



**BICYCLE  
NETWORK®**

**Coronial Inquest -  
Investigation into the  
death of Norman  
MacKenzie**

**COR 2017 1812**

**Bicycle Network submission**

*August 2019*

*Prepared by Craig Richards, CEO and  
Anthea Hargreaves, General Manager – Public  
Affairs*



## Introduction to Bicycle Network

Bicycle Network believes that physical activity is vital for a happy, healthy life, so that's why we work to make bike riding easy for everyone, every day.

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 through:

- improving the bike riding environment by working with government at all levels to provide better infrastructure, data, policies, legislation and regulations
- delivering successful, large-scale and measurable behaviour-change programs such as Ride2School and Ride2Work
- providing services that support bike riders through membership
- running successful and world-renowned bike riding events such as Around the Bay, Peaks Challenge Falls Creek and the Great Vic Bike Ride as well as the Newcrest Orange Challenge.
- acting as a key national spokesperson on issues related to bike riding and physical activity.

As vulnerable road users, people who ride bikes are susceptible to serious injury and worse, and the organisation is acutely aware of the risks that riders, and other road users, can face.

Following information that emerged during the Coronial Hearing into the death of Mr Norman MacKenzie, Bicycle Network has considered whether there are steps that may be taken to reduce the risks of such tragic incidents in the future.

We offer this submission to the Coroner and trust he finds it helpful in his deliberations.

Craig Richards  
CEO  
Bicycle Network  
[craigr@bicyclenetwork.com.au](mailto:craigr@bicyclenetwork.com.au)

Anthea Hargreaves  
General Manager – Public Affairs  
Bicycle Network  
[antheah@bicyclenetwork.com.au](mailto:antheah@bicyclenetwork.com.au)



## 1. Executive Summary

Tragically, on 18 April 2017, Norman MacKenzie died as a result of injuries sustained in a collision with a bicycle being ridden by Mr Jarel Remmick. Mr MacKenzie was crossing Jacka Boulevard in St Kilda at a pedestrian crossing and the light was red. The traffic was stationary due to congestion and Mr Remmick was riding in the bicycle lane.

This was one of the very rare situations where a person walking is killed as a result of a collision with a person riding a bicycle. There have only been four lives lost in this way over the last 10 years in Victoria, which is less than one per cent of all pedestrian fatalities.

To Mr MacKenzie's loved ones, we extend our deepest condolences. We simply need to do more to prevent more lives being lost on our roads and do what we can to avoid a repeat of these tragic circumstances.

In order to assist the Coroner, Bicycle Network makes the following recommendations:

- **Recommendation 1:** In order to reduce the number of people who walk when the light is red, Bicycle Network recommends the Coroner investigates:
  - the effectiveness of crossings that adjust the time allowed to cross to the speed of the person walking (sometimes referred to as Puffin Crossings)
  - whether the light sequence at the Jacka Boulevard crossing allowed enough time for Mr MacKenzie to cross
  - the possible introduction of a behaviour change program aimed at reducing the number of people walking who cross on red 'don't walk' lights.
- **Recommendation 2:** Replace the pedestrian crossing where Mr MacKenzie was killed with an elevated crossing that links The Esplanade, St Kilda Triangle and St Kilda Foreshore.
- **Recommendation 3:** Increase visual cues about the possibility of bike riders at high volume points like pedestrian crossings with raised separation of the bike lane, on ground markings and eye level signs.
- **Recommendation 4:** Implement a behaviour change program to increase the number of people looking out for bike riders who are under passing stationary traffic.
- **Recommendation 5:** Implement a behaviour change program to encourage bike riders to take greater caution when under passing in high risk situations like intersections and crossings.
- **Recommendation 6:** Extend TAC coverage to include people who are injured on the road when walking or riding a bicycle.



## 2. Our deepest sympathies

Too many lives are lost on our roads and losing Mr MacKenzie is a tragedy. Bicycle Network would like to express our deepest sympathy to Mr MacKenzie's family, friends and loved ones.

We also acknowledge Mr Remmick and the terrible trauma he's endured.

We write this submission with a heavy heart. It's obviously important to try and learn from these tragic circumstances.

In that context, we'd like to make clear that:

- the consequences are extraordinarily out of proportion to any mistakes made
- our opinions are in no way intended to upset any person and simply made to assist the Coroner with his determination.

## 3. The circumstances surrounding Mr MacKenzie's death

From the evidence presented to the Coroner provided it appears that on Tuesday 18 April 2017 at approximately 5.52pm:

- Mr MacKenzie crossed at a pedestrian crossing on Jacka Boulevard heading away from the foreshore
- when Mr MacKenzie crossed, the traffic lights were green for vehicles and the pedestrian light signalled to not cross
- the south bound vehicle traffic was stopped or slowed due to congestion
- Mr Remmick was riding his bicycle in the bike lane, which was on the inside of the vehicle lanes, at between 33km/h and 40 km/h
- the speed limit on Jacka Boulevard was 60kmph
- there were other pedestrians waiting at the pedestrian crossing on the St Kilda Esplanade side
- the bicycle Mr Remmick was riding collided with Mr MacKenzie
- the head injury that caused Mr MacKenzie's death was a result of Mr MacKenzie falling backwards and striking his head
- fortunately, while Mr Remmick's injuries meant that he was transported by ambulance to hospital, he was released after an overnight stay.



*Figure 1: The crossing on Jacka Boulevard in St Kilda where the fatal crash occurred. Image taken on 14 August 2019.*



*Figure 2: View of Jacka Boulevard crossing from the beach/kiosk side of the road. Image taken on 14 August 2019.*

## 4. Pedestrians are rarely killed in a collision with a bike rider

Since 1 January 2009, 427 people who were walking have lost their lives on Victorian roads [1]. Of those, only four were due to a collision with a person riding a bicycle [2]. That's less than one per cent of total pedestrian deaths.

Accordingly, Mr MacKenzie's death is an unusual circumstance in Victoria.

## 5. Preventing crossing on red signals

Throughout the world, pedestrians account for 22% of traffic related fatalities and walking on red lights is one of the main circumstances of pedestrian-related traffic incidents at intersections [3] [4].

Factors affecting pedestrian red-light crossing behaviour include herd mentality, cognitive perception, age, mobility, personal characteristics and traffic environments [5]. Of growing concern is whether signalled intersections allow enough time for all people on foot to cross.

### Recommendation 1:

*In order to reduce the number of people who walk when the light is red, Bicycle Network recommends the Coroner investigates:*

- *the effectiveness of crossings that adjust the time allowed to cross to the speed of the person walking (sometimes referred to as Puffin Crossings)*
- *whether the light sequence at the Jacka Boulevard crossing allowed enough time for Mr MacKenzie to cross*
- *the possible introduction of a behaviour change program aimed at reducing the number of people walking who cross on red 'don't walk' lights.*

## 6. Redesigning the Jacka Boulevard Triangle

As one of the main arterials servicing Melbourne's beach side suburbs, the vehicle traffic on Jacka Boulevard is often congested. High pedestrian volumes funnelling down from Acland Street and The Esplanade, people riding bikes and activities on the foreshore, create an area with a high potential for incidents.

In addition to the pedestrian crossing at which Mr MacKenzie was killed, there are three other dedicated pedestrian crossing points on Jacka Boulevard. One at Cavell Street, another crossing from the foreshore to St Kilda triangle car park and a pedestrian footbridge near Pier Road.

The proposed redevelopment of the 'St Kilda Triangle', a nearby site controlled by the City of Port Phillip, will most likely result in the removal or relocation of pedestrian crossings. Several options for new crossings are indicated in the St Kilda Triangle Masterplan, including the possibility of a pedestrian overpass supported by the local community [6].



Bicycle Network supports and recommends that a new crossing replace the current crossing. A new crossing should align with the strongest desire lines of pedestrians seeking to cross the street, as well as have greater capacity and improved safety. A pedestrian overpass would remove pedestrian interaction within the traffic environment, acknowledge community feedback and be used given the elevation of The Esplanade.

**Recommendation 2:** *Replace the pedestrian crossing where Mr MacKenzie was killed with an elevated crossing that links The Esplanade, St Kilda Triangle and St Kilda Foreshore.*

## 7. Increasing the number of people looking out for bikes

Many road users are not looking out for bike riders. Unfortunately, our traffic environment has conditioned users to look out for cars, trucks and buses; options that have higher mode share and much larger physical mass.

Interactions are also influenced by attitudes towards people riding bikes. A study found that in Australia, attitudes have had an impact on understanding road rules and subsequently a lower tolerance of cyclists on road [7]. Many road users are unaware, unfamiliar or uncomfortable when sharing the road with people on bikes [8].

This can present a problem when traffic is congested or at a standstill and bikes are able to continue along their dedicated lane or clear space on the inside of the stationary vehicles. This is often referred to as 'under passing'. Typically, a crash might occur when an oncoming vehicle turns right between stationary traffic in front of the bike rider going straight ahead.

While we don't know what influenced Mr MacKenzie's decision to cross the road, it is possible that he saw the stationary traffic, concluded there was no danger from cars, trucks or buses and decided it was safe to cross without considering that there may be an oncoming bicycle.

Therefore, to help prevent any further crashes between people on bikes and people walking, as well as people on bikes and people driving cars, Bicycle Network recommends improving the visual cues in high volume areas like pedestrian crossings and implementing a behaviour change program to increase the number of people who look for bikes when the traffic is stationary.

**Recommendation 3:** *Increase visual cues about the possibility of bike riders at high volume points like pedestrian crossings with raised separation of the bike lane, on ground markings and eye level signs.*

**Recommendation 4:** *Implement a behaviour change program to increase the number of people looking out for bike riders who are under passing stationary traffic.*

## 8. Increasing the number of bike riders expecting the unexpected

At the time of collision, Mr Remmick was riding his bicycle at least 20 km/h below the speed limit. The speed at which Mr Remmick was riding both prior to the crash and at the time of impact are key questions to be examined by the coronial inquest.

Given the conditions of the road and the speed limit, Bicycle Network does not believe Mr Remmick was travelling at an excessive speed.

It is also relevant that:

- given the position of the stationary vehicles, Mr. Remmick could not see Mr MacKenzie approach from the median refuge. Subsequently, he had no time to apply the brakes or evade Mr MacKenzie
- the evidence given by the forensic pathologist during the inquiry indicates that the speed of the bicycle at the time of the collision wasn't the determinative factor in Mr MacKenzie's fatal injuries and the same injury could've been sustained with a lower speed collision.

Accordingly, it appears that even if Mr Remmick was travelling at a slower speed, there is a high probability that the tragic outcome would've been the same.

Research has also confirmed that unlike in pedestrian-car collisions, major injuries sustained by pedestrians in incidents with people riding bikes are not attributed to the initial impact, but secondary due to the subsequent fall [9].

In the event of a collision a bicycle and rider weighing say, 85 kilograms, and travelling at 40km/h emits a fraction of the force of even a small vehicle and driver weighting over 1,000 kilograms travelling at 40km/h. Therefore, it's hard to argue that bicycle riders should proceed at a slower speed than vehicle drivers.

All road users should be vigilant and aware of the surrounding road environment, particularly in complex situations like pedestrian crossings. In circumstances where a bike rider is approaching a crossing or intersection and they are under passing stationery traffic, we recommend they be ready for the unexpected.

Accordingly, Bicycle Network recommends that a behaviour change program be implemented aimed at riders taking great caution when under passing in high risk situations like at intersections and crossings.

**Recommendation 5:** *Implement a behaviour change program to encourage bike riders to take greater caution when under passing in high risk situations like intersections and crossings.*





## 9. TAC coverage extends to people walking and riding

In Victoria, the Transport Accident Commission (TAC) under a no-fault scheme covers injuries that result from crashes directly caused by the driving of a car, motorcycle, bus, train or tram. They can provide support services for people injured in a transport accident as a driver, passenger, pedestrian, motorcyclist, and in many cases, a cyclist [10].

However, if there is a collision between a person riding a bicycle and a person walking, the TAC does not cover the persons involved. Accordingly, Mr MacKenzie and Mr Remmick were not covered by TAC.

Of course, some people argue that as TAC collects its premiums at the same time as car registration is paid, people on bicycles and people walking have not paid the TAC and should not be covered. Of course, like people travelling on trains, most people walking and on bicycles live in households that own cars. Therefore, they have already contributed to the TAC scheme.

Therefore, Bicycle Network recommends that TAC coverage should be extended to also look after people extends to better cover pedestrians and people on bikes on our roads.

**Recommendation 6:** *Extend TAC coverage to include people who are injured on the road when walking or riding a bicycle.*

## Bibliography

- [1] Transport Accident Commission, "Searchable Road Trauma Statistics," Transport Accident Commission. [Online]. Available: <http://www.tac.vic.gov.au/road-safety/statistics/online-crash-database>
- [2] VicRoads, "CrashStats Data," Victorian Government, [Online]. Available: <https://discover.data.vic.gov.au/dataset/crash-stats-data-extract..>
- [3] World Health Organisation, "Pedestrian Safety: A road safety manual for decisions-makers and practitioners," 2013.
- [4] L.Levulyten et al, "Pedestrians' Role in Road Accidents," *International Journal for Traffic & Transport Engineering*, vol. 7, no. 3, pp. 328-341, 2017.
- [5] W. Zhang et al, "Exploring factors affecting pedestrians' red-light running behaviors at intersections in China," *Accident Analysis & Prevention*, vol. 96, pp. 71-78, 2016.
- [6] "St Kilda Triangle Masterplan," City of Port Phillip, 2016.
- [7] J.A. Oldmeadow et al, "Driver anger towards cyclists in Australia: Investigating the role of the perceived legitimacy of cyclists as road users," *Transportation Research Part F: Traffic Psychology and Behaviour*, vol. 63, pp. 240-251, 2019.
- [8] M. Johnson et al, "Safety in numbers? Investigating Australian driver behaviour, knowledge and attitudes towards cyclists," *Accident Analysis & Prevention*, vol. 70, pp. 148-154, 2014.
- [9] M.Graw & H.G.Konig, "Fatal pedestrian–bicycle collisions," *Forensic Science International*, vol. 126, pp. 241-247, 2002.
- [10] Transport Accident Commission, "If I had an accident what would the TAC cover?," [Online]. Available: <http://www.tac.vic.gov.au/about-the-tac/faq/if-i-had-an-accident-what-would-the-tac-cover>.