

27 February 2015

Senator Glenn Sterle  
Chair, Senate Rural and Regional Affairs and Transport References Committee  
PO Box 6100 Parliament House  
Canberra ACT 2600  
Via email: [rrat.sen@aph.gov.au](mailto:rrat.sen@aph.gov.au)

## **Inquiry into Aspects of Road Safety in Australia**

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The Amy Gillett Foundation is pleased to provide you with our submission to the *Inquiry into Aspects of Road Safety in Australia*.

Australia's road toll has decreased over recent years but this is not the case for bike riders. From 2012 to 2013, there was a 55 per cent increase in the number of bike riders killed in Australia and an additional 45 people lost their lives while riding their bikes in 2014. Urgent action is needed if Australia's aim to double the number of people riding bikes is to be achieved<sup>1</sup> safely.

Our submission provides the evidence for urgent action at the national level to improve the safety of bike riders in Australia. Our recommendations to the Inquiry are that the Federal Government:

1. Recommend that the Australian Road Rules Maintenance Group amend the model Australian Road Rules to mandate minimum distance when drivers overtake bike riders:
  - 1 metre in speed zones up to and including 60kph
  - 1.5 metres in speed zones over 60kph
2. Define serious injury in order to better understand the magnitude of non-fatal crashes and risk in the community. The Australian Institute of Health and Welfare could be the relevant agency to lead this work for safety, health and research sectors
3. Support the Amy Gillett Foundation to convene a working group of relevant stakeholders to develop a robust national cycling exposure measurement
4. Investigate including bike rider specific tests as part of the Australasian New Car Assessment Program (ANCAP)
5. Align the National Cycling Strategy and the National Road Safety Strategy to maximise safety outcomes for all road users, including bike riders

Through the COAG Transport and Infrastructure Council:

6. Support research to identify the most effective questions to include in driver licence tests in all States and Territories

Through the COAG Transport and Infrastructure Council and local governments:

7. Support research that targets specific regional/rural areas with high incidence of bike rider crashes so that communities have the evidence to take action to improve the safety of bike riders on local roads
8. Investigate model speed zones that improve safety for all vulnerable road users, including:
  - 40kph or lower in local and collector streets to improve safety and promote liveability, environmental amenity, health and well-being
  - 50kph limits on arterial roads where designated cycling infrastructure are provided.

Our recommendations align with priorities identified in the National Road Safety Action Plan 2015-2017 and the areas on which the Federal Government leads in terms of road safety: a coordinated approach and improving vehicle safety.

We have focused on the actions needed to improve the safety of bike riders. However, many of these measures will also improve safety for other vulnerable road users such as pedestrians and motorbike riders.

We are available to present to the Committee with more detail and evidence of each action in person or in writing. Please do not hesitate to contact me directly for any additional information required as part of this important Australian Parliamentary Inquiry.

Yours sincerely



Tracey Gaudry  
**Chief Executive Officer**  
**Amy Gillett Foundation**

Everyone has the right to ride in safety for work, sport and play.

## 1. About us

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The Amy Gillett Foundation's purpose is to reduce the incidence of death and serious injury of bike riders in Australia. We draw on evidence and international best practice, and collaborate with governments, business and the community to create a safe environment for bike riders, while maintaining an efficient road network for all road users. Please see our website for more information: [www.amygillett.org.au](http://www.amygillett.org.au)

## 2. Submission

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This submission responds to the Inquiry's terms of reference.

### A. The social and economic cost of road-related injury and death

There was a 55% increase in the number of bike riders killed in Australia (2012-2013) with an additional 45 losing their lives while riding their bikes in 2014. As noted in the submission to the Inquiry by *Link Place*, this is double the 'target' of bike rider fatalities set for 2020, based on the 30% reduction in fatalities on the baseline of 32 per year, established in the National Road Safety Strategy<sup>2</sup>.

The social impact of each death cannot be calculated. The ripple effect of each crash creates extensive social costs far beyond the individual involved and affects their family, friends, workplace and community. More tangible are the economic costs of crashes. From available data, the annual community cost of fatal and non-fatal road trauma is estimated at \$27 billion.<sup>3</sup>

The Bureau of Infrastructure, Transport and Regional Economics (BITRE) calculates that a fatality costs \$2.4 million and a hospitalised injury costs \$214,000<sup>4</sup>. Based on these figures, the economic cost of bike rider deaths and serious injuries is calculated as:

- \$120 million cost of bike rider fatalities in 2013 (50 bike riders killed<sup>5</sup>)
- \$2.04 billion cost of bike rider serious injuries in 2008-09 (latest national figures<sup>6</sup>)

The economic impact of bike rider crashes is most evident in the non-fatal data. 17.9% of all road crashes in Australia involve a person on a bicycle<sup>7</sup> and this is increasing annually by 6.8 per cent. In the last period reviewed (2000-01 to 2008) the magnitude of bike rider crashes is far greater than we are able to calculate given the suspected levels of underreporting. As few as 1 in 30 crashes are reported to police.<sup>8</sup> Even using lower BITRE costing of \$2,200 (non-hospitalised injury), it is likely that the broader costs of bike crashes is an additional \$526 million per annum.

Currently there is no nationally agreed definition of serious injury therefore we cannot report on the number and type of serious injuries. Defining 'serious injury' is critical to get a better picture of crashes, and therefore, solutions to improve safety, as highlighted in the National Road Safety Action Plan 2015-2017 (Action 19). The report of the Victorian Parliament's Road Safety Committee's Inquiry into Road Safety (May 2014) details options to resolve this issue.

**Recommendation:** That the Federal Government define serious injury in order to better understand the magnitude of non-fatal crashes and risk in the community. The Australian Institute of Health and Welfare could be the relevant agency to lead this work for safety, health and research sectors.

- B. The importance of design standards on imported vehicles, as Australian vehicle manufacturing winds down; and**
- C. The impact of new technologies and advancements in understanding of vehicle design and road safety**

Vehicle technology, improved design and enhancements have the potential to generate enormous gains in road safety. As noted by the Assistant Minister for Infrastructure and Regional Development, Hon. Jamie Briggs:

“Globally, vehicle technology is on the edge of major transformations which will reduce the road toll exponentially. For instance, autonomous emergency braking systems are expected to save over 1200 lives and prevent 54,000 hospitalised injuries by 2033. Critically, these improvements will be of key benefit to cyclists and pedestrians—some of our most vulnerable road users who are over represented in road toll figures. While this progress is being driven by industry, the Government will have a key role in promoting this technology in Australia”.<sup>9</sup>

Advances in vehicle design are central to improving the safety of people outside the vehicle, that is, bike riders, motorcyclists and pedestrians. The Foundation supports the Assistant Minister’s announcement of a major review of the Motor Vehicle Standards Act with the aim of improving consumers’ access to the safest cars. However, every measurement of safety needs to take into account the safety of those inside and outside the vehicle.

We also support recommendations made by the Australasian College of Road Safety (ACRS) in their submission to this Inquiry<sup>10</sup> including encouraging fleet and private consumers to purchase the safest available motor vehicles and new motorcycle, trucks and buses to be equipped with the most advanced safety assist technologies and to keep pace with international best practice. Further, we strongly support action that leads to Australia increasing the targets for improved road safety and echo the call from the ACRS to strive for targets such as those set by leading countries:

- Sweden - 75% of travel on safe (3 or 4-star) roads by 2020
- Netherlands - minimum 3-star for national roads by 2020
- New Zealand - 4-star for “roads of national significance”
- World Bank Projects are adopting minimum 3-star designs.

Moreover, there are safety issues specific to bike riders that need to be considered in terms of vehicle design. It is essential that increased non-occupant testing is required in the ANCAP rating including driver blind spots in relation to vehicle B pillars and bike rider impact testing.

**Recommendation: That the Federal Government investigate including bike rider specific tests as part of the Australasian New Car Assessment Program (ANCAP)**

#### **D. The different considerations affecting road safety in urban, regional and rural areas**

A recent review of bike rider crashes in Victoria<sup>11</sup> reported that while the majority of non-fatal bike rider crashes occur in metropolitan areas – almost half bike rider fatalities occurred in regional/rural areas. Rear end crashes were the single crash type that resulted in the greatest proportion of bike rider fatality crashes. Over half of all rear end crashes in Victoria occurred in regional/rural areas (59%).

There has been limited research attention on regional and rural issue for bike riders in Australia. Research conducted in 2012<sup>12</sup> in the Baw Baw area in Gippsland, Victoria found that safety concerns for bike riders in towns were the same as those for bike riders in metropolitan areas including: parking related driver behaviour, lack of space on the road, lack of bike lanes and opening car doors.

However, there are also regional specific cycling safety issues that require discrete attention and cannot be addressed with generic metropolitan-centric strategies. For example, in regional areas, the majority of all roads are high speed, typically 80kph, 100kph or 110kph. Poor road surfaces, lack of a sealed road shoulder and narrow, winding roads with poor sight lines in high speed zones can often mean that drivers and bike riders must share roads that are ill designed for mixed modes. Yet in country areas, these are often the only available road for drivers and bike riders.

For bike riders in regional areas to be able to cycle safely and to access the same benefits of cycling as bike riders in metropolitan areas, action is needed to address a wide range of issues including:

- mandated minimum overtaking distances when drivers overtake bike riders
- improvements to the quality of the roads
- increased and connected cycling facilities including on-road lanes and off-road paths
- a review of speed limits with particular attention to the standard of the road
- a campaign to address misinformation about road users' rights and responsibilities
- permanent roadside signage, particularly in relation to regularly used commuter/recreational training cycling routes
- greater police enforcement of dangerous driving and non-compliant cyclist behaviour
- a collaborative approach to road use, particularly for bunch riders and commercial trucks

The impact of this research in Baw Baw was immediate, with the local community using the new evidence to find local solutions together to improve the safety of bike riders. Local cycling clubs and local companies examined commercial trucking routes and schedules to reduce the interaction between trucks and bunch riders by minimising their exposure. The local council installed roadside signs to increase drivers' awareness of bike riders in the area. To paraphrase the local police:

*"...it's the best thing to happen here for cycling (because) it will give me the evidence to be able to ask for action."*

This example can serve as a model for how to arm local communities with evidence and empower them to take action in their area improve safety for bike riders in regional and rural areas.

**Recommendation:** That the Federal Government, through the COAG Transport and Infrastructure Council and local governments, support research that targets specific regional/rural areas with high incidence of bike rider crashes so that communities have the evidence to take action to improve the safety of bike riders on regional/rural roads

## E. Other associated matters

Bicycle-friendly infrastructure has been fundamental to the successful action taking in the Netherlands and Denmark, countries with the highest levels of cycling in the world. Progressively, bicycle infrastructure is being implemented in cities and towns across Australia. However, it is likely to be many decades before the capital investment is made to create a widespread bicycle-friendly network. Action is needed now to improve the safety of all bike riders.

There are many actions that can be taken to improve safety for bike riders. Actions that will have immediate national impact include:

1. Safe overtaking distance (a metre matters)
2. Driver education
3. Speed
4. National cycling exposure measurement
5. Alignment of federal policies, namely the National Cycling Strategy and National Road Safety Strategy

### 1. Safe overtaking distance

Data shows hit-from-behind crashes are the most common cause of bike rider fatality<sup>1</sup>. The leading action needed to reduce fatal tragedies for bike riders is to change existing laws to provide a measurable benchmark for safe overtaking distance. Better infrastructure is critical to improving the safety of bike riders but we cannot afford to wait until Australia has this in place. The best way to make bike riders safer right now is for drivers give them enough space. If a bike rider can touch a car as it passes, it is too close.

We know changing the rules to mandate a minimum overtaking distance works. In April 2014, Queensland introduced a minimum overtaking distance trial which has already created a positive shift in driver behaviour and increased bike riders' feelings of safety. Market research also shows that the majority of all road users agree with the changes to the legislation. Specifically:

- 75% of all road users are aware of the new legislation
- 67% of all road users agree with the amendment legislation
- 61% of bike riders in Brisbane experienced greater distance from overtaking drivers<sup>13</sup>

In Queensland there has been a positive shift in bike rider crashes since the minimum overtaking distance trial started in April 2014. In 2013, there were 13 bike rider fatalities, in 2014, there were 9 bike rider fatalities and to date there have been no bike rider fatalities in Queensland in 2015 (24 February 2015). Serious injury data is not currently available to determine if there has been a positive impact on nonfatal crashes.

Three other jurisdictions have taken action to amend their road rules to improve bike rider safety:

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<sup>1</sup> Rear-end crashes were the single crash type that resulted in the most bike rider deaths (26%) Garratt, M and Johnson, M. (Under review).

- Australian Capital Territory – announced in 2014 they would conduct a Queensland style trial
- South Australia – January 2015 announced they would amend the road rules (no trial)
- Tasmania – February 2015 amended road rules related to drivers overtaking a solid centre line/s to enable safe overtaking

While there is momentum for change, Federal leadership on this issue is needed to make it safe for people to ride bikes across Australia. Action at a Federal level will help to ensure harmonisation of this effective change to the road rules. There is extensive evidence on the need for this type of legislative amendment, please refer to <http://www.amygillett.org.au/minimum-overtaking-distance/> for more information.

**Recommendation:** That the Federal Government recommend that the Australian Road Rules Maintenance Group amend the model Australian Road Rules to mandate minimum overtaking distances when drivers overtake bike riders of:

- 1 metre in speed zones up to and including 60kph
- 1.5 metre in speed zones over 60kph

## 2. Driver education

We do not teach drivers how to safely share the road with bike riders. This critical gap exists in the current driver licensing processes nationally. Currently across Australia there is no mandatory cycling-related content for people learning to drive. It is possible to become a fully licensed driver and not answer a single question about:

- How to safely interacting with bike riders on the road
- The purpose of different cycling infrastructure, or
- Skills tests about safe driving behaviour

Change at the federal level to improve bike rider safety can be achieved through the existing road safety programs for example, *keys2drive*. However, it is not enough to just add some questions and hope for the best. Quota sampling of questions is needed to ensure all tests include questions about safe driving behaviour when sharing the road with bike riders. In addition, the on-road driver skills test must include safe driving behaviour in when sharing the road with bike riders and in relation to on road cycling infrastructure (e.g. bike lanes).

Further, research is needed to understand what people need to learn and how we can incorporate international best practice to make this step change in driver licensing. A pilot study, *Learning to Drive with Bikes*, is currently underway in the Australian Capital Territory funded by the NRMA-ACT Road Safety Trust, and has potential to be expanded into a national study.

**Recommendation:** That the Federal Government, through the COAG Transport and Infrastructure Council, support research to identify the most effective questions to include in driver licence testing (written and skills) in all States and Territories

### 3. Speed

Safe bike riding needs to be balanced with the viability of the road transport system. In many locations physical space is limited and modifying speeds is another approach to create a safer environment for bike riders and drivers to travel together.

While posted speed limits are in the main governed by the jurisdictions, we recommend that the Federal Government takes a national, leadership approach by providing model speed zones that improve the safety for all vulnerable road users including bike riders, pedestrians, children and older Australians.

**Recommendation:** That the Federal Government, through the COAG Transport and Infrastructure Council and local governments, investigate model speed zones that improve safety for all vulnerable road users, including:

- 40kph or lower in local and collector streets to improve safety and promote liveability, environmental amenity, health and well-being
- 50kph limits on arterial roads

### 4. Cycling exposure measurements

The number of bike rider deaths and serious injuries are significant but we do not have enough context to help identify the most effective solutions. We do not know if, and how, the increase in the number of people riding a bike directly impacts the number of bike crashes. The lack of exposure data is the most significant gap in bicycle safety research in Australia.<sup>14, 15</sup>

In road safety, exposure measurements refer to the details of use. For example, the number of trips taken in a week, the distance travelled (km), duration of trip (time) or route choice. Each of these descriptions could be used to calculate the rate of road trauma. For example: number of bike rider fatalities per year / number of kilometres cycled per year = rate of bike rider fatalities per year by distance travelled.

Comprehensive measurements of how people use their bicycles (exposure measurements) will provide context for assessing, analysing and understanding the bike crashes that occur. One hypothesis is that increased bike rider fatality and serious injury crashes are a function of an increase in cycling activity (increased trip frequency and trip duration). Put simply, the more people who ride bikes, the more people will crash.

However, internationally the opposite effect has been reported. Increased cycling trips in countries including the Netherlands and Denmark have produced a 'safety in numbers' effect. That is, the more cyclists on the road, the lower the risk of any individual bike rider being involved in a collision.<sup>16</sup>

We do not know where Australia is positioned relative to a 'safety in numbers' effect for bike riders. Accurate, meaningful measurements of bike riders' exposure are essential to inform targeted action to create a safe cycling environment in Australia. We must understand exposure data if we are to understand change.

The National Cycling Strategy (2010) aims to double cycling participation by 2016. Public policies, active travel and transport plans identify bike riding as an activity that can achieve a range of health, transport, economic and urban liveability objectives. However, without meaningful measurements of bicycle use, it is almost impossible to determine whether we will meet that target safely. An



accurate baseline of cycling exposure is essential in order to monitor the long term impacts of public policies, road safety messaging and investments in infrastructure in order to maximise the safety of bike riders. The context of changes to the safety of bike riders is essential if governments are to responsibly encourage people to increase cycling.

**Recommendation:** That the Federal Government supports the Amy Gillett Foundation to convene a working group of relevant stakeholders to develop a robust national cycling exposure measurement

#### **5. Alignment of federal policies, namely the National Cycling Strategy and National Road Safety Strategy**

These two national policies affecting road users are not aligned and in are, in some instances, contradictory. Alignment at a policy level is essential to streamlining process and maximising return on investment to achieve the greatest benefits for road safety, including safety outcomes for bike riders. As these policies are monitored and renewed, the Amy Gillett Foundation and other stakeholders can play a more active role to help align these two key polices.

**Recommendation:** Align the National Cycling Strategy and the National Road Safety Strategy to maximise safety outcomes for all road users, including bike riders.

## References

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