Australasian College of Road Safety

New South Wales Chapter

Submission for the

Joint Standing Committee on Road Safety

Parliament of New South Wales

Mobile speed camera enforcement programs in NSW

July 2021

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The Australasian College of Road Safety (www.acrs.org.au) is the region's peak membership association for road safety with a vision of eliminating death and serious injury on the road.

The New South Wales Chapter, Australasian College of Road Safety (ACRS-NSW) maintains a state-wide network of road safety stakeholders, globally acclaimed academic researchers, practitioners, and government officials.

Material quoted in this submission was drawn from publicly available information and data sources.

In this submission ACRS-NSW:

- Supports the Mobile Speed Camera program and the changes made in late 2020
- Calls for the deployment of Mobile Speed Cameras to additional locations
- Calls for public education measures that inform the public of the cost of speeding and improve road safety

1. Introduction

The Daily Telegraph newspaper reported the announcement of this inquiry into mobile speed camera programs, by describing it as an "inquiry into 'cash grab' on drivers[1]".

Data on a range of legal actions is publicly available data Revenue NSW website[2]. Data downloaded by ACRS-NSW on 25 June 2021 found Mobile Speed Camera (MSC) fines for months of February, March, April 2021 totalled $17,416,640. In a worst-case scenario, this would equate to approximately $70 million if extrapolated over 12 months.

Last year however, the NSW Roads Minister, Mr Andrew Constance, placed the annual cost of road trauma in NSW at $8 billion[3].

In other words, it would take 114 years' worth of MSC fines to pay for one years' worth of road trauma in NSW.

Global, national, and state road safety strategies commencing in 2021 will set targets that require action from government and the private sector. These strategies are working towards the ultimate goal of zero deaths and serious injuries from road crashes.

Existing NSW road safety strategies nominate 2056 as the year when the goal of zero road deaths is finally achieved. The Draft National Road Strategy 2021-30 has brought that *vision zero* goal forward to 2050.

[1] Daily Telegraph, 28 May 2021, Page 8

[2] www.revenue.nsw.gov.au/help-centre/resources-library/statistics

[3] *Our Future Transport Mobility Environment* Webinar, 1 September 2020

Notwithstanding variations in the target year, the goal of zero road deaths and serious injuries will require effective speed management measures.

> *Effective speed management still remains one of the key ways road trauma can be significantly reduced.*
>
> Inquiry into the National Road Safety Strategy 2011-2020, p60

Information on global, national and state road safety strategies, and implications for safe systems, was provided in our recent submission to the Inquiry into Support for Rural and Regional Learner Drivers.[4]

2. Key Issues

In this section, ACRS-NSW provides comment supported by research that speaks to the Inquiry's terms of reference.

2.1. Global, National, and State Road Fatalities

Throughout this Inquiry, *Staysafe* will be furnished with an array of statistics concerning road safety. Between bush fires at the start of last year and travel restrictions imposed via public health orders, traffic volumes and movements, on the roads, cycleways, footpaths, as well as on public transport, were different in 2020 than previous years.

In time, ACRS-NSW expects the impacts of COVID-19 on road safety will be subjected to vigorous academic research with findings presented to Australasian Road Safety Conferences in future years. In the meantime, caution should be exercised when comparing, interpreting, and attempting to draw conclusions based on 2020 crash data. What we do know already, is that the travel restrictions and lower traffic volumes did not necessarily lead to proportionate reductions in road trauma, with speed being a key factor in the complex picture.

The European Transport Safety Council (ETSC) is an independent non-profit road safety organisation. Their summary of 2020 road deaths in the European Union included a stark warning which has been emphasised below.

- *Covid-19 pandemic travel decrease mainly responsible for a 17% drop in road deaths last year in the EU;*
- *Deaths dropped by 37% in the last ten years – short of the EU target to cut by 50% by 2020;*
- ***2020 a "turning point" year – future reductions in road deaths in doubt without political leadership.***

https://etsc.eu/eu-road-deaths-down-by-3900-in-2020/

[4] https://www.parliament.nsw.gov.au/ladocs/submissions/72051/Submission%2041.pdf

In the United States, the National Highway Transportation Safety Administration (NHTSA) released provisional data showing a 7.2% increase in road deaths despite a 13.2% reduction in vehicle miles travelled.

Speeding related road deaths in the United States increased by 11% in 2020 compared to the previous year. Some 27% of US road fatalities were speed related in 2020 (Table 1).

Fatalities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% change 2019–2020
2019		2,664	2,388	2,764	2,817	3,166	3,189	3,294	3,351	3,308	3,197	3,050	2,908	36,096	
2020		2,665	2,675	2,560	2,310	3,095	3,715	3,770	3,820	3,715	3,795	3,430	3,130	38,680	7%
Speeding-Related															
Overall	2019	26%	27%	27%	26%	27%	28%	25%	26%	26%	25%	26%	26%	9,478	
	2020	27%	27%	29%	32%	32%	31%	30%	27%	26%	25%	20%	21%	10,490	11%

Table 1: Percentage of US Road Deaths that are Speeding Related (NHTSA)
https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813118

In 2020, overall road deaths fell in most Australian states and territories. Queensland and Tasmania were notable exceptions, experiencing increases in road deaths of around 25% (Table 2).

Annual Australian Road Deaths

Year to date	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
January 2019 - December 2019	353	266	219	114	163	29	36	6	1,186
January 2020 - December 2020	297	212	276	95	154	36	29	7	1,106
Per cent change	-15.9	-20.3	26.0	-16.7	-5.5	24.1	-19.4	16.7	-6.7

Table 2: Comparison of 2019 and 2020 Australian Road Deaths by State (BITRE)
https://www.bitre.gov.au/sites/default/files/documents/rda_dec2020.pdf

In the first five months of 2021, Australian road deaths increased by 4.3%, with Queensland, which continues to trend upwards, Western Australia, and the Territories contributing most to the national increase (Table 3).

Australian Road Deaths Jan-May 2021

Year to date	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
January 2020 - May 2020	121	99	91	44	58	17	8	2	440
January 2021 - May 2021	119	90	106	46	70	12	11	5	459
Per cent change	-1.7	-9.1	16.5	4.5	20.7	-29.4	37.5	150.0	4.3

Table 3: Comparison of 2019 and 2020 Australian Road Deaths by State (BITRE)
https://www.bitre.gov.au/sites/default/files/documents/rda_may2021.pdf

NB: Due to late reports and Coronial determinations, data must be treated as provisional.

In NSW, provisional data for the first six months of 2021, obtained from the Centre for Road Safety website on 1 July 2021, shows 137 fatal crashes occurred resulting in 147 deaths. For the same period in 2020, 131 fatal crashes claimed the lives of 143 people.

Some 70% of fatal crashes so far in 2021 have occurred in areas classified as "country". The comparison of 2021 against the three-year-average is useful (Figure 1).

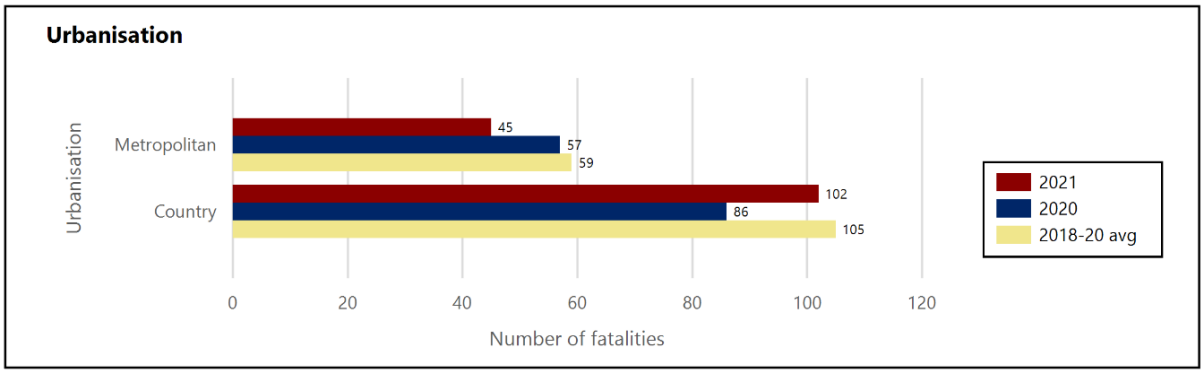

Figure 1: NSW Road Deaths: Metropolitan Vs Country
https://roadsafety.transport.nsw.gov.au/downloads/dynamic/nsw-road-toll-daily.pdf

2.2. The Culture of Speeding

The International Transport Forum (ITF) is an intergovernmental organisation with 59 member countries. The ITF is politically autonomous and administratively integrated with the Organisation for Economic Co-operation and Development. In 2018, the ITF released their *Speed and Crash Risk Research Report*, which highlights the complexities and political realities of setting speed limits:

> *Setting speed limits on different road types is often not just as simple as following strict safety criteria developed for each road type. Politicians and planners have to consider several challenges when deciding on speed limits, such as balancing safety and mobility aspects.*
>
> *There might also be synergies with other areas. One example is from France where it was possible to reduce speed limits on urban motorways for environmental reasons but not for safety reasons. A consequence in the opposite direction arises when politicians tend to accept higher speed limits on motorways to satisfy their voters.*
>
> https://www.itf-oecd.org/sites/default/files/docs/speed-crash-risk.pdf Page 7

The full implementation of the safe systems faces a range of challenges. The ETSC spoke about the requirement for political leadership. That leadership can be tested by public and media criticisms and community attitudes.

In 2013, Austroads released *Driver Attitudes to Speed Enforcement*. The work included a survey of 3,152 drivers in Australia and New Zealand on their attitudes on speeding and speed enforcement.

The Austroads report examined what it described as the "perceived legitimacy of speed limits and enforcement".

New Zealand Ministry of Transport (2009) found in New Zealand that 14% of participants agreed that 'there isn't much chance of an accident when speeding if careful,' a proportion that had changed little over the past survey waves.

Petroulias (2009) found in Australia that 25% of participants agreed that 'it is okay to exceed the speed limit if you are driving safely'. Micromex (2010) found in the ACT that 19% of participants agreed that the chances of having a crash are low when driving carefully above the speed limit (62% disagreed). Delaney and colleagues' literature review (2005) found that there was a widespread public belief in all four jurisdictions included in the study (Australia, Canada, the USA, and the UK) that driving slightly over the limit did not increase the risk of crashing if a driver was in other respects driving safely.

https://austroads.com.au/publications/road-safety/ap-r433-13/media/AP-R433-13.pdf (Page 47)

2.3. Repudiating low level speeding

There are not very many people who speed at huge margins over the speed limit. They are a higher extreme risk...so it's a dramatic safety problem, and when a crash occurs with someone doing that speed, we see it on the television every night, we see it in the newspapers every day. So it always gets the attention. It's dramatic. But it's still relatively rare.

But there's a very large number of people who are doing low range speeding offences, and the risk, it may only be two or three times what it is if you're at the limit, but because it's happening all of the time it becomes a very significant safety problem.

Professor Ian Johnson AM
Transcript, *Debunking the myths around low-level speeding* webinar, 2018
https://www.safeworkaustralia.gov.au/media-centre/debunking-myths-around-low-level-speeding

The ITF Speed and Crash Risk Research report examined the relationship between speed and road crash risk.

There have been a number of research efforts undertaken in the last few decades which have all shown a close correlation between speed, road crash frequency and severity: when speed increases, the risk of a crash and of its severity increases as well. While, at an individual level, the perceived risk is low, the societal risk is high and usually not well understood.

The severity of a crash follows from the laws of physics. At higher speeds, the kinetic energy released in a crash increase with the square of the speed and the changes of speed experienced by those struck by or occupying the vehicles involved increase with speed. The increase in crash risk is explained by the fact that when speed increases, the time to react to changes in the environment is shorter and manoeuvrability is smaller.

https://www.itf-oecd.org/sites/default/files/docs/speed-crash-risk.pdf Page 7

The report looked at studies and modelling from around the world to understand how speed affects the number of crashes as well as the crash severity as the following quote and table explain.

> *This is a consequence of laws of physics that has been supported by large amounts of empirical evidence from all over the world. If on a particular road the average speed increases, then the number of crashes will increase with serious crashes increasing to a larger extent than less serious crashes. To present the power function of Nilsson as a rule of thumb, this would mean that a 1% change in speed results approximately in 2% change in injury crash frequency, 3% change in severe crash frequency, and 4% change in fatal crash frequency.*
>
> https://www.itf-oecd.org/sites/default/files/docs/speed-crash-risk.pdf Page 7

To summarise, the forces (kinetic energy) generated in a crash lead to serious injury and death because the human body cannot withstand such forces. In the context of the safe system, ANCAP physical crash testing is carried out at speeds no greater than 60km/h[5] so safety features of modern vehicles can be defeated by high-speed impacts. Of course, the outcomes are even worse for older vehicles.

Recent media reporting has centred on an increase in MSC-detected offences for exceeding the speed limit by 10km/h or less[6]. However, there are considerable safety gains if average speeds are reduced by as little as 5km/h (Table 4). A reduction in speed of 5km/hr leads to a 28% reduction in the frequent of fatal crashes, on urban, rural and highway roads.

Indicative expected change in crash frequency following a 5km/h reduction in average speed on a road for different crash severities according to an exponential model

Initial speed stated in parentheses

	Urban roads (50→ 45km/h)	Rural roads (80→75km/h)	Motorways (120→115km/h)
All injury crashes	-15%	-16%	-16%
Serious injury crashes	-26%	-26%	-26%
Fatal crashes	-28%	-28%	-28%

Table 4: Expected change in crash frequency
https://www.itf-oecd.org/sites/default/files/docs/speed-crash-risk.pdf

Further evidence is found in a University of Adelaide study from 2002. The study has been quoted many times by global road safety researchers.

[5] https://www.ancap.com.au/safety-testing-explained

[6] *Camera cash-in a sigh of the fines*, Daily Telegraph, Page 6

It was estimated that illegal speeding in Adelaide 60 km/h zones accounts for around 25 per cent of all casualty crashes in those zones. That is, if we could reduce the maximum speed of all vehicles in Adelaide 60 km/h speed zones to 60 km/h, we would expect casualty crashes in those zones to fall by around 25 per cent. Moreover, nearly 60 per cent of the benefit of eliminating speeding would be achieved by eliminating speeding among those travelling between 61 and 75 km/h. This is because there are many more drivers who travel in this speed range than at faster speeds. Their relative risk of casualty crash involvement is lower than those travelling above 75 km/h, but their contribution to the total number of casualty crashes is the product of the number of these drivers and their relative risk of involvement in a casualty crash.

https://www.infrastructure.gov.au/roads/safety/publications/2002/Speed_Risk_3.aspx
(Executive Summary Page i)

The University of Adelaide study found the relative risk of a crash approximately doubles for each 5km/h increase in free traveling speed. Further:

We have estimated that the group of drivers travelling at 65 km/h have approximately double the risk of being involved in a casualty crash as the group travelling at 60 km/h.

https://www.infrastructure.gov.au/roads/safety/publications/2002/Speed_Risk_3.aspx
(Page 14)

That figure – double the risk 5km/h over - assumes that drivers are not distracted and would have slower reaction times. Distraction, of course, has emerged as a major global road safety challenge.

2.4. Mobile Speed Camera (MSC) operations

On 19 November 2020, the NSW Government announced changes to the MSC program that would "roll out over the next 12 months[7]".

Changes include removing portable warning signage, striping of some MSC cars of their highly visible markings as part of a new covert strategy, and reducing the size of decals on the remainder of the marked fleet. It is understood these changes have taken effect. Other changes such as increasing the operational hours have not been implemented.

The following figures were produced by ACRS-NSW from publicly available data[8].

[7] https://www.transport.nsw.gov.au/news-and-events/media-releases/major-changes-to-road-safety-laws
[8] www.revenue.nsw.gov.au/help-centre/resources-library/statistics

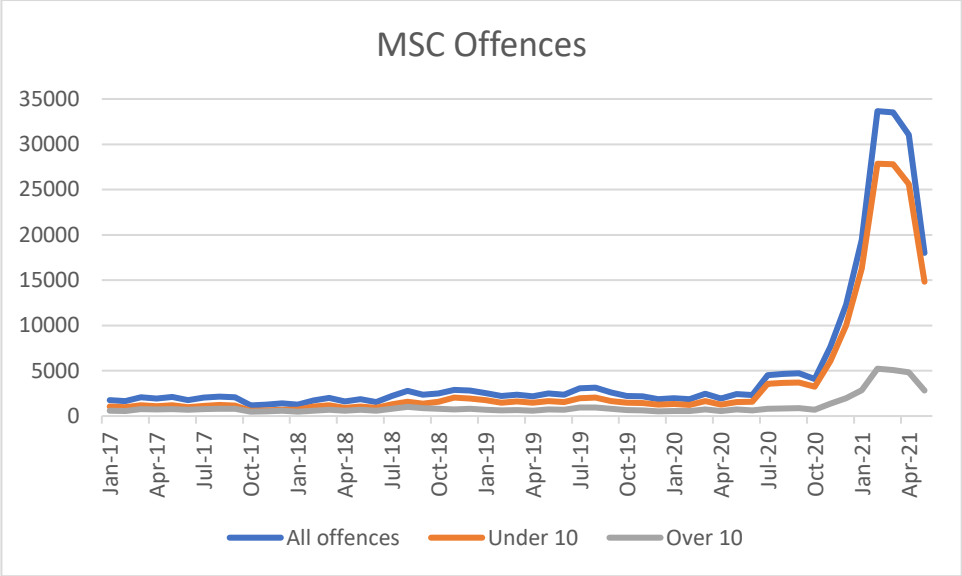

Figure 2: MSC detected offences Jan 2017 to Apr 21

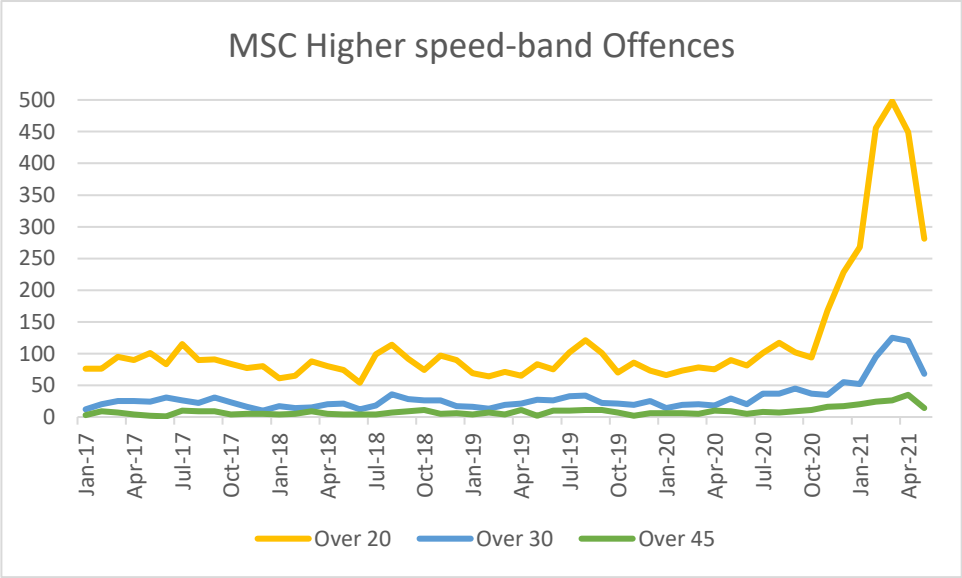

Figure 3: Higher level MSC detected offences Jan 2017 to Apr 21

Observations:

- MSC detected offences increased around October 2020, about the time changes to the program were announced by the NSW Government
- The overall increase in offences is largely due to offences in the Exceed Speed by Less than 10km/h band
- Offences within the higher speed bands have also been observed, increasing from 569 in the period Jan-May 2017 to 2,531 in Jan-May 2021
- In that same period, the number of motorists detected for offences resulting in automatic loss of licence (Exceed Speed by more than 30km/h and Exceed Speed by more than 45km/h) has quadrupled

It is understood that the number of hours MSC vehicles operate has not yet increased from the 7,000 per month figure. Without increasing hours, over 30,000 speeding offences are now being detected each month.

It appears, by virtue of the removal of advance warning signs and the changes to MSC vehicle markings, we are now able to see how big the problem of speeding is.

Remember, the University of Adelaide study found the relative risk of a crash approximately doubles for each 5km/h increase in free travelling speed. In a 60km/h zone, drivers detected in the lowest Exceed Speed band are travelling up to 10km/h over the speed limit, up to quadrupling their risk compared to drivers who obey the speed limit.

That speed related fatalities rose to 47 per cent of the total road toll last year[9] highlights the underlying driver behaviour issues that have afflicted our roads.

2.5. Warning Signs

In October 2018, the NSW Auditor General released its most recent report on MSC (https://www.audit.nsw.gov.au/our-work/reports/mobile-speed-cameras).

The Auditor General cited several reasons why the requirement to deploy warning signs limited the effectiveness of the MSC program.

> *A key aspect of providing an effective general network deterrence is creating a perception that speeding can be enforced anywhere at any time. Multiple warning signs have increased compliance at the sites and locations that MSCs currently operate but reduced the likelihood of achieving a general network deterrence - the main purpose of MSCs. This is because the use of signs reduces the perceived risk of detection, thereby limiting the ability of MSCs to moderate driver behaviour at other locations.*
>
> *The additional signage requirements have further limited the effectiveness of MSCs by making it more difficult to enforce speed limits in both traffic directions, because of the need to set up multiple signs on both sides of the road. They have made it more difficult to operate in school zones because of the need to change the indicative speed sign, in line with the change in speed limit, during the MSC session.*
>
> *There are also additional costs associated with the signs, including the time for their set up and removal, and additional site maintenance costs. Deploying signs also puts operators at risk of injury. Transport for NSW has not evaluated the use of signs to gauge their impact on the effectiveness of the MSC program since their implementation in 2012.*
>
> NSW Auditor General's Report to Parliament – Mobile Speed Cameras, Page 2

[9] https://roadsafety.transport.nsw.gov.au/downloads/road-safety-progress-report-2020.pdf

The Monash University Accident Research Centre (MUARC) Research Note, *Analysis to Estimate Road Safety Benefits of Expanding the NSW Mobile Speed Camera Program*, looked at operations in other jurisdictions and found that the presence of warning signs in advance of speed camera activity did not reduce crashes over the broader network:

> *Evaluation of the NSW fixed mid-block speed camera program (ARRB 2005) showed that crash effects of the program were localised to the area bounded by the signage either side of the camera consistent with the highly overt nature of the signage. It is likely that crash effects at the mobile camera sites are also likely to be localised to within 250m of the camera site reflecting the placement of the signage for identifying the sites.*
>
> Analysis to Estimate Road Safety Benefits of Expanding the NSW Mobile Speed Camera Program, Page 2

There are broader considerations and implications of having signage. The Work Health Safety legislation and codes of practice impose requirements upon Persons Conducting Business Undertakings (PCBU's) to eliminate risks to workers as far as reasonably practicable. Removing the requirement for the MSC operator to deploy and retrieve a sign that provides no road safety dividend removes a WHS risk.

2.6. Police enforcement and camera enforcement

Opposition to camera-based speed enforcement seems to be founded on the proposition that a binary choice must be made between police enforcement and camera technology. ACRS-NSW rejects this notion and supports the use of multiple platforms to combat speeding.

> *A combination of mobile roadside police checks together with automated stationary enforcement, including fixed and average speed or time-over-distance cameras has proved to be an effective tool in addressing speeding.*
>
> European Transport Safety Council: Reducing Speed in Europe, Page 18

Camera enforcement and effective owner-onus legislation have the ability to screen high volumes of vehicles. For their part, police have the mobility to cover more ground and use their greater numbers to conduct highly visible road policing operations targeting other behaviours such as alcohol and drug driving.

The Auditor General reported on the criteria used for locating and scheduling MSC's. One of the criteria is "location is difficult to enforce by Police using conventional methods" (Page 10).

Conventional methods include stationary traffic enforcement where a stationary police officer detects an offence (radar or lidar), and then the police officer, usually on foot near the police vehicle, signals for that person to stop.

New South Wales Police Force (NSWPF) Stationary Traffic Enforcement (STE) Standard Operating Procedures (SOP) governs the conduct of such activities. Sites used for STE are assessed against the criteria in the SOP. Police working on their own are subjected to additional safety requirements.

There are parts of the road network where STE operations are not possible, hence the MSC criteria regarding locations that are difficult for police to enforce.

Unfortunately, requirements for MSC operators to deploy warning signs discussed in the previous section were also preventing MSC operations from taking place, effectively preventing speed enforcement on large parts of the road network.

The Auditor General reported on 87 MSC locations deemed unsuitable in 2016 because of the requirement to place warning signs (Page 11).

ACRS-NSW hopes that the changes enacted late in 2020 may lead to greater synergies between NSWPF speed enforcement activities and MSC operations. The two activities are complementary not mutually exclusive.

2.7. MSC locations and deployments

The Auditor General's performance audit documented the shortage of suitable MSC sites that existed at the time of the 2018 report.

> *The Minister for Roads announced in June 2012 that MSCs would be operating at about 2,500 locations. However, there are currently only 1,024 locations approved for use, with 640 locations available in 2016 and a further 384 locations approved in early 2017. Of the 1,024 MSC approved locations only around 940 have suitable sites available, and only 650 were used in the six months to December 2017. This means there is a current shortfall of over 1,500 locations in respect of the Minister's commitment.*
>
> NSW Auditor General's Report to Parliament – Mobile Speed Cameras, Page 11

Scheduling was another issue raised by the Auditor General who was concerned that operations are too reliant on a small number of locations.

> *A scheduling system is meant to randomise MSC location visits to ensure they are not predictable. However, a relatively small number of locations have been visited many times making their deployment more predictable in these places. The allocation of MSCs across the time of day, day of week and across regions is prioritised based on crash history but the frequency of location visits does not correspond with the crash risk for each location.*
>
> NSW Auditor General's Report to Parliament – Mobile Speed Cameras, Page 1

The consequence of being overly reliant on a small number of sites is that it gives rise to the view that certain sites are being targeted to raise revenue. It is not helpful to the public image and integrity of the MSC program and road safety in general.

The MUARC research note estimates between 34 to 43 lives could be saved each year and some 600 serious injuries prevented. This however is dependent on expanding MSC operations to new locations and the use of a randomised schedule.

> *Whether these potential savings are ultimately realised through expansion of the program depends on a number of factors including the validity of the modelling assumptions and the way in which the program expansion is implemented.*

Implementation factors critical to realising benefits under the expansion include appropriate selection of new road lengths to enforce and the selection of actual sites within these to place the cameras. Adoption of the Victorian model will also likely involve the selection of additional sites for camera operations on the currently enforced road lengths. Appropriate scheduling of operations across existing and expansion sites using randomised scheduling within time and location is likely to be required to fully realise program benefits.

Analysis to Estimate Road Safety Benefits of Expanding the NSW Mobile Speed Camera Program, Page 10

2.8. Penalties and Disadvantage

Fixed penalties for traffic offences increase on 1 July each year by government decree. Demerit points are reviewed sporadically. In 2012, money raised from speed camera offences was hypothecated into a newly created Community Road Safety Fund[10]. The NRMA had been calling for the creation of such a fund for many years, as indicated from this 2003 reference.

NRMA notes the overwhelming proportion of speeding TINS are issued by speed cameras, and the majority of these are for speeds less than 15 km/h over the speed limit.

The speed camera program would have greater credibility and public acceptance, if all speed camera revenue were hypothecated to a special fund dedicated to road safety countermeasures.

https://www.walk.com.au/pedestriancouncil/page.asp?PageID=1193&print=Y

The penalties regime must now be considered in the broader context of *safe systems.*

Another recent demerit change is increasing points incurred for low level speeding offences involving novice drivers, so learner and provisional drivers lose their licence for any speeding offence. ACRS-NSW has previously expressed concern about financial hardship and disadvantage which can be perpetuated through exclusion from authorised driving (Staysafe Inquiry: Support for rural and regional learner drivers).[11]

Options for driver education programs could be examined. The benefits of offering education have been validated through programs such as the Blacktown City Council Child Seat Program[12].

Where people facing financial disadvantage and hardship own a motor vehicle, how old is that vehicle likely be? Older vehicles lack modern safety features that can prevent crashes

[10] https://www.transport.nsw.gov.au/newsroom-and-events/media-releases/community-road-safety-fund-legislation-passed-into-law

[11] https://www.parliament.nsw.gov.au/ladocs/submissions/72051/Submission%2041.pdf

[12] https://www.dailytelegraph.com.au/news/nsw/sydney-cops-heartfelt-move-from-seatbelt-fines-to-free-baby-seats/news-story/f62d91fc8ccc5ab67d3103a916338697

and reduce the severity of injuries not just for occupants but for pedestrians, bicycle riders and motorcyclists. As outlined in the Introduction, costs from serious injury crashes far outweigh speeding fine revenue.

The payment of a penalty notice or a Court-imposed fine represents an opportunity cost, particularly for those of limited means. Perhaps criteria could be established where money paid towards traffic fines is held by the Community Road Safety Fund and credited towards the purchase of a newer, safer vehicle.

3. Case Studies

3.1. Appin Road Bradbury

Bradbury is in the City of Campbelltown. This X on the map depicts where is MSC is regularly positioned, enforcing southbound traffic (Image 1).

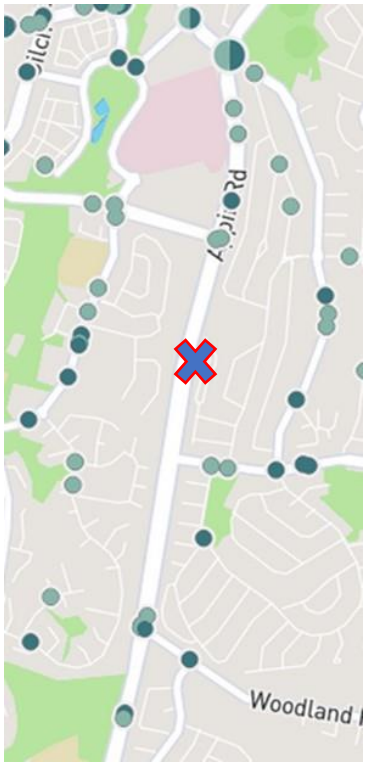

Image 1: Appin Rd

The area is street lit, dual carriageway arterial, two lanes in each direction separated by a grass median, with a sign-posted 80km/h speed limit. Motorists pass three sets of 80k/h signs in the kilometre immediately prior to the area used by the MSC.

A flat stretch of road, there is clear visibility for traffic in both directions and this has made the MSC site susceptible to northbound headlight flashers who warn southbound motorists of the presence of the MSC car.

The crash history of the area, available from the Interactive Crash Statistics page on the CRS website, is depicted by the dark dots (serious injury) and the lighter dots (moderate injury). That part of Appin Road has had no recorded fatalities in the period of the available data (2015 to 2019).

However, five kilometres to the south, the road is undivided single carriageway, non-street lit, and is widely known for fatal and serious crashes and calls for upgrades. This strongly suggests that motorists are slowing down in the area known for having visible MSC and speeding again soon afterwards.

Conclusions:

- The changes announced in October 2020 to MSC operations has made the site less vulnerable to headlight flashers
- There has been an increase in offence detections despite an abundance of 80km/h speed limit signs immediately prior to the MSC location (Table 5)
- The presence of warning signs and highly visible MSC vehicles at the site for many years would appear to have delivered no lasting educational value

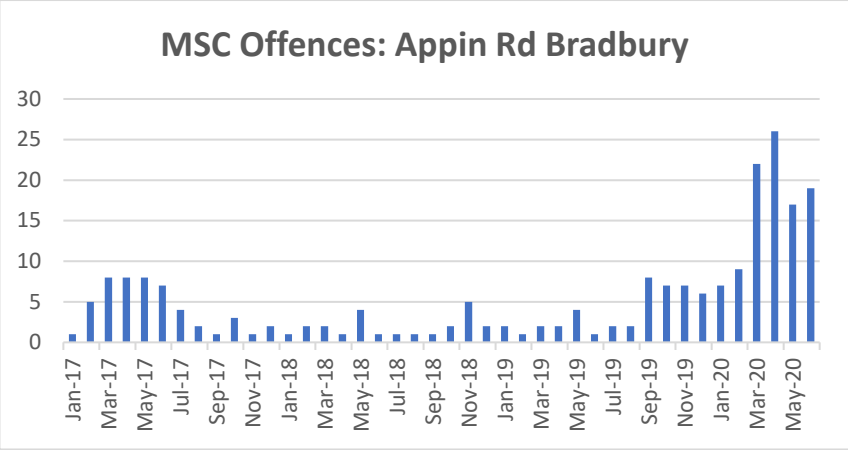

Table 5: MSC detected offences Appin Rd Bradbury

3.2. Public information on MSC locations

Agencies responsible for speed camera programs make lists of locations available to the public on their websites.

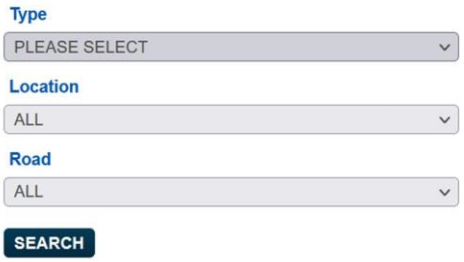

Image 2: NSW CRS website

In NSW, the CRS website (Image 2) features cumbersome dropdowns where the public can search for the type of camera, the suburb and road. Beyond official auditing requirements, the site offers little benefit to the public. A list of fixed camera locations is downloadable via the TfNSW open data website.

Image 3: SA Police

South Australia Police, the responsible agency in that state, publishes lists, in advance, naming the roads where MSC will be operating (Image 3). They are the only Australian jurisdiction to do so.

Separate lists are available for country and metropolitan areas.

In Victoria, www.camerassavelives.vic.gov.au allows users to view a map of all fixed camera sites (Image 4). Even camera test certificates are available. For mobile sites, only a downloadable spreadsheet is available.

Image 4: Victoria

Western Australia provides the list of MSC locations with the reason why they have been selected, being the location of fatal crash, public complaints, school zone, or high-speed observations.

Social media pages publish unofficial lists of camera locations and Apps allow road users to warn others of the locations of active MSC or police operations. The MUARC Research Note is silent on the publishing of MSC locations and taskings via official websites.

Conclusions

- Such is the culture of speeding that MSC programs will continue draw criticism regardless of the findings of this or future inquiries or the lives saved
- This case study shows it is possible to develop engaging tools that allow the road user to understand why MSC sites are selected and where they are located
- Combining the best features from throughout Australia discussed in this case study would represent national best practice and be a useful weapon in fighting myths and disinformation about the MSC program and speeding in general

4. Recommendations

Globally, a measure of road fatalities is *deaths per 100,000 population*. This measure assists in comparing countries of varying means.

In a recent report, *Road Trauma in NSW – a snapshot* (March 2021), Centre for Road Safety reports NSW at 4.4 road deaths per 100,000 people as of 2019.

This places NSW, and Australia (4.7 deaths per 100,000) as one of the better performing places. Not quite as good as countries like Norway and Sweden, but better than our New Zealand neighbours, some European countries, and the United States.

Regional roads, part of the Terms of Reference for this Inquiry, do not fare so well in terms of safety.

The snapshot highlighted how country NSW has a fatality rate of 8.8 deaths per 100,000 people. This is higher than New Zealand and more in line with developing countries.

Random Breath Testing was successfully introduced despite opposition from elements of the community. At 0.05 the risk of a crash is doubles compared to being at zero[13].

The risk doubles just like low level speeding.

In both cases, the government decided it needed to do something to protect people.

The Second United Nations Decade of Action for Road Safety has just commenced, and new Australian and NSW road safety strategies are commencing in 2021-22. In that context, ACRS-NSW makes the following recommendations:

[13] https://www.nrspp.org.au/resources/debunking-the-myths-around-low-level-speeding/

4.1. *ACRS-NSW supports the 2020 changes to the MSC program*

Based on the contents of this submission, in particular sections 2.2 and 2.3, it should come as no surprise that ACRS-NSW supports the MSC program and the 2020 changes.

Barely six months have elapsed since the changes to MSC operations were announced. Whilst penalty notice data and various criticisms of the MSC program now appear in the media on a regular basis, insufficient time has elapsed to make any informed judgements regarding the road safety impact of the operational changes.

At least two full years of data would be required to fully assess the impact of the changes, remembering 2020 road trauma and traffic volumes were affected globally by COVID-19.

Indeed, given the time required to accumulate data, prepare academic-level research papers, and submit them for peer review, meaningful research into MSC operations should not be expected until 2023-24 at the earliest.

4.2. *Additional MSC locations are needed*

If indeed it is the government's position that speeding motorists can "be caught anywhere anytime[14]" more MSC locations are required.

Both the NSW Auditor General and the MUARC Research Note have called for the commissioning of additional MSC locations and improved rostering practices.

An over-reliance of a limited number of sites has allowed criticism of the MSC program to fester.

Collaboration between TfNSW and NSWPF is needed to ensure enforcement is taking place over the whole network.

4.3. *Public education measures*

This submission has provided examples of the aggressive counter-road safety campaign currently being waged against the MSC program. There are measures road authorities can take to seize the narrative.

For example, that road trauma costs NSW $8 billion annually needs to be reinforced as this too affects "government coffers".

The Draft National Road Safety Strategy talks about leveraging road safety from outside the traditional government agencies[15].

[14] https://www.transport.nsw.gov.au/news-and-events/media-releases/major-changes-to-road-safety-laws
[15] https://www.officeofroadsafety.gov.au/nrss/resources-fact-sheets/the-social-model-approach-to-road-safety

What should employers and trade unions do to help prevent over 300 deaths and 10,000 hospitalisations from occurring each year on NSW roads? What can sporting and other community groups do?

Road safety is a public health issue. With COVID-19, the other great public health issue of our time, it is the advice of the Australian Government advice to get vaccinated.

> *When you get vaccinated, you are helping to protect yourself and helping to protect the whole community*[16]

By not speeding, you too are helping to protect yourself and helping to protect the whole community.

5. Conclusion

ACRS supports the MCS program in NSW and the changes made in 2020 to remove warning signage. We would like to emphasise the following points:

- Speeding, including low-level speeding, greatly increases the chances of crashes, serious injuries and fatalities
- Warning signs on mobile speed cameras reduce their effectiveness to the immediate area
- More time is require to fully assess the impact of the changes on road safety
- Additional MSC locations are needed
- Public education campaigns would be helpful

ACRS appreciates the opportunity to contribute to this Inquiry. Please do not hesitate to contact us should you require any additional information.

Dr Ingrid Johnston
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Australasian College of Road Safety

Duncan McRae
Chair
ACRS-NSW Chapter

9 July 2021

[16] https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/getting-vaccinated-for-covid-19/why-should-i-get-vaccinated-for-covid-19

Appendix A: About the Author

Michael Timms retired from New South Wales Police Force in January 2020 following a 33-year career. Mr Timms has over three decades experience in Highway Patrol and road policing and was a member of the Command Leadership Group, Traffic and Highway Patrol Command.

He was a trained in the use of police vehicle mounted speed cameras and managed the deployment of camera cars over many years, incorporating their use in road policing strategies.

He holds a Bachelor of Professional Studies (Policing) UNE, majoring in road safety studies and completed the Monash University Road Safety Leadership Program in 2016.

He has written and presented papers at road safety conferences in Australia and overseas. He has been a member of the Australasian College of Road Safety for 11 years. In 2020, joined the ACRS-NSW Chapter Executive Committee and is the current Treasurer.

Australasian College of Road Safety – NSW Chapter https://acrs.org.au/chapters/nsw/

This submission has been compiled using the template on the NSW Parliament website.

Appendix B: Evidence

The information in this section is taken from global, national and state road safety strategies and similar evidentiary sources. The information has been restricted to post-crash care and provides support for the recommendations made by ACRS-NSW.

Debunking the Myths of Low-Level Speeding with Professor Ian Johnson AM

https://www.safeworkaustralia.gov.au/media-centre/debunking-myths-around-low-level-speeding, 2018 Webinar by the National Road Safety Partnership Program

Extracts from the Transcript

And then the critical part of this controversy is that most folk exceed the speed limit by small amounts nearly every time they get out there, and nothing bad happens. In other words our everyday experience is that we don't get into trouble. And this is where our dilemma comes into a very sharp focus.

There are not very many people who speed at huge margins over the speed limit. They are a higher extreme risk, because we saw from the Adelaide research anything up to 30 times for 30 k's over the limit. So it's a dramatic safety problem, and when a crash occurs with someone doing that speed, we see it on the television every night, we see it in the newspapers every day. So it always gets the attention. It's dramatic. But it's still relatively rare. But there's a very large number of people who are doing low range speeding offences, and the risk, it may only be two or three times what it is if you're at the limit, but because it's happening all of the time it becomes a very significant safety problem.

Now the interesting thing about taking a health prevention view of road safety is that you soon realise that where you have a small risk spread across an entire population, you have to get the population to change to prevent the bad outcomes that you don't want. An example from outside the road safety field is inoculation of children. Now that's become quite a controversial issue at the moment too. Everyone used to inoculate against things like whooping cough and the like, and these childhood diseases basically disappeared. Now people are questioning whether they have the right to not worry about anybody else but just take the very small risk that their own child might have an adverse reaction, and as the inoculation rates drop, so these diseases are beginning to reappear.

So back into our field, just take a look at why we've set .05 as our blood alcohol limit for drink driving. Well the same kind of case control research that has been done with the speeding as in Adelaide has been done several times in different countries around alcohol.

At what point does alcohol start to seriously affect your performance on the road? And the answer is at .05 the risk of a crash is about double what it was if you had no alcohol at all. So at double, the government has said 'Well it's about time we take some role in protecting people'. So it's kind of similar.

How many lives could be saved by speed limit reductions?

Media Release from the Australasian College of Road Safety, 19 May 2021

https://acrs.org.au/newsroom/how-many-lives-could-be-saved-by-speed-limit-reductions/

During this week, that marks both the 6th UN Global Road Safety Week and Australia's National Road Safety Week, the Australasian College of Road Safety (ACRS) calls attention to the many impacts that excessive speed causes on our roads.

With more than 1,400 people killed and 50,000 suffering major injuries across Australian and New Zealand roads each year the economic, societal, and personal cost of road trauma is staggering. Globally, road trauma results in the deaths of 1.3 million people every year, or one person every 24 seconds.

In high-income countries, such as Australia and New Zealand, 1 in 3 road deaths can be attributed to speed. It is estimated that 40-50% of people drive above the speed limit. For every 1 km/h increase in speed there is a 4-5% increase in fatal crashes. Pedestrians are at considerably greater risk of death when impact speeds are above 30 km/hr but evidence shows that the risk of death and injury reduces considerably when speeds are lowered.

ACRS CEO, Dr Ingrid Johnston stated "We have evidence from around the world that shows a significant reduction in road injuries and deaths. When Toronto, Canada reduced speed limits from 40 to 30 km/hr in 2015 they saw a 28% decrease in road crashes, and serious and fatal injuries were cut by two thirds."

"We have seen reductions in road casualties when speed limits were reduced in many cities and countries, from Tanzania to Colombia, Bogota to Bristol, UK. There is no doubt that lower speed limits can save lives." Dr Johnston continued.

Recent trials of 30 km/hr speed limits in Australia and New Zealand have seen similar results. Christchurch City reduced the speed limit in the central city area from 50 km/hr to 30 km/hr in 2016. This reduction saw a 36% decrease in reported injuries. Yarra City Council became the first Australian council to trial a 30 km/hr speed limit when it introduced the reduction in parts of Fitzroy and Collingwood in 2018. A year later, at the conclusion of the trial, the Council recommended that the reduced speed limits become permanent.

"We know that reducing speed decreases the risk to road users. We encourage the review of speed limits, particularly in urban areas, to assess how lower speeds can help reduce the number of people killed and injured on Australian and New Zealand roads." Dr Johnston concluded.