

**BICYCLE
NETWORK®**

Road Safety Inquiry Tasmanian Legislative Council

August 2021



About Bicycle Network

With nearly 50,000 members, Bicycle Network is one of the top five member-based bike riding organisations in the world.

With a proud history reaching back more than 40 years, we are committed to improving the health and wellbeing of all Australians by making it easier for people to ride a bike.

Operating nationally, we have a measurable and large-scale impact in community participation and the promotion of healthy lifestyles through bike riding.

We achieve this in Tasmania through:

- improving the bike riding environment by working with government at all levels to provide better infrastructure, data, policies, legislation and regulations
- delivering Ride2School, Ride2Uni and Back on your Bike programs to get more people riding
- providing services that support bike riders through membership
- encouraging more people to ride by providing free social rides and bicycle valet parking
- being a key spokesperson on issues related to cycling and physical activity.

Bicycle Network would like to thank the Tasmanian Parliament for instigating this important inquiry and look forward to recommendations that will improve road safety in this state.

A handwritten signature in black ink, appearing to read "Alison Hetherington".

Alison Hetherington
Public Affairs Manager Tasmania
alisonh@bicyclenetwork.com.au

A handwritten signature in blue ink, appearing to read "Craig Richards".

Craig Richards
Chief Executive Officer
craigr@bicyclenetwork.com.au



Riding is a low-impact exercise that can help people improve their physical and mental health, as well as providing a low-cost, low-polluting form of transport.

Tasmanians are enthusiastic bike riders for recreation but fewer do so for transport, with one in three Tasmanians riding a bike at least once a year.ⁱ If we are going to increase the number of people who ride for transport and all the health and economic benefits that would bring, people need to feel safer on or interacting with our roads.

All of us need to improve our behaviour on roads to reduce the unacceptably high number of people killed or injured for life. Despite many years of interventions to reduce the road toll, Tasmania has seemingly reached a plateau. We should be dedicating the funding and innovation needed to restart the downward trend and save lives.

We need to transform our current transport planning approach from one focused on speed and convenience to one focused on safety of all road users.

Our submission includes recommendations and suggestions aimed at ensuring people riding bicycles in Tasmania will be protected into the future, and that their safety is acknowledged in the government's strategies and performance benchmarks.

Recommendations

Bicycle Network

1. Recommends that road safety plans set unique targets to reduce crashes involving motor vehicles and vulnerable road users.
2. Recommends the parliament amends legislation to permit the adoption of camera technology that captures and issues fines to drivers using mobile phones.
3. Recommends the Tasmanian Government fund new camera technology that detects mobile phone use as well as speeding and seat belt use.
4. Supports funding for a road safety campaign and improved driver testing focussing on the need for drivers to pay attention at all times to all road users.
5. Recommends that 30 km/h speed limits be adopted in Tasmanian urban centres and statewide in school zones and around school buses.
6. Supports reduction of speed limits on roads which are not designed for high speeds and road audits show have an unacceptable risk of crashes.
7. Recommends the Tasmanian Government advocate for harmonisation of our national heavy vehicle safety standards for additive safety devices with those of the United Nations.



8. Supports funding to progressively implement wide, sealed shoulders on our major roads and the implementation of audible edge marking on all roads.
9. Recommends that Tasmania's road safety action plans and road funding agreements use the 'Safe Systems' framework as well as the 'Movement and Place' approach.
10. Supports funding to upskill council, government and private practitioners in Safe Systems and Movement and Place frameworks.
11. Recommends funding for Tasmania Police to include Minimum Passing Distance enforcement in its operations.
12. Recommends the Road Safety Advisory Council continue to advertise the Distance makes a Difference campaign to remind drivers of the minimum passing distance laws.
13. Recommends the Tasmanian Government develop cycling infrastructure design guidelines for state and local government based on the Safe Systems and Movement and Place frameworks.
14. Recommends the Tasmanian Government establish an ongoing fund for use by state and local government to retrofit separated cycling infrastructure and build separated infrastructure in new road projects.
15. Recommends the Tasmanian Government funds demonstration projects to build separated cycleways, protected intersections and protected roundabouts.

Vulnerable road users

People riding bicycles are classified as vulnerable road users because they are so exposed to death and injury if hit by someone driving a vehicle.

In the past ten years more than 100 people have lost their lives or suffered a serious injury while riding a bicycle in Tasmania.

Year	Fatalities	Serious injuries	Total
2010	1	9	10
2011	1	7	8
2012	1	6	7
2013	4	14	18
2014		12	12
2015	1	12	13
2016		3	3
2017	1	9	10
2018	1	10	11
2019		9	9
2020		6	6
2021	1	7	8
Grand Total	11	104	115

While this represents a small percentage of overall deaths and injuries, for those 11 families who lost a loved one and the 104 people who suffered significant injuries, their lives were changed forever.

The majority of serious crashes involving people riding involve motor vehiclesⁱⁱ and while not all crashes are the fault of drivers, when a crash happens it's the person on the bicycle who suffers the most.

To better address the causes of crashes for different users, we recommend that a unique set of targets for motor vehicle drivers and vulnerable road users be adopted.

For example, drivers not actively looking out for bicycles and not giving enough passing distance are two causes of serious injury for people riding bicycles that aren't common problems in vehicle-on-vehicle crashes.

However, some of the main reasons for vehicle-on-vehicle crashes also apply for crashes with people on bicycles.

We need to reduce distracted driving, speeding, drug and alcohol use and fatigue if we are going to make it safer for people riding on roads as well as other road users.

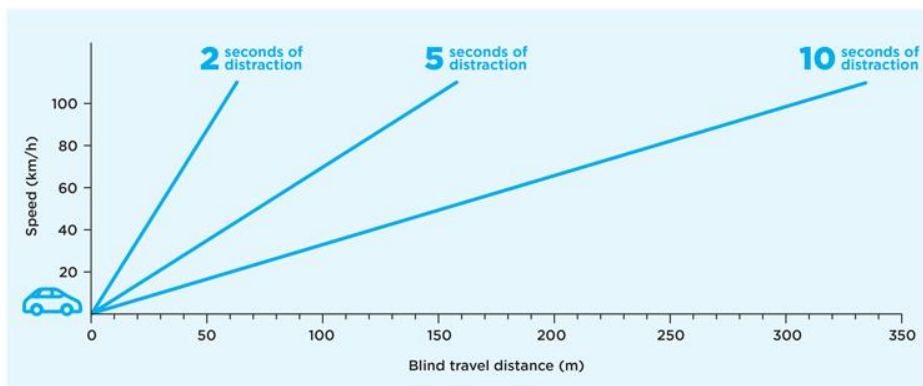
Distracted Driving

If we are to build Australia's active future, we need to take action on behaviour that places vulnerable road users at risk of serious injury.

An increasingly dangerous behaviour on our roads is distracted driving.

Each time drivers eat, fiddle with their dashboard or check their phone, their driving abilities are compromised. When drivers are distracted they are effectively 'travelling blind', which causes significantly large areas of the road space to become hazardous for other road users.

Distracted driving



Some hard truths:

Drivers distracted for **2 seconds** on a 90km/h road are traveling blindly for **50 metres**, the length of an Olympic swimming pool.

Drivers distracted for **5 seconds** on a 60km/h road are traveling blindly for **83 metres**, the length of five humpback whales.

Drivers distracted for **10 seconds** on a 100km/h road are traveling blindly for **305 metres**, the length of a whopping 67 cars.

To help stop this poor driving behaviour, automation technologies, including driver alert systems, autonomous emergency braking, lane centring, and driverless operation are being implemented in new cars.



There is the possibility for mobile phone blocking technology in cars to stop people using phones while the vehicle's engine is on and 'Do not disturb while driving' apps for phones.

There are also drivers who are just not paying attention to all the risks on the road. Many people who drive the same route day after day get used to seeing the same things and so their minds go into 'cruise control' and they are slow to react to something unexpected.

We often hear that drivers 'didn't see' a bicycle rider before they hit them. It may be that it was poor visibility at the time of the crash, but it could also be because drivers are not actively looking for people riding or walking.

Bicycle Network recommends the parliament amends legislation to allow the adoption of camera technology, such as that used in NSW, which captures drivers using their mobile phones and issues fines. Such technology can also detect speeding, vehicle registration and seatbelt use. This technology has already been tested elsewhere in Australia and only needs a short trial in Tasmania to get drivers used to it.

The Tasmanian Government should fund this technology as part of its overall road safety program to reduce distraction and speeding on our roads. In return, the fine revenue received from cameras could be reinvested into making roads safer in Tasmania.

Road safety campaigns and improved driver testing should be implemented to reinforce the need for drivers to pay attention at all times to the road and all its users.

Reducing speed

Speeding, fatigue and drug and alcohol intake impedes the abilities of people driving to control their vehicles and to stop quickly.

This is important for people on bicycles as they are more vulnerable to injury if they are hit by someone driving a vehicle.

A driver speeding around a corner who comes across someone riding on the road is less likely to be able to veer around the rider or slow quickly. Likewise, a driver who is tired or affected by drugs/alcohol will have slower reaction times and may also not be able to veer around the rider or slow quickly.

Bicycle Network supports road safety approaches to reduce speeding, drug and alcohol use and fatigue.

In particular, dropping speeds on roads where vulnerable road users like people walking and riding are more likely to be.

International best practice is to set speeds of 30 km/h on those streets with higher numbers of people walking and riding, such as those in our urban centres or around schools. Increasingly, Australian cities and towns are adopting 30 km/h limits, but in Tasmania we are sticking to 40 km/h around schools and buses and 40 or 50 km/h in most urban centres and residential streets.

A person hit by a vehicle travelling at 30 km/h has a 90% chance of survival, at 40 km/h it's 60% and at 50 km/h it's 10%.ⁱⁱⁱ When we adopt 'compromise' speed limits such as 40 km/h around school zones, we are putting speed and convenience above human life.

Bicycle Network recommends that 30 km/h speed limits be adopted in Tasmanian urban centres, and statewide in school zones and around school buses.

It is not uncommon in Tasmania to see narrow, winding roads with unsealed shoulders and posted speed limits of 100 km/h.

Bicycle Network supports moves to reduce speed limits on roads which are not specifically designed for high speeds and road audits show have an unacceptable risk of crashes.

Heavy vehicle reform

In Australia, 23 per cent of bike rider fatalities in an average year involve a heavy vehicle, a statistic that has not changed for 20 years.^{iv} In many cases, a collision occurs where bike riders are travelling through an intersection and are struck by turning heavy vehicles.^v

Recently in Tasmania a man riding along the Bass Highway was seriously injured by a truck driver at Wivenhoe in October 2019 and a man riding along the Bass Highway was killed at Somerset when hit by a truck in February 2018.

Drivers of freight vehicles remain susceptible to blind spots and people walking and riding are often not aware of where these blind spots are. The consistency of these crashes over the long term highlights that we have not solved the problem.

A necessary step towards safer freight vehicles is the compulsory fitting of devices for indirect vision and monitoring/detecting other road users (additive safety devices) on vehicles over 4.5 tonnes. Australian Design Rules (ADR) already cover some of these devices for new vehicles.

These include:

- devices for indirect vision (ADR 14/03; UN Regulation No 46)
- lane departure warning systems (ADR 99/00; UN Regulation No 130)
- blind spot information systems (ADR 105/00, UN Regulation No 151)
- lateral protection devices (e.g. side underrun protection) (ADR 106/00; UN Regulation No 73)



- audible warning devices (UN Regulation No 28)
- retro-reflective markings (UN Regulation No 104)

It's important to harmonise our national heavy vehicle safety standards with those regulated by the United Nations if we are to strengthen the freight and active transport sectors. This harmonisation should include a stronger commitment to additive safety devices.

These kinds of changes take time and in the interim heavy vehicle blind spot education campaigns for people walking and riding, such as the Swapping Seats campaign, should be implemented in Tasmania.^{vi}

Shoulder sealing

Widening and sealing shoulders on major roads would help drivers to retain control of their vehicles when they veer out of their lanes, as well as providing a space in the road reservation for people riding away from vehicles.

Too many of Tasmania's major roads have unsealed or very narrow sealed shoulders with high posted speed limits and are missing the rumble strip or audible edge marking that alert drivers who veer out of their lane.

The Tasmanian Government should set up a fund to progressively implement wide, sealed shoulders on our major high-speed roads as well as audible edge marking.

Movement and Place approach

Our perception of transport systems has changed dramatically. The traditional view has been that roads should be designed to optimise high levels of movement with minimal travel time. However, certain streets may be desirable places in their own right for people to spend time.

Movement and Place methodology recognises that some streets are movement corridors while others are places that attract people. The methodology guides road designers and urban planners to achieve the best functionality for a given space. A common form of visualisation of this is a Movement and Place matrix.



Example of the Movement and Place matrix. Modified from the Government of South Australia's 'Streets for people' report, as documented in Wooley et al.

The 'movement' and 'place' axes may also be viewed as a proxy for the ratio between motor vehicles and vulnerable road users. For example, higher levels on the 'movement' axis approximates a higher motor vehicle to vulnerable road user ratio, and vice versa for the 'place' axis.

Movement and Place methods are being used in many capital cities by key bodies such as Transport for NSW and VicRoads. Active transport has become a vital component of Movement and Place thinking, and transport networks are now being retrofitted and repurposed to better support active travel.^{vii}

Tasmania's Road Safety Action plans and road funding agreements have been framed within the Safe Systems framework, but they should also be framed within the context of Movement and Place. What is considered safe in a high movement road is not the same as what is considered safe in a high place setting.



The movement and place environments demand a unique set of safe driving and bike riding behaviours. Austroads has issued advice on designing roads for vulnerable road users using both the Safe Systems and Movement and Place approaches.^{viii}

The Tasmanian Bicycle Council recently organised training for Tasmanian engineers and planners in designing cycling infrastructure using the Safe Systems approach that was subsidised by a Road Safety Advisory Council grant. It was very popular, selling out within days, prompting the instructors to put on a second and third round of sessions and opening it up to other states.

Tasmania needs to upskill council, government and private practitioners in both Safe Systems and Movement and Place frameworks to ensure all new road projects and amendments to existing roads follow these approaches. This would only require a small amount of funding but could result in very different approaches to road design.

Minimum Passing Distance

Tasmania has had Minimum Passing Distance laws in place since 2017, with a successful awareness campaign ensuring the laws are well understood. These laws require drivers passing people on bicycles to ensure there is 1 metre between their vehicle and the bike rider when the speed limit is 60 km or below, and 1.5 metres when the speed limit is higher than 60 km.

Anecdotally, riders tell us that the majority of drivers are obeying the law. However, there is a small number of drivers who consistently pass much too close to riders and risk a crash occurring.

The onus is on bike riders to equip themselves with the technology to be able capture a driver passing too close and then to rely on police prosecutors to decide whether the case could stand up in court before a driver is charged.

In the United Kingdom, where these laws have been in place for longer, police forces actively enforce minimum passing distance laws through Operation Close Pass activities. They do this through footage taken from police cars or motorbikes, or send police officers out on bicycles with the technology and backup to catch drivers who are breaking the law.^{ix}

There is scope in Tasmania to enact enforcement campaigns to ensure drivers are giving enough distance, similar to campaigns around speeding, distraction and drug and alcohol usage.



Bicycle Network would like to see Tasmania Police get the funding to conduct Operation Close Pass activities here.

Bicycle Network supports the Road Safety Council continuing to book in advertising space for the Distance makes a Difference campaign to remind drivers of the law.

Separated bike infrastructure is a road safety intervention

Separated or protected infrastructure refers to areas of the road set aside for bike riders that are physically separated from motor vehicles, often by bollards, kerbs, planter boxes, concrete blocks or parked cars. This type of infrastructure should be the gold standard in catering for the safety of people on bicycles.

A wealth of evidence shows that cities with high bike riding volumes have better road safety outcomes and that this is associated with the installation of separated infrastructure.^x

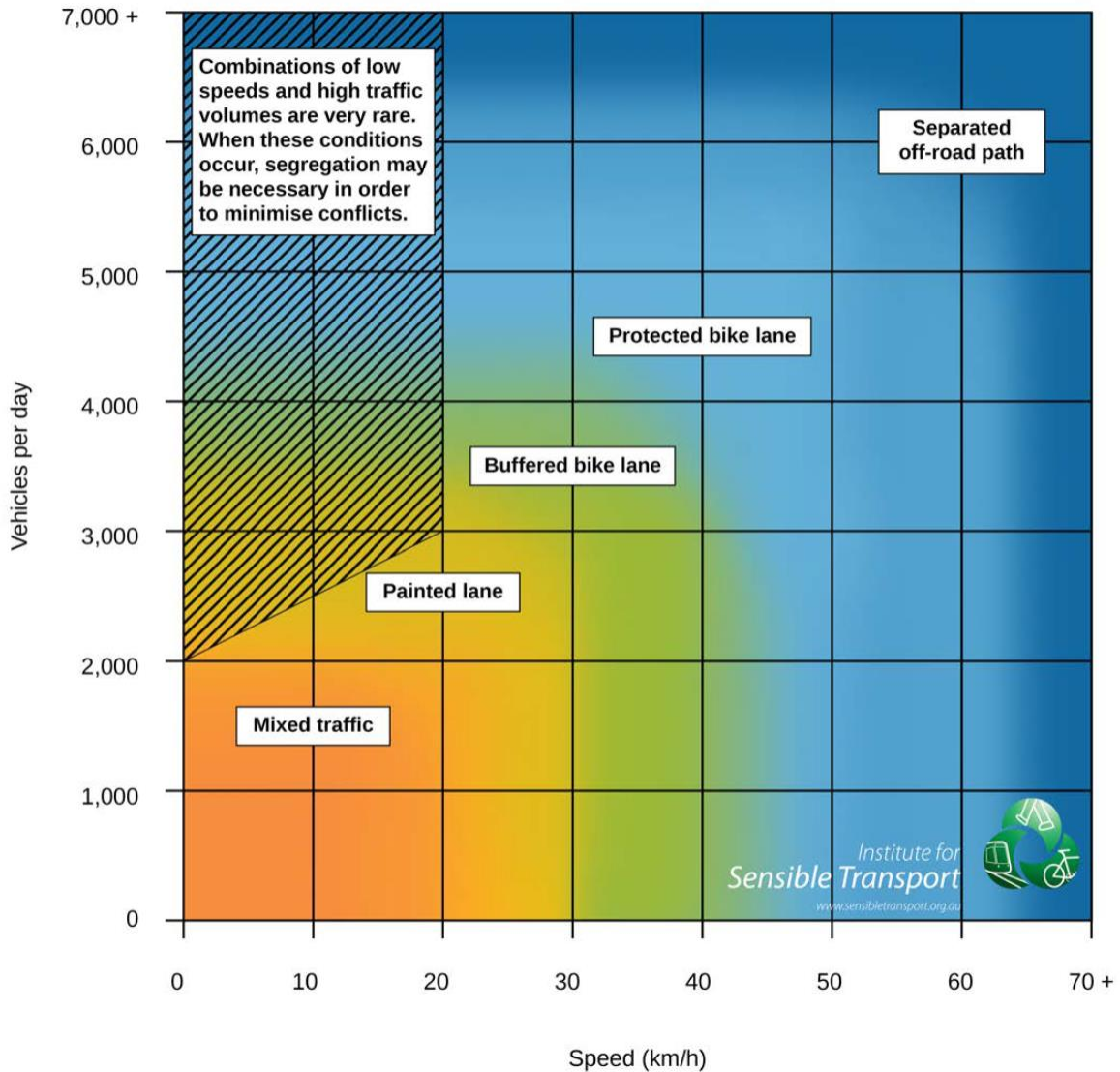
Separated infrastructure should be at the forefront of current and future road projects and as stand-alone road safety projects in their own right, such as the proposed Margate to Huntingfield path that would give people riding another option to the Channel Highway.

It should be viewed as the critical intervention component for actioning the safety needs of people riding bikes.

While there is Austroads advice to separate people on bicycles from vehicles once traffic volumes and speed reach a certain point, very few places in Tasmania do so.

This is advice only, leaving councils and state government to adopt different approaches across the state. It would benefit everyone if the Tasmanian Government issued Tasmanian guidelines on the types of cycling infrastructure that should be built in different road environments, and practical advice on how to build that infrastructure.

This infrastructure matrix was recently updated for Austroads by the Melbourne-based Institute for Sensible Transport, making it clearer that protected or separated cycleways are key for most road environments.



Matrix taken from Kingborough Cycling Strategy 2021–2030 (Draft)

The Tasmanian government does not have a dedicated funding stream for such infrastructure, with project funding and one-off cycling infrastructure funds announced during election campaigns and varying in size each time. There needs to be an ongoing fund to retrofit separated cycling infrastructure to state and council-owned roads. A standing fund would give councils security of funding to go ahead and design projects they know they can get help with building down the track.

While this sort of infrastructure is common interstate, there are few substantive examples in Tasmania. Funding could be set aside for demonstration projects where state and local

government works together to build separated cycleways, protected intersections and protected roundabouts to show people what we could be doing on our roads to better protect people riding.

End Notes

ⁱ Munro, C. National Cycling Participation Survey 2019 (Austroads Sydney, Australia, 2019). The 2021 survey is due out soon and we've been told shows a significant increase in the number of Tasmanians riding a bicycle.

ⁱⁱ Bureau of Infrastructure Transport Regional Economics. Australian Cycling Safety: Casualties, Crash Types and Participation Levels. (BITRE Canberra, Australia, 2015).

ⁱⁱⁱ Mclaughlin, M et al, "Busted: 5 myths about 30 km/h speed limits in Australia", The Conversation website, <https://theconversation.com/busted-5-myths-about-30km-h-speed-limits-in-australia-160547>, accessed 5 August 2021.

^{iv} Bicycle Network. Bike Rider Fatality Report 2001-2020. (Bicycle Network, Melbourne, Australia, 2021).

^v Pokorny, P., Drescher, J., Pitera, K. & Jonsson, T. Accidents between freight vehicles and bicycles, with a focus on urban areas. in Transportation Research Procedia (2017); Johannsen, H., Otte, D. & Urban, M. Pre-crash analysis of accidents involving turning trucks and bicyclists, in 2015 IRCOB Conference Proceedings - International Research Council on the Biomechanics of Injury (2015).

^{vi} Bicycle Network. "Swapping Seats", < <https://www.bicyclenetwork.com.au/our-campaigns/swapping-seats/>> accessed 6 August 2021.

^{vii} Woolley, J., Stokes, C., Turner, B. & Jurewicz, C. Towards Safe System Infrastructure: A Compendium of Current Knowledge. (Austroads, Canberra, Australia, 2018).

^{viii} Corben, Bruce. Integrating Safe System with Movement and Place for Vulnerable Road Users, Research Report AP-R611-20 (Austroads, Sydney, 2020).

^{ix} Lamb, J. S. et al. Should we pass on minimum passing distance laws for cyclists? Comparing a tactical enforcement option and minimum passing distance laws using signal detection theory. Transportation Research Part F: Traffic Psychology and Behaviour 70, 275-289, doi:<https://doi.org/10.1016/j.trf.2020.03.011> (2020).

^x Ling, R., Rothman, L., Cloutier, M. S., Macarthur, C. & Howard, A. Cyclist-motor vehicle collisions before and after implementation of cycle tracks in Toronto, Canada. Accident Analysis and Prevention 135, doi:10.1016/j.aap.2019.105360 (2020); Marshall, W. E. & Ferenchak, N. N. Why cities with high bicycling rates are safer for all road users. Journal of Transport and Health 13, doi:10.1016/j.jth.2019.03.004 (2019); Thomas, B. & De Robertis, M. The safety of urban cycle tracks: A review of the literature. Accident Analysis and Prevention 52, 219-227, doi:10.1016/j.aap.2012.12.017 (2013).