety of cycling.²⁰

To summarise, significant increases in urban and suburban cycling results in significant savings for individual households as well our community, as well as greater understanding and respect for cyclists which in turn leads to greater cyclist safety.

Therefore, the introduction of policies that encourage cycling significantly, such as the provision of safe cycling infrastructure, will result in a safer cycling environment in Queensland.

Proactive versus reactive provision for road users

TMR has a 'hierarchy of roads' policy approach to network planning and traffic management within Queensland's urban environments.²¹ However this network planning is often reactionary, in response to increasing road use. The safety of vulnerable road users including pedestrians and cyclists, and the liveability of urban environments, requires a proactive approach to network planning. Increased road use by automobiles leading to congestion should not be automatically met with infrastructure allowing greater capacity,

²⁰ See for example *Infrastructure, programs, and policies to increase bicycling: an international review,* 2009, John Pucher, Jennifer Dill and Susan Hardy, Preventative Medicine 50.

²¹ *Road Planning and Design Manual,* 2004, Department of Transport and Main Roads, Chapter 1, section 1.3 'Hierarchy of Roads'.

given that higher use of automobiles in urban environments is not conducive to safety, liveability, savings of the public purse or pollution reduction.

Strict compliance with the hierarchy of roads should be encouraged through the reduction of speed limits to 30kph on all local roads (with a primary function of property access), 50kph on collector / distributor roads (with primary functions of traffic transition and property access) and the strategic introduction of filtered permeability in urban environments:

Simple example of filtered permeability, where light grey represents suitability for heavy traffic, dark grey represents suitability for cycling and pedestrian access.²²



A number of European states and municipalities have reduced urban speed limits in local roads to 30kph. It is also widely accepted that 30km/hour speed limits would drastically improve the likelihood of survival in the event of a collision between a pedestrian or cyclist and a motor vehicle.²³

In 2011 a number of cycling stakeholders were invited by the then Transport Minister Anastacia Palaszczuk to participate in a 'cycling safety roundtable'. Participants agreed on a number of measures necessary for the safety of cyclists on Queensland roads. The most important measure identified was the reduction of urban speed limits. Other measures identified included education, awareness and separated infrastructure.

²² Streets and Patterns, 2005, S. Marshall; http://en.wikipedia.org/wiki/Permeability_(spatial_and_transport_planning)

²³ See for example *The impact of lowered speed limits in urban and metropolitan areas* (Report 276), 2008, Monash University Accident Research Centre; *Fact sheet: 30KPH speed limits and cyclist safety,* European Cyclists' Federation.

50km/hour speed limits for collector roads (currently 60km/hour or higher in Queensland), including most multi-lane main roads in built-up areas, are also widely used in the Provinces of British Columbia and Ontario, Canada:

Photograph of typical 50km/hour zone in urban area in Ontario (University Avenue, Toronto)²⁴



Common criticisms of reduced speed limits are that they adversely affect travel time for automobiles, and unrealistic speed limits result in limits being ignored by drivers. Introducing 30kph speed limits on local roads will have little or no effect on trip times if those roads are being used for local access, but will affect trip times if local roads are being used for rat running. Research has shown that, in urban environments, reducing speed limits can have very little noticeable effect on travel times.²⁵ Speed reduction can also assist with the efficient flow of traffic and reduced overall road casualties.²⁶

Many Queensland urban environments, including Brisbane CBD, already have 10kph, 20kph or 40kph speed limits in a number of locations to reduce their use as thoroughfares, and in light of the number of pedestrians likely to be in their vicinity. Speed limits in these areas are not ignored. By the same logic, reducing speed limits for local roads will similarly encourage pedestrianism and liveability.

²⁴ Source: Google mapping.

²⁵ Regulatory impact statement for proposed Road Rafety (Road Rules) (Amendment) Regulations 2000, 2000, VicRoads.

²⁶ An evaluation of the default 50km/h speed limit in Victoria, November 2006, Monash university Accident Research Centre.

Solution 4: The introduction of a default speed limit of 30km/hour for local streets, and 50km/hour for collector roads.

Short and long term trends in bicycle injuries and fatalities involving motor vehicles

Injuries and fatalities: a qualitative assessment

From my personal experience, there are a number of identifiable situations where dangerous interactions occur regularly between cyclists and other road users.

• 'Getting doored:'

This situation occurs where doors of parked cars are opened into the path of cyclists without proper care and attention. While this is an offence under Queensland's road rules, it still appears to be a common occurrence.²⁷ Often the result is not the cyclist hitting the opened door, but the cyclist swerving to avoid collision and instead colliding with passing vehicles.

• The 'shave:'

This situation often arises where cars are parked along the side of the road or within a bike lane, forcing the cyclist to ride outside the 'door zone' to avoid getting 'doored' as described above. As a result the cyclist is forced to ride closer to, or actually within, the adjacent traffic lane. Automobiles and other traffic travelling in the same direction as the cyclist often fail to overtake the cyclist with sufficient clearance.

This situation also occurs where lanes are too narrow to allow a motorised vehicle to pass. Cyclists have a choice of either keeping to the left which encourages vehicles to pass too closely, or 'taking the lane' (riding in the middle or in the right wheel track of the lane) in order to prevent vehicles from overtaking if there is not enough room to do so safely. If taking the lane, the cyclist is often tailgated in an attempt to intimidate the cyclist to move over, are aggressively beeped at or, when there is sufficient space within the lane or a break in oncoming traffic, overtaken too closely as punishment. On many occasions the subsequent close overtake is accompanied with being told to "get off the f***ing road" or the dangerous and illegal blaring of a horn.²⁸

²⁷ *Transport Operations (Road Use Management - Road Rules) Regulation 2009*, subsection 269(3).

²⁸ *Transport Operations (Road Use Management - Road Rules) Regulation 2009*, section 224.

• The intersection/roundabout overtake:

Current on-road bike lanes in Queensland are continued to roundabouts and curve left in parallel to the kerb:



Example of roundabout with bike lanes²⁹

As a result of this, cyclists often have to stop to the left of vehicles, where drivers are looking to their right (away from cyclists) for any traffic already on or approaching the roundabout.

The end result is that cyclists and other vehicles will often enter the roundabout at the same time, with motorised vehicles accelerating quicker than bicyclists. This type of road treatment also encourages the driver's expectation that cyclists will continue to keep to the left allowing them to overtake on the roundabout, whereas both cyclist and automobile will take the same natural line through the roundabout resulting in collision.

Similar conflict can occur in intersections, where both cyclists and cars will either slow or stop at approach, and then attempt to accelerate across the intersection at the same time.

• The 'left hook':

This situation occurs as a result of cyclists keeping to the left of the carriageway approaching a side road or driveway. Automobiles and other vehicles will overtake the cyclist and then immediately turn left, cutting off the

²⁹ Rode Road, Wavell Heights, looking west towards intersection of Bilsen Road. Source: Google mapping.

cyclist who may collide with the side of the vehicle.

It is my view that this situation often occurs because drivers underestimate the speed at which cyclists are travelling, or believe that once they are 'in front' of the cyclist it is the cyclist's responsibility to give way.

• The pinch point:

Pinch points are created in an effort to be seen to introduce traffic calming and facilitate pedestrians crossing the road, without actually requiring traffic to slow down. Pinch points are created where the lane narrows through the use of kerbing extending into the roadway, or a traffic island or refuge being created in the centre of the lane.

In most instances, any bike lane or safe shoulder evaporates leading up to the pinch point:



Examples of pinch points³⁰

³⁰ Shaw Road, Wavell Heights, looking north; Pfingst Road, Wavell Heights, looking south. Source: the author.



The result of this type of road treatment is that cyclists are required to move into the line of traffic. This often results in cars passing cyclists too closely as described above, or attempting to 'beat' cyclists to the pinch point by accelerating past cyclists dangerously.

The SMIDSY

This situation occurs most commonly where a vehicle entering the road from a side road or driveway, fails to give way to a cyclist already travelling along the road. This situation often results in the claim of 'SMIDSY' by the driver: "sorry mate I didn't see you!"

From my experience this situation often occurs for four reasons:

- 1. The driver will look for oncoming traffic before pulling out, but is expecting to see another automobile or heavy vehicle and therefore fails to see a cyclist. This is a symptom of low levels of cycling within our community, resulting in a general lack of awareness of cyclists by other road users.
- The driver underestimates the speed of the cyclist, thinking they can turn into the road before the cyclist reaches the intersection. This can also be attributed to a lack of awareness of cyclists' needs and behaviours.

- 3. The 'A' pillar of the driver's vehicle (the roof pillar adjoining the windscreen) conceals the cyclist from the driver's view. This situation is exacerbated by drivers turning in the direction of the corner as they approach the intersection, and slowing their vehicle but not stopping. These actions often result in the A pillar continuing to align with the driver's sightline to the slowly approaching cyclist. Drivers who are expecting to see fast moving automobiles will expect an approaching vehicle to approach at sufficient speed to overcome this alignment. Drivers that have an adequate awareness of cyclists will look for them too. This situation is also exacerbated by the *punctum caecum* blind spot.
- 4. A driver may simply choose not to give way simply because he or she believes that cyclists are illegitimate road users.

In all the above circumstances, encouraging more cyclists onto the road is the most effective way to create greater awareness of cyclists' behaviours and needs across all road users. This greater awareness cannot be achieved through advertising campaigns or tougher penalties. It is in this way that the 'safety in numbers' phenomenon occurs.

Injuries and fatalities: a quantitative assessment

Measuring injury and fatality trends for cycling, and drawing conclusions, is notoriously difficult due to a number of factors including:

- The very small number of cyclists' injuries likely to be reported: it has been estimated that only 11% to 13% of bicycle crashes are recorded by police, and that as little as 3.5% of crashes are reported in crash data with an over-representation of the more serious crashes.³¹
- The lack of reliable data for Queensland prior to 1993.³²
- Changes in hospital categorisation and admission processes during data collection periods.³³
- The increased likelihood of injury or death for a cyclist in the event of a crash, compared to other types of road users.
- The lack of information about actual cycling participation rates during data collection periods: this makes it impossible to analyse cycling

³¹ *Monograph 5: Bicycle helmet research,* November 2010, Centre for Accident Research and Road Safety - Queensland, Part 4, page 25.

³² *Monograph 5: Bicycle helmet research,* November 2010, Centre for Accident Research and Road Safety - Queensland, Part 4, page 25.

³³ See for example Bicyclist head injuries in Victoria three years after the introduction of mandatory helmet use (Report 75), 1994, Monash University Accident Research Centre; Evaluation of the Bicycle Helmet Wearing Law in Victoria During its First Four Years (Report 76), 1995, Monash University Accident Research Centre.

injuries and fatalities in the context of the number of people choosing to cycle.³⁴

- The huge differences of crash likelihood between minors and adults, both of whom cycle whereas drivers are predominately adults.³⁵
- Significant fluctuations in the number of cyclists during data collection periods: for example it has been suggested that cycling participation in Australia declined by as much as 44% for some age groups in 1991, and then increased by a similar amount by 2010.³⁶
- The difficulty of separating the effects of various safety measures, such as car design and increased law enforcement, where such measures have indirect effects on cyclist safety and are therefore statistical confounders which are difficult to correct.
- Injury and fatality data not distinguishing between different types of cycling, despite significant disparity in risk factors: for example, racing bicycles equipped with drop bars and cleats are likely to pose different risks than comfort or utility bicycles, or public hire scheme bicycles such as CityCycles.

Additionally, comparative safety of various transport modes is usually expressed as injuries or fatalities per kilometres travelled. Under this measure, cycling is often reported as being more dangerous than automobile use. However this measure does not allow for the likely general trend of automobiles being preferred for much longer trips, and cycling for comparatively shorter trips. It is likely that, if comparative safety of transport modes is expressed as number of trips taken, number of years utilised, or trip time, cycling would be safer than being a pedestrian.³⁷

TMR has provided the Committee with injury statistics as part of its presentation at the Committee's public briefing.³⁸ This data combined with previous TMR-sponsored research can provide some insight into long-term injury and fatality trends for cyclists:

³⁴ Transport, Housing and Local Government Committee public briefing - inquiry into cycling issues transcript of proceedings, 18 June 2013, page 9 (response to Chair by Mr Graham Fraine, Deputy Director General, Customer Services, Safety and Regulation, Department of Transport and Main Roads).

³⁵ *Monograph 5: Bicycle helmet research,* November 2010, Centre for Accident Research and Road Safety - Queensland, Part 4, figure 19, page 37.

³⁶ Evaluation of bicycle helmet wearing law in Victoria during its first 12 months (Report 32), 1992, Monash University Accident Research Centre; *Monograph 5: Bicycle helmet research,* November 2010, Centre for Accident Research and Road Safety - Queensland, Part 8, page 53.

³⁷ See for example *Cross modal safety comparisons* discussion paper, Australian Transport Safety Bureau: http://www.atsb.gov.au/media/36229/cross_modal_safety_comparisons.pdf

³⁸ Transport, Housing and Local Government Committee public briefing - inquiry into cycling issues: Department of Transport and Main Roads presentation: *Cycling: injury data*, page 11.

Cyclist crashes by severity relevant to the introduction of mandatory helmet laws and subsequent introduction of penalties: fatal or hospital treatment ('severe') compared to other medical treatment ('not severe') 1990 to 1993;³⁹ fatalities and hospitalisations ('severe') compared to medical treatment and minor injury ('not severe') 1994 to 2008⁴⁰



The above data, along with data presented to the Committee, shows that TMR's approach to cyclists' safety over the last 20 years has not resulted in any significant outcomes. The only outcomes achieved seem to come from general safety measures across all transport modes.

However it is also important to keep in mind the plight of cycling in the context of general road deaths. Comparatively, considerably less cyclists die on our roads each year than any other type of road user:

³⁹ Bicycle helmet legislation and enforcement in Queensland 1991-1993: effects on helmet *wearing and crashes,* 1994, Graham King et al, Road User Behaviour Section, Road Transport and Safety Division, Queensland Transport, table IV.

⁴⁰ *Monograph 5: Bicycle helmet research,* November 2010, Centre for Accident Research and Road Safety - Queensland, Part 4, page 31 and following.





Similar comparisons can be made for injuries on our roads.

Another important backdrop for considering this injury and fatality data is the changing popularity of cycling during the data collection period:





⁴¹ Source: Department of Transport and Main Roads

⁴² Summary of Characteristics of Persons and Dwellings Queensland, census data collected 1981, 1986, 1991, 1996, 2001 and 2006, Australian Bureau of Statistics.

The different crash rates for different age groups is also significant to any discussion about cyclist safety, given that children often bicycle but are usually prohibited from driving:

Queensland traffic cyclist hospitalisations by age group, 2007-2008 (CARRS-Q)⁴³



Despite caution being necessary when drawing conclusions from the available injury data, the following conclusions can however be made with relative certainty:

- Different types of cycling, for example sports cycling including training rides or off-road mountain biking, utility cycling, on-road cycling or segregated path riding, are likely to pose different risks and injury potential.
- Children cyclists have a much higher likelihood of injury.
- Injury rates for cycling have decreased steadily, but not as significantly as injury rates for all transport modes.⁴⁴
- The introduction of bicycle helmets did not result in a significant decline in serious injury rates as a percentage of bicycle usage.⁴⁵
- The introduction of bicycle helmets did not result in a significant decline in serious injury numbers, in comparison to the general

⁴³ *Monograph 5: Bicycle helmet research,* November 2010, Centre for Accident Research and Road Safety - Queensland, Part 4, figure 19, page 37.

⁴⁴ Transport, Housing and Local Government Committee public briefing - inquiry into cycling issues: Department of Transport and Main Roads presentation: *Cycling: injury data*, page 11.

⁴⁵ Transport, Housing and Local Government Committee public briefing - inquiry into cycling issues: Department of Transport and Main Roads presentation: *Cycling: fatality data*, page 10; *Cycling: injury data*, page 11.

decrease of all road related injuries before and after their introduction.⁴⁶

- Cycling is an inherently safe transport mode.⁴⁷
- On-road interaction between cyclists and motorised traffic significantly increases the likelihood of cyclists' injuries.⁴⁸
- The majority of cyclist fatalities have occurred in the Brisbane and Gold Coast regions.⁴⁹
- Bicycle helmet laws are not a significant factor in reducing serious cycling related injuries and fatalities, and may or may not be significant in reducing minor injuries.⁵⁰
- Bicycle helmets may assist in the reduction of minor head injuries amongst children.⁵¹

Solution 5: TMR liaises with relevant local governments to immediately deliver a core network of separated cycling routes that safely and conveniently connect the suburbs of Brisbane and the Gold Coast with their central business districts, and then deliver similar networks across all other Queensland cities.

⁴⁶ Transport, Housing and Local Government Committee public briefing - inquiry into cycling issues: Department of Transport and Main Roads presentation: *Cycling: fatality data*, page 10; *Cycling: injury data*, page 11.

⁴⁷ The health risks and benefits of cycling in urban environments compared with car use: health impact assessment study, D. Rojas-Reuda et al.

⁴⁸ *The role of traffic violations in police-reported bicycle crashes in Queensland,* 2010, Amy Schramm, Andry Rakotonirainy, and Narelle Haworth, Journal of the Australasian College of Road Safety.

⁴⁹ Transport, Housing and Local Government Committee public briefing - inquiry into cycling issues: Department of Transport and Main Roads response to questions on notice: *Question 11: Where are the crashes involving cyclists occurring?* page 6.

⁵⁰ Transport, Housing and Local Government Committee public briefing - inquiry into cycling issues: Department of Transport and Main Roads presentation: *Cycling: fatality data*, page 10; see also *Evaluation of bicycle helmet wearing law in Victoria during its first 12 months* (Report 32), 1992, Monash University Accident Research Centre; *Bicyclist head injuries in Victoria three years after the introduction of mandatory helmet use* (Report 75), 1994, Monash University Accident Research Centre; *The effectiveness of bicyclist helmets: a study of 1,710 casualties,* 1993, McDermott et al, Journal of Trauma.

⁵¹ Effectiveness of bicycle helmets in preventing head injury in children: case control study, 1994, Thomas et al, British Medical Journal.

Existing and other alternative road rules, which govern interaction between cyclists and other road users

Cyclists are a discrete type of road user that aligns more with pedestrians than motor vehicles, yet existing rules and associated penalties force cyclists to operate on and around our roads in the same manner as automobiles and trucks. This approach, while suitable to a 19th century urban environment consisting of mainly pedestrians, cyclists and horse-drawn vehicles, is not suitable to the current urban environment. Accordingly, road rules should not apply to cyclists any more than they apply to pedestrians. Existing rules for cyclists should be reviewed with this in mind.

Solution 6: Cyclists are exempted from the definition of vehicles and afforded a discrete status, which does not require cyclists to compete within existing road rules with much heavier vehicles such as automobiles and trucks.

In the event the above solution is rejected, the following specific road rules should be amended to enhance the safety of cyclists and, in some instances, pedestrians:

Cyclists dismounting at pedestrian crossings

At present, cyclists are required to dismount when crossing a pedestrian crossing.⁵²

In its presentation to the Committee, TMR stated that it is considering amendments that would allow cyclists to ride across signalled pedestrian crossings. I support this amendment, but fail to see any reason why this amendment should not also apply to all pedestrian crossings.

In accordance with the guideline Australian Road Rules, Queensland allows cyclists to ride on footpaths. This is an important concession to cyclists especially given the lack of safe cycling specific infrastructure and lack of consideration often afforded to cyclists on Queensland roads. Being able to ride across pedestrian crossings is in accord with this concession.

This proposed amendment is unlikely to cause any further negative public opinion or injury. This amendment reflects what is already common practice in Queensland.

This amendment is also in accordance with the need to recognise cyclists as a discrete form of road user, more aligned with pedestrians than automobiles, and not force cyclists to compete within existing road rules with much heavier and faster vehicles.

⁵² *Transport Operations (Road Use Management - Road Rules) Regulation 2009*, section 248.

It should also be noted that cyclists, particularly novice riders such as children, are most likely to fall when mounting or dismounting.

Some criticism may be made on the grounds that cyclists will abuse this amendment and recklessly speed out into the path of oncoming vehicles. However such behaviour does not currently occur widely, despite disobedience of this requirement already being common practice among cyclists. Cyclists, as pedestrians currently do, are most likely to exercise common sense and caution when crossing a roadway near heavier, faster vehicles.

Solution 7: Repeal laws requiring cyclists to dismount when crossing pedestrian crossings.

Stopping at stop signs

The policy intention for most Queensland road rules is safety for all road users and the efficient control of traffic.

Under current Queensland road rules, cyclists are considered vehicles and must obey many rules intended to prevent death and injuries caused by automobiles and trucks. As stated above, cyclists need to be recognised as a discrete form of road user, and not forced to compete within existing road rules with much heavier and faster vehicles.

There is no rule requiring pedestrians to stop at stop signs. Such rules would be ludicrous, with the community expecting pedestrians as vulnerable road users to negotiate intersections with stop signs with common sense.

In many situations cyclists can already avoid stop signs by entering and exiting the footpath either side of the intersection. This manoeuvre is legal, but possibly more risky to both cyclists and pedestrians in certain situations.

In some overseas jurisdictions 'Idaho stop' laws have been introduced with great success. These laws, named as a result of their introduction in the US state of Idaho, require cyclists to treat stop signs as give way signs.

A common experience for cyclists is coming to a complete stop at a stop sign and then having an automobile or truck stop next to the rider, instead of behind. This leads to the intersection overtake described above, where both vehicles then attempt to negotiate the intersection at the same time, increasing the risk of collision.

Bike lanes also create conflict in these situations by depositing cyclists to the left of motorised vehicles that may be turning left. cyclists forced to stop at this point will be in conflict with the turning vehicles.

Allowing cyclists to negotiate stop signs safely, while maintaining momentum necessary for the safe operation of a bicycle, will also improve network efficiency by getting cyclists out of the way of motor vehicles.

Solution 8: Exempt cyclists from the requirement to stop at stop signs when giving way to all other vehicles and when it is safe to proceed.

Stopping at red lights

Similar to stop signs, enforcing cyclists to remain stopped at a red light until the light turns green forces cyclists to operate in close proximity with heavier motorised vehicles. Allowing cyclists to progress through a red light allows cyclists to get clear of advancing traffic similar to the policy intention of onroad 'bike boxes'. Cyclists who stop at a red light and then proceed when the light turns green, have to merge with accelerating motor vehicles either in the middle of, or just beyond the controlled intersection.

Bike lanes that do not end in a 'bike box' also deposit cyclists to the left of motor vehicles waiting to turn left, creating conflict when lights change between cyclists going straight ahead and the turning vehicle.

Additionally, cyclists are often unable to trigger the induction loop governing traffic lights. This results in cyclists having to either remain at the intersection indefinitely until an automobile arrives, dismount and walk across the intersection as a pedestrian, or ride through the red light.

'Idaho stop' rules for cyclists at traffic lights have been trialled successfully in Paris, France.

Similar to stop signs, forcing cyclists to remain stopped at red lights often leads to both cyclists and accelerating motor vehicles attempting to negotiate the intersection at the same time.

Similar to stop signs, cyclists can often already legally avoid stopping by entering and exiting the footpath before and after the controlled intersection.

Solution 9: Exempt cyclists from the requirement to remain stopped at traffic lights until a green signal, when giving way to all other vehicles and when it is safe to proceed.

Mandatory helmet laws

As discussed above, the available crash data fails to identify any significant safety benefits attributable to mandatory helmet laws.

There is significant academic debate about whether bicycle helmets reduce the instance or severity of head injuries. Older research, predominately from Australia and conducted after mandatory helmet laws were introduced, support the efficacy of bicycle helmets. However more recent overseas research from overseas fails to identify any significant advantage to wearing a bicycle helmet.⁵³ The most commonly quoted figure, that helmets reduce head injuries by as much as 85%, has now been retracted.⁵⁴

In 2010 CARRS-Q was commissioned by TMR to produce a summary of a selection of relevant research, most of which related to the efficacy of helmets and not the effects of mandatory helmet laws. In their support of mandatory helmet laws, the authors opined that health benefits of cycling were not significant and that mandatory helmet laws did not discourage cycling.⁵⁵

However a significant body of research not represented in this summary shows that repealing mandatory helmet laws will significantly increase cycling which in turn will make cycling safer.⁵⁶ Recent Australian research also shows that the availability of helmets (36%) and a dislike of wearing a helmet (25%) far outweigh any other reason for not using Australian bike share schemes, including perceptions of safety (9%):

⁵³ See for example *Helmet legislation and admissions to hospital for cycling related head injuries in Canadian provinces and territories: interrupted time series analysis,* 2013, Jessica Dennis et al, British Medical Journal.

⁵⁴ National Highway Traffic Safety Authority, United States Department of Transportation, http://bike.risingsea.net/docs/Legislation/helmet/NHTSA-response-to-Titus.pdf

⁵⁵ *Monograph 5: Bicycle helmet research,* November 2010, Centre for Accident Research and Road Safety - Queensland, Part 2, pages 3 and 10; Part 8, page 53.

⁵⁶ Report on Compulsory Helmet Wearing for Bicyclists, and Other Bicycling Issues, 1994, W.A. Legislative Council Select Committee on Road Safety; Intended and Unintended Effects of Youth Bicycle Helmet Laws, 2010, NBER Working Paper Series; The impact of compulsory cycle helmet legislation on cyclist head injuries in New South Wales, Australia, 2011, Accident Analysis and Prevention; The possible effect on frequency of cycling if mandatory bicycle helmet legislation was repealed in Sydney, Australia: a cross-sectional survey, 2011, Health Promotion Journal of Australia.

Barriers to using Melbourne Bike Share⁵⁷



The effect of more cyclists on the roads can also be seen in cities where cycling has been successfully encouraged. For example in London a 28% increase in bicycle trips coincided with a 20% decrease in cyclists' injuries.⁵⁸ In the Netherlands a 45% increase in cycling resulted in a 58% decrease in cyclists' injuries.⁵⁹ In Copenhagen a 44% increase in cycling in coincided with a 60% reduction of cyclists' injuries.

Any real debate about whether helmet laws achieve additional safety for cyclists requires the separation of the issues of whether helmets have a significant benefit in the event of a crash, and whether mandatory helmet laws adversely affect cycling in our community to the extent that those safety benefits, if any, are negated or even outweighed. Irrespective of the efficacy of bicycle helmets, mandatory helmet laws have a number adverse effects which clearly outweigh any potential efficacy of helmets, given the likelihood of a bicycle crash and the subsequent likelihood of a potential head injury resulting from that crash.⁶⁰

As discussed above, the greatest benefit in cyclists' safety can be achieved by removing any legislative barriers to getting more people cycling more often,

⁵⁷ Source: Alta Bike share, as cited in *Barriers and facilitators to public bicycle scheme use: a qualitative approach,* 2012, Elliott Fishman, Simon Washington, Narelle Haworth, Elsevier Transportation Research Part F: Traffic Psychology and Behaviour.

⁵⁸ Congestion Charging: 3rd Annual Report, 2005, Transport for London.

⁵⁹ Cycling in the Netherlands, 2007, Ministerie van Verkeer en Waterstaat.

⁶⁰ Report on Compulsory Helmet Wearing for Bicyclists, and Other Bicycling Issues, 1994, W.A. Legislative Council Select Committee on Road Safety; Intended and Unintended Effects of Youth Bicycle Helmet Laws, 2010, NBER Working Paper Series; The impact of compulsory cycle helmet legislation on cyclist head injuries in New South Wales, Australia, 2011, Accident Analysis and Prevention; The possible effect on frequency of cycling if mandatory bicycle helmet legislation was repealed in Sydney, Australia: a cross-sectional survey, 2011, Health Promotion Journal of Australia.

and getting cycling perceived as a normal, legitimate transport option. Encouraging cycling also has significant positive health and wellbeing outcomes, as well as community benefits, which outweigh the risks associated with regular cycling, even when cycling without a helmet. Cycling is, after all, an inherently safe activity.⁶¹

A number of exceptions that already exist in Australia show that mandatory helmet laws are not necessary to reduce injuries and fatalities among cyclists. In Queensland, cyclists are not required to wear a helmet if they have a relevant medical condition or are fare paying passengers and the bicycle has more than two wheels.⁶² Additionally, riders of non-motorised scooters, skateboards or any other wheeled recreational vehicle are not required to wear a helmet even on public roads. However most children riding these devices choose to wear helmets voluntarily.

TMR has also recently announced plans to introduce broader exemptions for religious headdress.

As stated above, different types of cycling is likely to present different levels of risk. People participating in types of cycling that may have greater risk risks, such as sports cycling and mountain biking, are still likely to continue wearing helmets if the law was repealed. Many sports cycling club events require helmet wearing and choosing to wear a helmet is part of the culture of sports cycling and mountain biking. Most recreational mountain bikers continue to wear helmets even when riding off road in areas that are not within the definition of roads or road related areas, and therefore outside the jurisdiction of the *Transport Operations (Road Use Management) Act 1995* and subordinate regulations including any requirement to wear a helmet. Children and young adults riding scooters and skateboards now commonly wear safety helmets, even though there is no mandatory requirement to do so.

It should also be noted that a significant number of cyclists currently wear helmets either incorrectly (e.g. placed too far back on the head, or worn backwards), have helmet straps too loose or have helmets that have weathered and are therefore not likely to afford any protection. In some instances, incorrect wearing can add to the risks of head injury.

According to TMR data, 40% of Queenslanders in metropolitan areas have ridden a bicycle in the last year (based on 2011 data).⁶³ This data, when

⁶¹ The health risks and benefits of cycling in urban environments compared with car use: health impact assessment study, D. Rojas-Rueda et al; Infrastructure, programs, and policies to increase bicycling: an international review, 2010, J. Pucher; The health impact of mandatory bicycle helmet laws,2012, P. de Jong.

⁶² *Transport Operations (Road Use Management - Road Rules) Regulation 2009*, subsections 256(2) and (4).

⁶³ Transport, Housing and Local Government Committee public briefing - inquiry into cycling issues: Department of Transport and Main Roads presentation: *Cycling participation: Queensland*, page 5.

compared with the current rates of bicycle commuting in south east Queensland, clearly indicates that there is a large proportion of Queenslanders in metropolitan areas who are willing and able to cycle, but are discouraged from doing so more often.

All ages mandatory helmet laws exist in very few places outside Australia and New Zealand, where they were introduced more than 20 years ago without any empirical evidence to support them. Since their introduction, all Australian states and territories have ratified the Australian Road Rules through the Council of Australian Governments, thereby entrenching mandatory helmet laws Australia wide. In the Northern Territory, however, adult cyclists are not required to wear helmets if riding on a footpath or separated bike path. The Northern Territory now has the highest cycling participation rates in Australia, despite other jurisdictions (such as Canberra) also having a significant amount of cycling infrastructure.⁶⁴

Although an all ages mandatory helmet law exists in the province of British Columbia, Canada, approximately half of cyclists in British Columbia's greatest city ignore the law and the law is not enforced. Of the cyclists I spoke with when visiting Vancouver in June this year, most were either unaware of the law or knew the law was not enforced. Both Vancouver and Toronto downtown areas have much greater levels of utility cycling than Melbourne, Sydney or Brisbane, despite a considerably colder climate for most of the year and similar levels of bicycle-specific infrastructure.



Vancouver cyclist, 201365

⁶⁴ Transport, Housing and Local Government Committee public briefing - inquiry into cycling issues: Department of Transport and Main Roads presentation: *Cycling participation: Australia*, page 4.

⁶⁵ Source: the author

Vancouver cyclists, 2013⁶⁶



Mandatory helmet laws are also likely to significantly reduce the numbers of women choosing to cycle, through both concerns about presentation and the perception of cycling as a sport that mandated sporting equipment encourages. While some of these concerns may be belittled as superficial, they do nonetheless exist and therefore may prohibit people from choosing to cycle.

It is often said that any protection bicycle helmets can give, no matter how small, warrants mandatory helmet laws. However mandating helmets for pedestrians and drivers would be considered ridiculous even though such a law could have a much greater effect on road safety if helmet efficacy is significant. It would appear, therefore, that cyclists' social standing as 'outliers' to the norm allow such rules to be forced upon them despite their relative safety, further undermining their status as legitimate road users and leading to animosity and dangerous behaviour by motorists. This can be seen in the prevalence of our media and our health departments focussing on whether cyclists were wearing a helmet when they were innocently killed or injured by a motor vehicle, and apportioning significant blame for the injury to the absence of a helmet if one was not worn.

This highlights how imposing mandatory helmet laws on cyclists can be compared to mandating bullet-proof vests in public places to combat gun control, or banning short skirts or imposing a curfew on women to protect them from rape. Such measures simultaneously move the responsibility of

⁶⁶ Source: the author

mitigation onto the victim, while drawing attention away from the real cause of danger and providing a convenient excuse not address that real danger. Such measures ultimately do not act to change the dangerous behaviour, and are therefore doomed to failure.

Repealing mandatory helmet laws to further the cause of cyclist safety does appear contrary to common sense, given the popular views that helmets do prevent injuries in the event of a crash and that cycling is an inherently dangerous activity. But the contention that mandatory helmet laws (not helmets) make cycling more dangerous is supported by empirical evidence. Repealing mandatory helmet laws is the type of seismic shift in our approach to road safety that is needed to achieve real gains.

Solution 10: Repeal mandatory helmet laws for cyclists.

Giving way when entering a road related area

The situation of SMIDSY outlined above often occurs where the cyclist is travelling along a separated bike path or shared path, and the heavier vehicle turns off the road across the path to enter a driveway or side road. This situation highlights the confusion within section 74 of the Queensland road rules which requires vehicles turning into a side road, or entering and exiting the road, to give way to pedestrians and other vehicles on the road, but also requires cyclists (categorised as vehicles) attempting to cross the side road to give way to all vehicles turning into the side road.

Solution 11: Amend section 74 of the Queensland road rules to require motor vehicles turning onto a road to give way to cyclists as well as pedestrians on or about to enter that same road.

Giving way on roundabouts

The Queensland road rules require cyclists travelling on large roundabouts to pull over in the middle of the roundabout and give way to vehicles behind them that are exiting the roundabout.⁶⁷ This is an absurd and confusing situation. Drivers on or entering a roundabout behind a cyclist do not expect the cyclist to stop in front of them. Drivers approaching a roundabout similarly do not expect cyclists to stop mid-way around a roundabout. This unexpected behaviour would cause confusion and possibly collisions.

Of more concern is that the Queensland road rules offer no guidance as to where, in the middle of a roundabout, it is safe for cyclists to stop.

⁶⁷ *Transport Operations (Road Use Management - Road Rules) Regulation 2009*, section 119.

Fortunately, this rule is not widely understood and, in my opinion, never obeyed by cyclists who are faced with negotiating large roundabouts in unison with automobiles and other vehicles.

Solution 12: Repeal section 119 of the Queensland road rules that requires cyclists to stop and give way to other vehicles in the middle of certain roundabouts.

Pedestrians and cyclists obstructing drivers

The Queensland road rules discriminate against pedestrians and cyclists by mandating these types of vulnerable road users must not "cause a traffic hazard by moving into the path of a driver ..."⁶⁸ Cyclists are further prohibited from moving into the path of pedestrians.

There is no similar rule for drivers. The result is that, whenever a cyclist or pedestrian enters the road or certain road related areas, they must ensure they do not impede the path of a driver as to cause a hazard. This is a very subjective situation, because what a driver believes constitutes "impeding my path" may be different from the cyclist's or pedestrian's belief. How far along the intended path of a driver is a cyclist or pedestrian prohibited from entering? For example, if a cyclist is required to share the road with motor vehicles due to a lack of separated infrastructure, can the cyclist enter the road at all if he or she suspects a driver will be along presently? If the cyclist can see an approaching car in the distance, can the cyclist pull out onto the road or wait until no cars can be seen?

These types of road rules, while no doubt intending to prevent reckless behaviour by cyclists and pedestrians, actually adds to the power imbalance on our roads. These road rules in particular further undermine cyclists and pedestrians as legitimate road users.

Solution 13: Repeal sub-section 236(1) and section 253 of the Queensland road rules.

Parking in designated bike lanes

In Queensland there is no prohibition to stopping or parking in a bicycle lane. This is contradictory to the guideline Australian road rules. ⁶⁹

⁶⁸ *Transport Operations (Road Use Management - Road Rules) Regulation 2009*, subsection 236(1) and section 253.

⁶⁹ *Transport Operations (Road Use Management - Road Rules) Regulation 2009*, section 187; *Australian Road Rules,* AustRoads, section 187.

Queensland's cycling infrastructure consists mainly of designated bicycle lanes (a clearly marked lane with a bicycle symbol and/or 'bicycle lane' sign) or bicycle awareness zones (roads marked with a yellow bicycle symbol):



Example of designated bike lane⁷⁰

Example of Bicycle Awareness Zone (BAZ)⁷¹



⁷⁰ Dickson Street, Wooloowin. Source: the author.

⁷¹ McDonald Road, Windsor. Source: the author.

Queensland road rules require cyclists to ride in a designated bicycle lane unless impracticable to do so.⁷² This rule is pointless, as cyclists will always choose to ride in a bike lane if it is safe to do so.

In Brisbane the majority of on road bicycle lanes are also car parking areas. As a result, cyclists are forced to either ride in the 'door zone' as described above, or ride close to or inside the adjacent car lane. Both options present significant danger for the cyclist, and create animosity amongst motorists who are forced to slow down or attempt to overtake cyclists in the car lane, resulting in the close pass or 'shave' described above. These motorists often complain that cyclists should be in the bike lanes, or that the provision of bike lanes is a waste of money.

Solution 14: Adopt guideline Australian Road Rules to prohibit stopping or parking in designated bike lanes.

Solution 15: Repeal requirements forcing cyclists to ride in a designated bike lane.

Solution 16: Where parking is allowed adjacent to a designated bike lane, amend road design guidelines to ensure the bike lane is on the left of parked cars, not between parked cars and moving traffic.

Solution 17: Amend road design guidelines to ensure bicycle awareness zone markings are placed in the middle of the traffic lane, and not to the left of or straddling the left hand lane edge marking.

Passing cyclists safely

In September 2011, 25 year old Richard Pollett, an extraordinarily talented Brisbane violinist, was killed while riding his bicycle along Moggill Road in Kenmore. Richard was being overtaken by a cement truck when he died. According to media reports, the lane in which Richard was riding varied between 3.1 and 3.6 metres wide at the place Richard died. The passing cement truck was 2.5 metres wide.

Despite Richard having only between 60cm to 110cm within which to manoeuvre his bicycle while the cement truck passed him, the truck driver was acquitted after arguing that he was not driving erratically, not speeding and had an honest and reasonable belief that there was sufficient room to overtake Richard safely. According to media reports, the driver admitted that he was aware of Richard on the road, but did not change lanes or slow down to remain behind Richard because of the presence of other vehicles behind him and in the adjacent lane.

⁷² *Transport Operations (Road Use Management - Road Rules) Regulation 2009*, section 247.

The trial was conducted before a jury, and as such very little legal precedent can follow from this controversial acquittal. However, of some concern is the fact that although the presiding judge ruled that the jury could still return a lesser verdict of dangerous driving even if the jury was not satisfied the driver's actions caused Richard's death, the driver was acquitted absolutely.⁷³ This implies that, in the opinion of an informed representative group of Queensland's society, passing a cyclist at speed in a cement truck without changing lanes is not considered dangerous.

The tragic death of Richard Pollett at worst highlights the community's failings to recognise cyclists as legitimate road users, and at best highlights the community's failings to understand the safety needs of cyclists forced to share the road with faster, larger motorised vehicles. No amount of rules will adequately protect Queensland cyclists from death or injury, if those rules operate to put the responsibility of safety onto the vulnerable road user.

This tragic event highlights the common incidence of cyclists being injured or killed by passing vehicles. Two cyclists have died in far north Queensland this year, in circumstances similar to Richard Pollett's death.

It is clear that current rules relating to safely passing other vehicles are ineffective in achieving cyclists' safety. As discussed above, the best solution is to significantly increase the number of cyclists on Queensland's roads to 'normalise' cycling, and where possible remove interactions between automobiles and other more vulnerable road users altogether. However, where this is not possible, a minimum safe passing distance should be introduced.

Such a rule has been criticised due to the likely inability of motorists to correctly gauge distances. However a number of road rules already exist that require this: for example mandatory distances for stopping and parking.⁷⁴

Such a rule has also been criticised due to a perceived inability to prove an offence. However the current law relies on the ability of the prosecution to prove an undefined standard or 'safe', reasonable', or 'dangerous'. A minimum safe passing distance can be much more easily proved than these contextual and subjective elements, because the width of a car, and the width

⁷³ *R v Stevens* [2013] QDC 102.

⁷⁴ See for example *Transport Operations (Road Use Management - Road Rules) Regulation* 2009, sub-section 193(1): a driver must park more than 100 metres from a crest of a hill; sub-section 194(1): a driver must not stop within 1 metre of a fire hydrant; sub-section 194(2): a driver leaves a vehicle unattended if the driver is over 3 metres from the vehicle; sub-section 195: a driver must not stop within 20 metres before a bus stop sign, or 10 metres past the sign; sub-section 196: a driver must not stop within 20 metres of a tram stop; section 199: a driver must not stop within 3 metres of a post box; sub-section 208(5): a vehicle cannot be parked within 1 metre of a continuous dividing line..

of a lane can be easily proved after an alleged offence as in the case of Richard Pollett's death.

Such a law would clarify the obligations of a motorist to ensure the safety of vulnerable road users, and work towards challenging the developing community notion that cyclists and pedestrians are solely responsible for their own safety on the roads.

The only possible argument to the introduction of a mandatory minimum passing distance is the inconvenience such a law may cause to drivers of faster, heavier vehicles who would otherwise pass too closely. Irrespective of the legitimacy of such concerns, they can be alleviated by the relaxation of laws prohibiting overtaking in certain circumstances. For example, vehicles may be allowed in certain circumstances to cross a continuous centre line in order to overtake a slow moving vehicle such as a cyclist, a stopped bus, a horse or similar mount, or slow moving farm equipment such as a tractor.

Solution 18: A mandatory minimum passing distance of at least 1.5 metres is legislated for automobiles, 2 metres or complete lane change for heavier vehicles, when passing cyclists, pedestrians, animals or similar mounts that are on a road or road shoulder.

Solution 19: Vehicles passing slow moving road users with sufficient distance be allowed to cross a continuous centre line if safe to do so.

Solution 20: A review of all existing road rules to ensure rules do not create the expectation within the community that cyclists are primarily responsibility for their own safety on the roads.

Solution 21: Presumed liability is introduced for the protection of vulnerable road users, being a legal presumption whereby the onus to prove no or reduced liability rests with the fastest or heaviest vehicle.

Current penalties and sanctions

In line with the above submissions, road rules should only reflect cyclists' status as a discrete type of road user. Cyclists should not be forced to compete within the existing road rules with much heavier, faster and more dangerous vehicles.

If penalties are still imposed for cyclist-specific offences (for example failure to give way to a vehicle in a bicycle storage area, failure to have a bicycle bell etc.) such penalties should be very minor given that the mischief they seek to avoid is largely to the detriment of the cyclist themselves.

Penalties vary according to the 'mischief' the relevant offence provision seeks to prevent. Automobiles and other forms of motor vehicles pose significantly greater risks to the community than cyclists. This should be reflected in the penalties imposed. Any penalties imposed on cyclists should be proportionate to the penalties imposed on pedestrians or similar vulnerable road users for similar offences, and significantly less than penalties imposed on drivers.

In line with the above, demerit points should not be mandated against cyclists.

Potential benefits and impacts of bicycle registration

Benefits of bicycle registration

I am unaware of any compelling benefits to the introduction of a bicycle registration scheme in Queensland.

Some proponents of such a scheme claim that the scheme would assist in the identification and apprehension of cyclists who disobey the road rules. The current registration scheme for automobiles and other vehicles fails to prevent drivers from disobeying the road rules. So it is difficult to conceive how such a scheme for bicycles would achieve this.

Furthermore an offending cyclist could evade identification by claimng loss or theft of the bicycle. Unlike a motor vehicle, a registered bicycle can be easily disposed of with minimal financial loss.

Some proponents claim that revenue raised could fund a compulsory third party insurance scheme or bicycle infrastructure. Compulsory third party insurance schemes are designed to mitigate damage to crash victims where the insured person is at fault. In the vast majority of cases, severely injured cyclists are victims of the fault of a driver. Third party insurance for cyclists would only cover parties that are not already covered by the driver's insurance. Third party insurance would not cover damage to motor vehicles, and would not cover damage to cyclists who were at fault.

Third party insurance would cover pedestrians or other cyclists who were injured because of the fault of a cyclist. However, the small number of instances of these crashes, and the relatively low severity of injuries, has to be weighed against the adverse impacts of imposing such a scheme.

Injuries cyclists cause to other road are likely to be quite minor in comparison to the carnage caused by automobiles.

As outlined above, better bicycle infrastructure actually creates savings across the community in a number of ways. Road infrastructure is mostly funded by local councils, and state or federal grants. These funds are sourced from rates and tax revenue, not vehicle registration fees. The amount of money spent on road infrastructure far outweighs the income from registration. Any bicycle registration scheme introduced to fund bicyclespecific infrastructure should only be introduced along with increases in motor vehicle registration sufficient to cover the amount of public funds spent on roads, freeways, tunnels, and intersections that are not specifically for the use of bicycles, as well as the health costs of injuries caused by motorized vehicles on our roads. The only conceivable safety outcome from imposing a registration scheme on cyclists, is the claim that a registered cyclist will be afforded more respect on our roads from otherwise unforgiving and dangerous drivers. Drivers who purposefully drive in an intimidating and dangerous manner around cyclists are thankfully a very small minority. There is no evidence that suggests such drivers would change their behaviours as a result of bicycle registration. These intimidating and dangerous behaviours appear to be caused by certain drivers' unwillingness to share 'their' road with other users (albeit cyclists, pedestrians or other drivers) who slow them down or otherwise interfere with their use of the road. Registering cyclists will not change this.

Adverse impacts of bicycle registration

The adverse impacts on cycling are many, including additional costs of living for Queensland families. As a family with young children we have a number of bicycles which would require registration under any such scheme.

But most significantly, a registration scheme for bicycles would be a strong disincentive to cycling, similar to mandatory helmet laws. The net result for Queensland would be even greater congestion, pollution, obesity (particularly child obesity) and increased healthcare costs, all of which would vastly outweigh the costs of cyclist related injuries and damage. Any scheme that seeks to register bicycle riders instead of bicycles would be an even greater disincentive to cycling. Requiring cyclists to wear some sort of bib displaying a registration number would further alienate cyclists, delineating them as social 'outliers' and consequently undermining their status as legitimate road users.