Submission No 56

SPEED LIMITS AND ROAD SAFETY IN REGIONAL NSW

Organisation: Transurban

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5 July 2022

The Hon Lou Amato MLC
Chair
Staysafe Committee
Parliament House
Macquarie Street
SYDNEY NSW 2000

Dear Mr Amato

RE: Inquiry into speed limits and road safety in regional NSW

Transurban is pleased to provide a submission in response to the Inquiry established by the Joint Standing Committee on Road Safety (Staysafe).

Transurban operates urban motorways in Sydney, Melbourne, Brisbane, the Greater Washington Area in the USA and Montreal in Canada. Our road safety strategic framework is based on the safe system approach and includes targets and action plans to further our goal in operating a transport network free from fatalities and life-changing injuries.

Transurban has an important role in contributing to the safety and performance of the overall network, beyond our own roads, as well improving safety for the broader community. Key to this is our partnership with Neuroscience Research Australia (NeuRA), which includes the Transurban Road Safety Centre and its crash test facility. Research outcomes from this partnership are contributing to improved road safety standards for children, senior drivers and motorcycle riders. Transurban is very proud of this partnership and I would be pleased to facilitate a tour and demonstration of the Centre and its crash lab by the Committee members.

Transurban's detailed response to the Terms of Reference is included as an attachment to this letter, but key recommendations are as follows:

- speed limits should be set at levels consistent with driver expectations
- greater focus should be paid to improving speed limit compliance around road works sites
- speed limits should account for the surrounding roadside infrastructure to ensure that any crashes on the road network are within human tolerance
- variable speed limits are a helpful tool for both improving traffic flow, and enabling proactive measures to reduce the likelihood and severity of crashes on the network, and
- point-to-point speed enforcement should be expanded to include light vehicles, which would have a beneficial impact on speed compliance in regional areas.

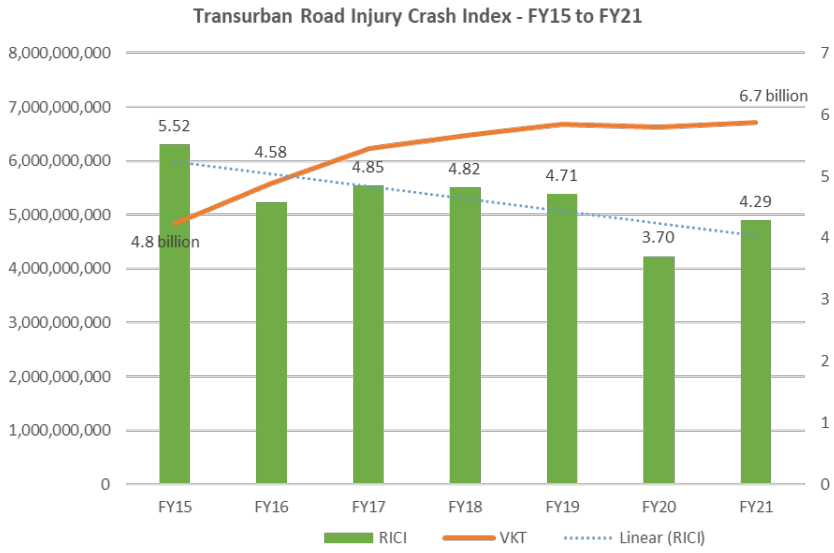
Transurban measures and reports on its road safety performance while also engaging experts to analyse data, assess the network and evaluate activities to support our continued road safety efforts.

Transurban's road safety key performance indicators include our Road Injury Crash Index, which measures the rate of serious injury crashes by vehicle kilometres travelled. Targets are established following analysis of past performance including crash rates and types, changes to Transurban assets and the surrounding network, as well as understanding the contributing factors to crashes including congestion, speed, distraction and vehicle type.

In the 2021 financial year, Transurban set a target of 4.5 serious injury crashes per 100 million vehicle kilometres travelled (VKT) and achieved a RICI of 4.29. For the 2022 financial year, Transurban set a target of 4.25 and is on track to meet this safety performance.

With an overall downward trend in serious injury crashes and an increase in travel by around 40 per cent over the past seven years (Exhibit A), the impact of COVID on driver behaviour has been observed on Transurban's roads. For example, we observed increased speeding and more debris/lost loads (attributed to home improvements) during lockdowns. These factors align with an increase in the number of serious injury crashes during FY21 compared to FY20. This is consistent with the performance of the broader network, particularly in those states that experienced longer or more frequent lockdowns.

Exhibit A: *Transurban Road Injury Crash Index – FY2015 to FY2021*



Transurban attributes our road safety performance to the:

- implementation of regionally based Road Safety Action Plans aligned with the safe system pillars
- investment in a Safe System Professional Development Program, co-designed and delivered with the Centre for Automotive Safety at the University of Adelaide to enhance our employees' safe system capability, and
- new and upgraded roads and technology, and continued excellence in maintenance and incident response.

As an active contributor to road safety policy in the jurisdictions in which we operate, Transurban has responded to research and policy initiatives by the National Transport Commission, Austroads, and the National Heavy Vehicle Regulator, along with federal and state road safety and transport inquiries.

Submissions and responses to recent inquiries and road safety strategies include the:

- Joint Select Committee on Road Safety in 2021
- NSW Staysafe Committee's Inquiry into mobile speed camera enforcement programs in 2021
- Draft NSW 2026 Road Safety Action Plan
- Draft NHVR Heavy Vehicle Safety Strategy 2021-2025
- Safer Roads, Safer Queensland Forum in May 2021
- Draft National Road Safety Strategy 2021-2030
- SafeWork NSW Guide to Managing Work, Health and Safety in the Food Delivery Industry in 2020
- Victorian Inquiry into the 2019 Road Toll in January 2020
- Joint Select Committee on Road Safety in January 2020, and
- 2018 review into the National Road Safety Strategy 2011-2020 (National Inquiry).

In responding to the Terms of Reference (ToR) for the current Inquiry, Transurban draws on its experience, expertise and activities to provide relevant and real-world examples.

On behalf of Transurban, I thank the Committee for the opportunity to participate in this Inquiry and welcome further discussion on the matters detailed within this submission.

Please feel free to contact [redacted] at [redacted] or on [redacted] should you wish to discuss further.

[redacted]

Yours sincerely

Elizabeth Waller
Head of Road Safety

Transurban's response to the Inquiry's Terms of Reference

a) The impact of speed limits and travel times on driver behaviour and safety

Transurban believes that speed limits should be set at levels consistent with driver expectations. Driver expectations are formed by cues in the road environment and surrounding road conditions. For example, drivers in built-up areas with limited visibility, regular intersections and pedestrian crossings would anticipate lower speed conditions than drivers travelling along open roads with high visibility and infrequent interactions with other road users. Speeds set lower than a driver anticipates will lead to greater speed differentials between drivers and this is correlated with higher crash risk.

Recent media reporting has shone a light on one such scenario affecting Transurban infrastructure. In line with Transport for NSW (TfNSW) requirements, NorthConnex has been speed limited to 80km/h. As the road has wide lanes and good site lines, drivers feel comfortable travelling at higher speeds. This issue is exacerbated for drivers who are travelling southbound and have just emerged from a 110km/h road environment on the M1, such that travelling at 80km/h feels uncomfortably slow. This demonstrates the importance of introducing gradual speed limit reductions, rather than a sudden speed drop, as this allows drivers time to adjust, feel more comfortable travelling at the lower speed and comply with the posted speed limit.

This issue is particularly acute at road works sites. When road works are set up on high speed roads, drivers are forced to reduce their speed significantly. Transurban has often found a lack of reduced speed limit compliance through its work zones, which increases the risk for both road workers and the general public. Efforts need to be made to improve speed limit compliance around road works, which can be achieved through the following measures:

- Cues to alert drivers to upcoming road works that encourage drivers to reduce their speed
- Additional devices such as temporary narrowing of the roads through bollards that assist drivers to understand the environment in which they are driving
- Use of road work speed limits only when necessary to improve credibility of temporary speed limits with drivers
- Greater enforcement of road works speed limits, which is currently being trialled in Queensland.

b) The impact of improved vehicle technology and road infrastructure

Transurban believes that improvements in vehicle technology and road infrastructure contribute towards a safe system on our roads, which is supported by appropriate speed limits being set, such that the network is forgiving to any errors by drivers on the road.

In the National Road Safety Strategy, Infrastructure and Transport Ministers have agreed to reach towards Vision Zero by 2050, that is a road-transport system free from deaths and serious injuries. In its Future Transport Strategy, the NSW Government has further set a target of zero trauma on the transport system by 2056, including on the NSW road network. To assist in achieving this goal, TfNSW has recently published the 2026 Road Safety Action Plan, which relies upon the safe system approach. This approach has been adopted internationally as best practice in improving road safety and recognises that the human body can only withstand so much energy before sustaining serious injury or death.

To achieve Vision Zero, the road transport system must feature safe people, travelling on safe roads, in safe vehicles. The entire safe system is underpinned by a requirement for safe speeds, as in speeds suitable for the environment, such that any crash that is not avoided would be at a speed within the human tolerance for such a crash.

Transurban contributes to achieving Vision Zero through the safe system approach by delivering on all pillars[1], including Safe Roads. The Australian Road Research Board's (ARRB) AusRAP assessment of our NSW network found that 87% of travel is on four star or better roads, with no sections of the network rated less than 3 stars. In contrast, the most recent publicly available AusRAP review of Australia's national highway network (2013), showed that 98% of National Highways in NSW and the ACT had a AusRAP rating of 3 stars of less.

This safety performance is borne out in the lower crash rate on Transurban operated assets, when compared to like roads. A recent review of the safety performance of Transurban roads by researchers at the Monash University Accident Research Centre (MUARC) found that the fatal-serious injury crash rate was almost 49% lower on Transurban operated roads in NSW than like roads in NSW. While a similar AusRAP assessment of regional roads is not publicly available, it is anticipated that roads in regional NSW would perform at a similar or lower rating. This is particularly significant given Transurban roads operate with a maximum speed limit of 100 km/h, and the default speed limit in regional areas of NSW is 100km/h.

Features contributing to a safe road environment on Transurban roads include:

- a forgiving roadside, with roadside barriers to prevent errant vehicles from striking less forgiving hazards such as trees, or from crossing into the path of oncoming vehicles
- interchanges instead of intersections, which remove the potential for many intersection crash types
- speed management, with speeds reduced at areas of increased risk, such as locations with reduced sight lines, and
- management of motorways that allows for rapid attention to hazards by a dedicated 24/7 incident response service, including debris or vehicles stopped within the traffic flow.

As the safe system approach requires speed limits to be set consistent with the safety of the road infrastructure, of concern is the default speed limit in regional locations that typically reflect unforgiving roadsides would be set at the maximum speed limit allowable on Transurban's network, where the design provides a forgiving environment in high speeds.

c) The use of variable speed limits

Transurban recommends the use of variable speed limits as a road safety measure, which can reduce congestion related crashes and better enable drivers to respond to potential hazards on the network.

Transurban commissioned MUARC in 2021 to conduct a literature review of the effect of variable speed limits (VSLs) on crashes and traffic flow. In general, research demonstrated that VSLs had the capacity to improve safety on highways through the following methods:

- reduced speed variability reduces both likelihood and severity of crashes
- improving flow of traffic, which reduces driver's likelihood to change lanes, and therefore the risk of sideswipe crashes; and
- reducing speeds when a crash potential has been identified to allow drivers to respond, which allows for greater ability to avoid crashes, and reduced severity when a crash does occur.

[1] Transurban also contribute to the Safer Vehicles and Safer People pillars through a number of projects including:

- Our partnership Neuroscience Research Australia, which is providing evidence to contribute to improved safety for child occupants, motorcycle riders, and older drivers.
- The requirement for heavy vehicles on the WestConnex project to be no older than seven years as newer vehicles support driver behaviour in terms of fatigue management, speed compliance and visibility of other road users.
- Trialling Hi-Vue Lens with our incident response vehicle and project vehicles. This aftermarket device aims to support driver visibility of vulnerable road users and prevent side swiping incidents.
- Public education campaigns around road safety.

Transurban demonstrated the benefits of VSLs during an initial trial conducted at the M7/M2 interface. As well as a reduction in congestion, the trial demonstrated a reduction in crashes, where rear end crashes were eliminated during the trial compared to the previous six months (five crashes before compared to zero after).

Based on the success of this trial and trials in other jurisdictions, Transurban is expanding VSL trials on our NSW roads NSW, including the Hills M2 (Eastbound), the Lane Cove Tunnel, and the Eastern Distributor. Transurban is continuing these trials as traffic returns to pre-COVID numbers and should have the results in 2023.

d) Any other related matters

Transurban recommends the expansion of point-to-point or average speed camera enforcement to light vehicles, which should have a beneficial impact on speed compliance in regional areas. These cameras have an influence on drivers' behaviour over a specific length of road, compared to traditional fixed cameras, which have a site-specific effect. Further, these cameras are more forgiving to momentary driver error as they do not penalise drivers for being slightly over the speed limit at a specific location, but rather penalise drivers for sustained speeding along the route. This is consistent with the safe system approach that acknowledges the fallibility of humans and research shows that this type of automated enforecemnt is considered fairer by motorists (as reported by the RACQ in 2014).

Research by the Centre for Accident Research and Road Safety at the Queensland University of Technology (CARRS-Q) demonstrated a positive relationship between point-to-point cameras and reductions in serious injury and fatal crashes. This is consistent with MUARC's evaluation of the Queensland Speed Camera Program.