Submission to the Legislative Council Select Committee

Road Safety in Tasmania

Executive Summary

The Legislative Council Select Committee on Road Safety in Tasmania was established to investigate Tasmania's relatively poor road safety compared to other states.

This submission considers the scientific evidence behind various aspects of road safety and includes original research.

Tasmania's vehicle fleet, despite being the oldest in Australia, is not subject to regular safety inspections. Research has proved this has resulted in a fleet that has more safety issues than other states. This submission recommends the introduction of yearly safety checks on vehicles more than 5 years old.

The age of Tasmanian vehicles results in Tasmanians being less likely to avoid crashes, and 7 to 10% more likely to die in an accident than the Australian average. This submission has recommendations to improve the relative age of Tasmanian vehicles.

Key issues affecting vulnerable road users are considered, including original research on the major difficulties overseas tourists find driving in Tasmania.

Note that the issues of vehicle age and maintenance, and the increase in motorcycles is sufficient to account for most of Tasmania's relatively poor performance.

Safe travel speeds are considered, with the Road Safety Advisory Council's (RSAC) own trials in 2013 proving that slower is not necessarily safer.

Finally, it is noted that public commentary by some stakeholders does not support the Safe Systems approach adopted in the RSAC Road Safety Strategy Action Plan (AP).

1 Vehicle Safety

The AP notes that Tasmania has the oldest vehicle fleet in Australia. It also states that an action is to "ensure that the vehicles on our roads are roadworthy".

However, the AP is scant on detail on how these issues are to be improved.

a) Roadworthy Vehicles (incorporating original research)

The current roadside checks by Police and Transport are very basic and infrequent. For example, I have been checked once in a million kilometres of driving in Tasmania.

Unlike some other states, Tasmania does not have a regular inspection program for car roadworthiness, despite having the oldest car fleet of any Australian state. This is illogical when the oldest fleet should obviously be subjected to the most mechanical inspections.

Note that traditionally mechanical failure or defects are downplayed as a contributing factor in crashes. However, research (see below) has proven that defects play a much greater factor in crashes than traditionally reported. It is a case of "if you don't look, you won't find".

For example, if road crashes were analysed to the standard of air crashes, then after a crash every component of a car's brakes, steering and suspension would be examined for wear; every fluid would be examined for age and effectiveness; the steering and brake system would be re-assembled and checked for performance and so on.

Obviously, this is impractical, thus mechanical influences on crashes remains underreported.

I have conducted over many years research experiments on the roadworthiness of Tasmanian vs. other States' cars. A research project I undertook in July 2021 yielded results typical of observations made since 2013.

Faulty Low Beam Headlights – Latrobe, Tasmania vs Mascot NSW

(Observations per 100 vehicles, July 2021)

	Latrobe, Tasmania	**Mascot, NSW**
Both headlights working	89	97
One faulty headlight	11	3
Failure rate	11%	3%

Note this is only low beam headlights. A staggering 11% (or 1 in 9) Tasmanian cars would fail a roadworthy test, just on low beam headlights. This is without considering tail, brake, indicator, and high beam lights, which my previous research showed raised the failure rate to 20%.

Surely faulty headlights would therefore be a contributing factor in at least 11% of accidents at night?

Tasmania, with an older vehicle fleet and no roadworthy checks for vehicles greater than five years old, has four time the failure rate of a state with a younger vehicle fleet and compulsory roadworthy checks.

From this is can be inferred that Tasmanian cars will have four times as many illegal tyres, worn brakes and steering components, faulty wipers, contaminated brake fluid, damaged windscreens, and broken brake, tail, and indicator lights.

It is also illogical that vehicles imported from interstate must undergo a safety check prior to obtaining a Tasmanian registration – even if the vehicle is improving the age and safety profile of the state's fleet and has had yearly checks interstate – and then for the rest of its life may not have one more safety check!

Thus, it is obvious that yearly vehicle safety checks should be introduced on vehicles older than five years. An additional benefit of these safety checks is that older vehicles are forced into retirement quicker, thus improving the fleet age.

b) Vehicle age

Since the 1971 when road fatalities peaked in Australia at 44 per billion kilometres driven, safety performance has improved immensely until in 2018 it was 4 per billion kilometres – an eleven-fold improvement.

The performance of cars, measured in terms of occupant **crash survivability**, has improved an average of 2.5 to 5% every year since 1971. These improvements include the development of energy absorbing crumple zones, collapsible steering columns, seatbelts, seatbelt pretensioners, side intrusion protection bars, safety glass, front, side, knee, and curtain airbags. **This has been the most significant factor in road safety improvements and is alone responsible for at least three quarters of the improvement. As ANCAP notes, you are four times more likely to be killed in a crash in a 20-year-old car as you are in a new car.**

In addition, the **crash avoidance ability** of cars has improved immensely in the 50 years since 1971. The universal adoption of disc brakes, improved suspension and road holding, ABS brakes, ESC, traction control, improved headlights, radar cruise control, collision avoidance semi - autonomous braking, blind spot warnings, even improved window demisting from standard air-conditioning are just some of crash avoidance technologies now in common use. And of course, it is better to avoid a crash entirely rather than rely on safety devices when you have one.

This makes it clear the significance of Tasmania's vehicle fleet being three years older than the Australian average. This equates to 7% to 10% less chance of surviving a crash, plus a similar percentage less chance of completely avoiding the accident.

The introduction of yearly safety checks on vehicles would result in the retirement of older, unsafe vehicles.

c) Existing punitive taxes on safe cars

The "Luxury Car Tax" (LCT) applies to a car for sale above $69,152. This tax should be either abolished or raised to a threshold that catches only genuine luxury vehicles.

The AP states many times that the public should purchase the safest vehicle that they can afford. However, the LCT penalizes drivers who wish to purchase safe vehicles. It is illogical that the more safety features a car has, the more a car will cost until it reaches a level where a punitive tax will be imposed, designed to

discourage, or make it impossible for a person to purchase the safest car available!

Electric Vehicles (EVs)are the future of cars, with many manufacturers planning to discontinue the production of internal combustion engine vehicles in the next few years. However, as with all technologies in the early stage of adoption, EVs are relatively expensive, and many trigger the LCT threshold for fuel efficient vehicles – even if they are not truly "Luxury Vehicles". EVs incorporate an abundance of safe driving technologies, and the Federal Government should be encouraging their take up – not actively discouraging potential purchasers with punitive taxes.

2 Vulnerable Road Users

a) Visitors (incorporating original research)

The Action Plan (AP) highlights the relatively high proportion of visiting road users in the crash statistics. The information given to visitors when collecting hire cars does not address several key issues.

As long-term operators of tourist accommodation, my wife and I extensively interviewed tourists from Asia, who would arrive by hire cars very late at night, well after our nominated closing time.

The visitors noted the following:

- Many had not driven in rural areas before, even in their own country.
- It was surprising how many believed that there would be streetlights on all major roads i.e., from Freycinet to Sheffield!
- Many were surprised by fog and did not even know it existed, or what it was called, or how to drive in it.
- Consequently, many of these visitors found the experience of driving at night in Tasmania slow, dangerous, and stressful.
- Furthermore, many were not aware that it was good road etiquette and safe practice to pull over, when safe to do so, if you are driving below the speed limit with vehicles banked behind you. I have observed tourists driving at 45kph (this is not a misprint) on Cradle Mountain Road with more than a dozen cars, buses and trucks banked behind them, and blissfully driving past many opportunities to safely pull over.

The information provided to visitors needs to be changed to reflect these key research findings.

b) Motorcyclists

The AP notes that motorcyclists are one third of the deaths and serious injuries, and that “motorcyclists are significantly over-represented” in crash statistics.

This statement is incorrect.

For a mode of transportation that is eight times more likely per km travelled to result in death or serious injury than driving a car, motorcyclists are “represented” in exactly the right proportion.

The AP does not address the key issue, that choosing this mode of transport is eight times more likely to result in death or a serious long term, life changing injury than if you had travelled by car.

c) Cyclists

A safe Systems Approach to road safety as promoted by the AP should recognize that the Hierarchy of Control should be applied to reduce risks to vulnerable road users such as cyclists. For example, high level controls such as separation, or engineering controls such as barriers, should be used in preference to administration controls such as a rule or a sign.

Many Tasmanian roads are simply not suitable for co-use by cyclists and motor vehicles. The lack of sealed shoulders makes it extremely difficult to obtain a safe separation distance.

No separation between vulnerable users (in this case cyclists) and motor vehicles – the typical Tasmanian situation.

The standard that Worksafe Tasmania requires for industry to separate vulnerable users (in this case pedestrians) from motor vehicles.

Improved infrastructure is the key to cyclist safety, and this can be as simple as sealing road verges or shoulders.

Note the AP states that the community must play its part through consideration of all fellow road users. This should apply equally to cyclists as well as motor vehicle drivers.

3 Safe Travel Speeds

A constant theme through the AP is an emphasis on promoting safer travel speeds. The causes of accidents are a complex interplay of factors, and to blame 40% of accidents on "excessive speed" is simplistic.

Proof of this was obtained by the 2013 trial of reduced rural speed limits in the Tasman and Kingborough Municipalities (known as the Tass and Kiss Trials). These trials were sponsored by the RSAC and supervised by Monash University. Technical analysis of the trials showed that accidents on gravel roads increased when slower speed limits were introduced, and the best road safety outcome was obtained by the municipality where the drivers maintained the highest speeds!

This result is due to risk being a product of Consequences X Likelihood X Exposure. The speed of a car, and the consequences of a crash at that speed, is just one component of a risk. A slower driver is often not as alert, more easily distracted, with a slower reaction time, with a greater time exposure to hazards, and a greater exposure to time related fatigue.

There is research that shows drivers travelling significantly under the speed limit are as, or more likely to cause accidents than those travelling significantly above the speed limit. This is recognized by many states in the USA where drivers can be fined for driving too slowly without due cause. The scientific explanation for this is slower cars have more interactions with other cars than those travelling with the flow of traffic, and cause traffic congestion, thus there is more exposure to higher risk situations.

4 Commitment from all stakeholders to the Strategy

Page ten of the Action Plan is entirely devoted to explaining the Safe System Approach, which underpins the entire structure of the 'Towards Zero' strategy. This summary states in part:

We can change the design of our system to reduce the likelihood of mistakes leading to serious crashes. Sealing gravel shoulders, improving sight distances, redesigning critical intersections, are just some of the tools we have available.

And tellingly, our vision is of a future with zero deaths and serious injuries. To achieve this, we know we must think and act differently.

This is constantly undermined by public statements from enforcement authorities, who usually only ever mention possible human factors when

commenting on a crash. Other obvious contributing factors relating to road infrastructure condition or vehicle age are never mentioned – this undermines public support for road improvements and safer cars, as the public is not educated on the lifesaving potential of other factors.

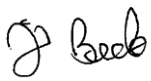
Case Study – vehicle runs off road (Exact details redacted in respect of the deceased).

A recent accident in Tasmania resulted in a fatality. A Tasmania Police spokesperson stated that it was yet to be determined if speed contributed to the crash and reminded the public to take care on roads.

Nothing was said about the following contributing factors, visible in a cursory examination of the accident photograph:

- The accident occurred at night. The road has no centreline or edge markings.
- The road shoulders are not sealed.
- Traffic lanes are narrow.
- The vehicle is more than five years old. Could headlight, tyre, steering, and brake conditions be contributing factors?

This is how a "Safe Systems" incident investigation should be conducted. It is how WST expects businesses to conduct incident investigations.



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