M03/7286

Mr Paul Neville MP
Chair
Transport and Regional Services Committee
House of Representatives
Parliament House
CANBERRA ACT 2600

Dear Mr Neville

Please find attached a submission prepared by the Roads and Traffic Authority (RTA) to the House of Representatives Transport and Regional Services Committee *Inquiry into National Road Safety*. The submission includes a particular emphasis on the abolition of the voluntary code of practice on motor vehicle advertising. Submissions on other road safety initiatives are also appended.

The attached submission covers the following road safety initiatives:

- Abolition of voluntary code of practices on motor vehicle advertising
- Continued financial support for the Federal Blackspot Program
- Digital Fixed speed Camera Program in NSW
- Australian Design Rule (ADR) for alcohol interlocks
- ADR and Voluntary Design Standard (VDS) for daytime running lights
- Federal funding for ANCAP
- Federal tax review of four wheel drive vehicles.

Yours sincerely

Paul Forward

Paul Forward
Chief Executive

Advertising of motor vehicles

What is the problem?

In recent years in NSW and the rest of Australia, there has been an explosion of motor vehicle advertising that depicts dangerous and illegal driving behaviour. This type of advertising typically shows apparently ordinary people committing dangerous and irresponsible behaviour on public roads. The purpose of the advertising is of course to sell more cars / trucks / motorcycles by associating them with the thrill and fun of high speed, fast cornering, and reckless and carefree driving behaviour.

Unfortunately, by taking this approach, the advertisers also send the message to the community that it is not only acceptable, but desirable or 'trendy' to engage in the dangerous and illegal behaviours that are shown. It 'normalises' a range of behaviours that are very definitely adverse to road safety.

Some would argue that movies for years have shown even more extreme dangerous and illegal driving behaviour and that the advertisements are very responsible and compliant with the law by comparison. However, there is a clear distinction between the behaviour of the created characters in action movies and the behaviours of apparently ordinary people on ordinary public roads as usually shown in car advertising. Members of the motoring public are more likely to model their own behaviour on the latter.

So, while the NSW and other Australian Governments are spending substantial amounts of their constrained public monies on educating the public on safe driving behaviour and on enforcement of road behaviour, motor companies are spending vast amounts more on messages that undermine these road safety efforts. It is not unusual, for example, to see an anti-speeding advertisement on television followed over the next few hours by a barrage of car advertisements that implicitly or explicitly promote speeding.

It is not mere surmise on the RTA's part that car advertising undermines road safety education. Research recently reported by Professor Simon Chapman of the School of Public Health, University of Sydney, clearly demonstrated that speed is one of the main features identified by young drivers (17-35 years) in a range of actual car television advertisements[1]. More than 90% of young drivers in study

[1] This research involved showing actual Australian car advertisements to groups of viewers and asking to them to complete rating scales on various aspects of what they saw.

identified speed as very obvious in advertisements for Holden, Audi and Lexus. More than 80 % rated speed as very obvious in Mazda, Lexus, Saab, Falcon and Honda advertisements.

The FCAI Code of Practice

As members of the Committee will be aware, the Federal Chamber of Automotive Industries (FCAI) developed its voluntary Code of Practice for advertising of automobiles when it came under strong pressure from the Federal Government and many state governments, including NSW.

The Code was agreed to by the Australian Transport Council (ATC) and came into effect for new advertisements from August 2002. The Code came into effect for all automobile advertisements from November 2002. ATC agreed that the Code would be monitored.

The NSW position on the FCAI Code when it was presented to ATC was that it was flawed and weak. It compared poorly with the British, New Zealand and draft Australian Transport Safety Bureau (in conjunction with the States) Codes. Nevertheless, NSW along with other jurisdictions voted to give the industry the opportunity to make the Code work.

Compliance with the Code is enforced by the Advertising Standards Board (ASB). Complainants draw the Boards attention to advertisements that they feel violate the Code. The Board reviews the advertisements and where it considers an advertisement violates the Code, requires the advertiser to withdraw the advertisement.

What has the RTA been doing to counter the offending advertising material?

The RTA has been writing letters to the Advertising Standards Bureau complaining about advertisements that violated the spirit or the letter of the Code since it came into force. As required by the Bureau, the RTA set out the reasons why it believed that the subject advertisements had violated the Code.

The results of the RTA's complaints to the ASB are as follows:

- 54 complaints have been lodged
- 2 of our complaints have been upheld[2]
- 18 are awaiting a decision.

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[2] Although the ASB agreed to require the withdrawal of one of these advertisements from cinemas, it has not required the withdrawal of exactly the same material from Nissan Australia's website and similarly has not required a much longer version that Nissan sells to the public on a compact disc to be withdrawn.

In addition, the RTA has been participating in the Monitoring Group that has been monitoring the automobile industry's compliance with the Code and the performance of the ASB in enforcing it. This Group consists of members of several roads authorities and a representative from the Australian Transport Safety Bureau.

How well are the Code and its enforcement working?

The NSW position is that the Code has not been effective in controlling the content of automobile advertising that is damaging to road safety.

Both the flawed, weak nature of the Code itself and the weak enforcement of the Code by the ASB had contributed to this failure.

Although there are many aspects of the Code and the way it is enforced that are at fault, one aspect of the Code and the way the ASB uses it are the main reason the failure. Oddly, this serious problem stems not from provisions in the Code itself, but from the Explanatory Notes to the Code. Specifically, under the heading of 'Context' the Explanatory Notes state:

> ***While acknowledging the legitimate use of motor sport, fantasy, humour and self-evident exaggeration in creative ways,*** *the FCAI asks advertisers to be mindful of the importance of road safety and to ensure that advertising for motor vehicles does not contradict or undermine efforts to achieve improved road safety outcomes in Australia.*

The clause in bold is used by the advertisers and the ASB to excuse virtually any content in advertisements, regardless of the provisions of the Code itself. The RTA would be happy to show the Committee examples if it wishes to examine this matter in depth.

The NSW Government's recommendation

The NSW Minister for Roads, the Hon Carl Scully MP, put out a media release on 25 September (copy attached) commenting on the Code and its ineffectiveness to date. In this release, he made the NSW Government's position very clear: The voluntary Code should be replaced by a mandatory code, administered by the Federal Government, that would incorporate tougher controls. It may be appropriate to have advertisements assessed by the Government before being allowed to go into the media.

National black spot program

Target

The Program stands alone from the other sources of Federal road funding by only supporting projects that are identified on State and local roads. It does not fund projects identified on National Highways or RONI's where work is currently being undertaken. By concentrating on State and local roads, it has had a significant impact on reducing road trauma on those sections of the road network in NSW. With the majority of crashes occurring on the local road network, the National Black Spot program usually delivers up to 60% of its funding to Local Government to treat identified sites. There is also a legislative requirement that at least 50% of all funds are allocated to roads in regional areas. This gives Regional Councils access to a significant source of road safety funding.

The Program concentrates on casualty crashes and all funded projects must meet the current black spot criteria of at least 3 casualty crashes within the last five years of crash data. It also allows for the treatment of black lengths of road by funding sections that meet a crash rate of 0.2 casualty crashes per kilometre per year over the last five years of crash data. The application of these criteria means that the program has been credited with saving numerous lives on local and State roads since its inception in 1996/97.

The National Road Safety Strategy and Two Year Action Plan has a commitment to reduce casualty crashes by 40% by the year 2010. The Black Spot program provides a major component of this commitment as it focuses on sites where high numbers of casualty crashes are occurring.

Community Benefits

The Bureau of Transport Economics (BTE) 2001Post-Evaluation Study of the first three years of the program showed a remarkable economic return of $14 for every dollar spent. There would be no other source of Federal funding that could be shown to generate this level of economic return to the community. This BCR of 14:1 should justify the continuation of the program as a stand alone source of funding.

Administration

The administrative costs of implementing the program are largely met by the States, and this current situation works well. It would be difficult for DoTaRS to deal directly with Councils and undertake the same level of analysis, site

identification and administration from Canberra. An anomaly could arise if a Council nominated a traffic signal site where a local road intersected with a state road and Canberra allocated funding. The installation of traffic signals at the site may not be supported by the RTA and the project would then not go ahead. The current system of administration gets around this.

The amalgamation of the National Black Spot program with all other sources of Federal Road funding would likely lead to reduction of spending on safety throughout the State with its allocation being swallowed up by the much larger Infrastructure funds.

The current National Black Spot Program specifically targets road safety by fixing those sites that are identified as having casualty crash problems and therefore saving lives and reducing injuries. This commitment could be lost with a change in the Federal funding structure.

Evaluation of fixed speed cameras in NSW

Introduction

It is well known and accepted in the road safety community that excessive speed is a major contributor to crashes, particularly severe crashes. There are several reasons for this: higher speeds give drivers less opportunity to react to developing hazardous situations; there is greater likelihood of loss of control; stopping distances are greatly increased; other road users are more likely to underestimate the vehicle's speed, higher impact speeds mean much greater likelihood of injury or death.

Because of the prominent role of excessive speed in crash causation and crash severity, the State's road safety strategy, Road Safety 2010, places a strong emphasis on reducing excessive speed.

Automated enforcement technology has some advantages over relying completely on Police on-road enforcement. Camera enforcement technology can operate 24 hours a day 365 days a year and is not hampered by occupational health and safety considerations in relation to working on a hazardous section of road (which is often the very place that speed enforcement is needed).

Promising road safety outcomes reported by some European countries and Great Britain gave the RTA confidence to implement a fixed, digital speed camera program in NSW.

Based on the experience in Europe and Great Britain, the policy decision was made early on to adopt strict criteria for the installation of the cameras. This would mean that cameras would be installed at blacklengths of road with a demonstrated speed and crash problem. It was also decided that all cameras would be clearly signposted to maximise the speed compliance through the blacklengths. The only exception to these criteria was for road tunnels, where a high-speed crash could cause major problems for emergency services access.

It was hoped, of course that the cameras would create a halo effect, but the strategy was to improve the safety of a well-defined length of road that satisfied the criteria.

The first fixed, digital speed cameras were installed in NSW in late 1999.

Recently, the State's fixed speed camera program has been expanded to include a trial of school zone speed cameras at 10 primary schools. These are the subject of a separate evaluation and are not discussed further in this paper.

The RTA made the decision early on that a comprehensive, long-term evaluation was needed. In July 2000, ARRB Transport Research was appointed to conduct the evaluation, which consisted of several distinct components: measured speeds pre-installation and at specified time intervals post-installation; crash records three years pre-installation and two years post-installation; four waves of community questionnaire survey on knowledge, attitudes, beliefs and reported behaviours of drivers in relation to the fixed speed cameras and speeding. A separate paper covers the outcomes of the community questionnaire surveys.

Method

Camera site selection and configuration

Camera sites are selected according to strictly applied speed and crash criteria. That is, camera sites are speed and crash blacklengths (see Appendix 1).

All cameras were in operation full-time, except for breakdowns and servicing. That is, there was no rotation of camera modules around a larger number of sites as is done in some jurisdictions.

All cameras operated uni-directionally (ie they monitored only traffic travelling away from the camera position) and all sites had very prominent camera warning signs that also displayed the prevailing limit (see Appendix 2).

Camera sites included in the evaluation

A representative sub-set of 20 sites was selected for the speed and crash evaluation components. Sites included in the evaluation included roads with diverse configurations (number of lane, divided/undivided etc), speed limits, traffic volumes and roadside development.

No variable speed limit sites were included in the evaluation.

Speed surveys

Pre-installation speed surveys were conducted within the camera-length at all treatment sites. Annual RTA speed survey data were used for 33 control sites. The purpose of the control sites was to estimate the general trends in speeds during the evaluation period.

These speed surveys were 24 hours a day 7 day surveys using automatic traffic counters. Post-installation surveys were conducted at 6, 12 and 24-month intervals after camera commissioning.

Statistics were derived for both directions at each site and summarised across all sites with a given speed limit.

60 km/h	12 sites
70 km/h	2 sites
80 km/h	2 sites
90 km/h	1 site
100 km/h	3 sites

The details of the analysis method were developed and undertaken by Camcomp Partners Pty Ltd.

A log-normal modelling analysis was used to assess changes in mean speed. The model compared the pre-surveys with the 12 months post-surveys; the pre-surveys with the 24 months post-surveys; camera with control sites; and the interaction between camera and control sites. The latter interaction measures whether the change in means speeds was greater at the camera sites was greater than at the control sites. The net change measures the effect of the speed cameras on the speed parameter. A test of statistical significance of the net change was performed to indicate whether the observed change was a real change in speed distribution. The key output was the estimated reduction in mean speed at the camera sites relative to the control sites.

An analysis was also conducted of proportion of vehicles exceeding the speed limit and those exceeding the limit more than 10, 20 and 30 km/h. A Poisson regression model was used for this analysis. The factors used in the model were the same as for the analysis of mean speed. The key output was the estimated percentage net reduction in the speed distribution parameter at the camera sites relative to the control sites.

Crash data analysis

Data were prepared for recorded crashes in the camera length for the three years before camera installation. This was compared with recorded crashes during the two years after camera installation. 'Recorded crashes' includes any crash where a vehicle was towed-away or a person was injured or killed.

As the installation of the cameras in the evaluation was staggered over a 15-month period, the three-year pre-period and two-year post-periods were differed across camera sites.

Control sites were selected for the camera sites. For cameras located in the Sydney region, crashes occurring elsewhere in the same local government area (LGA) were used as controls. Where a camera was on the border of two LGAs, crashes in both were used as controls.

For cameras located outside of the Sydney region, the control crashes were those on specific control lengths chosen by the RTA as having the same speed zoning and other relevant characteristics as the camera length.

Crashes were analysed by severity. The categories are 'towaway', 'injury', 'fatality', 'casualty' (injury and fatality) and 'all crashes' (towaway, injury and fatality crashes).

Results

The results of the evaluation are highly detailed and the final report has not yet been received from the contractors. The results reported in the following tables are therefore confined to the main findings.

Table 1: Changes in mean speeds pre-installation compared with 24 months after installation

Speed zone	Change km/h	Stat significance
60	-6.2	<0.0001
70	-4.3	0.0577
80	-9.2	<0.0001
90	-6.7	0.0005
100	-2.7	0.0211
ALL	-5.8	<0.0001

Table 2: Percentage change in proportion of vehicles exceeding the speed limit pre-installation compared with 24 months after installation

Speed zone	% Reduction	Stat significance

60	86.5	<0.0001
70	71.3	<0.0001
80	98.0	<0.0001
90	92.5	<0.0001
100	67.7	<0.0001
ALL	85.6	<0.0001

Table 3: Percentage change in the proportion of vehicles exceeding the speed limit by more than 10 km/h pre-installation compared with 24 months after installation

Speed Zone	% Reduction	Stat significance
60	72.3	<0.0001
70	57.7	<0.0001
80	87.8	<0.0001
90	72.4	<0.0001
100	60.7	<0.0001
ALL	71.8	<0.0001

Table 4: Reductions in crashes

Crash type	Reduction %	Stat significance
All reported crashes	19.7%	(0.0001)
Towaway crashes	16.9%	(0.0116)
Injury crashes	20.1%	(0.0164)
Casualty	22.8%	(0.0051)
Fatality	89.8%	(0.014)

Discussion

Vehicle speeds

Table 1 shows that the cameras have been very effective in reducing mean vehicle speeds. These reductions at 24 months after the cameras were installed were statistically significant (at the 0.05 probability level) in all speed zones except the 70 km/h zone (where the reduction only failed to reach statistical significance by a marginal amount) and the reduction was also significant across all speed zones.

Other data also show that the variability of vehicle speeds from the mean reduced markedly which is also conducive to safety.

With the size of the reductions obtained, coupled with the reduced variability of vehicle speeds, it would be reasonable to expect a marked improvement in safety around the cameras.

Table 2 shows that at 24 months after the cameras were installed, there was a very pronounced reduction in the proportion of vehicles exceeding the speed limit in all speed zones. These reductions were highly statistically significant in all speed zones and overall.

Table 3 shows that at 24 months, there was also a very pronounced reduction in the proportion of vehicles exceeding the speed limit by more than 10 km/h. These reductions were highly statistically significant in all speed zones and overall.

A very similar pattern of results was obtained for reductions in the proportion vehicles exceeding the speed limit by more than 20 km/h and by more than 30 km/h.

It is worthwhile pointing out that, although for reasons of brevity the results presented here only show the results at 24 months after the cameras were installed, the pattern of results was very similar at 6 months and 12 months after the cameras were installed. That is, the improvements were achieved quickly and were sustained up to the final speed surveys at 24 months.

Crashes

The ultimate focus of this evaluation is, of course, whether the cameras have been successful in reducing crashes, personal trauma and suffering, and crash-related financial costs to the community.

The results show that the cameras have been very effective in reducing crashes, particularly the more severe crashes resulting in injury or death. Thus although there was a pleasing reduction of about 17% in towaway crashes, even greater reductions were obtained for more severe crashes. Injury crashes were reduced by about 20%, casualty crashes (injury and fatality combined) were reduced by 23% and fatality crashes were reduced by 90%. That one fatality was almost two kilometres from the camera and was not speed-related. The reduction over all crash types was 20%. All of the reductions mentioned here were highly statistically significant.

The reduction in fatality crashes is remarkable: in terms of raw data, it involved 21 fatalities in the three years before the cameras were installed to 1 fatality in the two years after the cameras were installed. It should be noted that fatalities were not a criterion for selection of the camera sites in the first place.

The pattern of crash results, with all crash severities reduced but with much greater reductions at the higher levels of severity, are very much as could be predicted from reducing speeds. That is, both in theory and in various other studies it has been shown that reduced speeds tend to reduce crashes of all types. But because the amount of impact energy is reduced in such crashes as still occur, injuries and death are substantially reduced.

These reductions in crashes, particularly the reductions in casualty crashes, indicate that the fixed speed cameras were very successful in achieving their purpose as employed in NSW—to reduce crashes in defined blacklengths.

Conclusions

Fixed, digital speed cameras have been employed in NSW as a blacklength treatment. That is, they have been installed where a history of speeding and

crashes have been identified, according to strict criteria. Their presence has been clearly signposted and otherwise advertised with the aim of deterring speeding over specific lengths and therefore improving the safety of road users along those lengths.

The results of the comprehensive evaluation reported here show that they have been very effective in NSW in terms of speed reduction and speed variability and, most importantly in terms of crash reduction. Moreover, the greatest crash reductions were achieved for the more severe casualty crashes. The dramatic reduction in fatality crashes was particularly pleasing.

It is likely that even greater road safety benefits could be obtained from the cameras if they operated in bi-directional mode. NSW is in the process of converting many of its cameras to operate bi-directionally.

APPENDIX 1

General criteria

The lengths of road within which a camera site should be considered must demonstrate the characteristics of Criteria 1, 2 and 3a or 3b. These are typically 1 to 2 km long. The crash data used for site selection relate to the previous 3 years. The speed data used for site selection were 24 hours a day 7 day surveys using automatic traffic counters.

Crash rates:

Road Type	Criterion 1 Crash rate (per hundred million vehicle kilometres)	Criterion 2 Injury crashes per kilometre per year
Rural	>40	>0.5
Urban	>80	>0.5
Divided (Freeway / Motorway) *	>25	>0.5

Speed:

Criterion 3a Speed profiles which show 85th percentile speeds are in excess of 10% above the posted speed

OR

Criterion 3b mean speeds are in excess of the posted speed.

Supplementary rural criteria

Rural crash rates:

Road Type	Criterion 1 Crash rate (per hundred million vehicle kilometres)	Criterion 2 Injury crashes per kilometre year
Rural	>40	>0.5

Note: Minimum AADT of 2000 vehicle per day

Speed:

Criterion 3a The 95th percentile speed is in excess of the speed limit plus 10%

OR

Criterion 3b The 85th percentile speed is greater than the posted speed limit

Site alignment criteria:

The blacklength is to comprise a curve or a series of curves of a radius that warrants advisory speed signs with enhanced delineation and advisory speed signs displayed.

APPENDIX 2


SPEED CAMERA
24 HOURS
60


SPEED CAMERA
AHEAD
60


HEAVY FINES
LOSS OF LICENCE
60

Australian Design Rule (ADR) for Alcohol interlocks.

Mandatory alcohol interlocks in all new vehicles has been referred to the Minister at the Australian Transport Council for investigation.

Australian Design Rule (ADR) and Voluntary Design Standard (VDS) for Daytime running lights.

The RTA supports the adoption of the ADR requiring the mandatory fitment of daytime running lights (DRL). However mandatory introduction into new model cars could take 5 years with a further period required for introduction into existing models

As an interim measure agreement could be sought from manufacturers for the voluntary introduction of DRL (as they do in Europe and the USA); a consortium of government and industry groups could be a mechanism to use fleet purchasing policies accessing only vehicles that provide DRL.

Federal funding for ANCAP.

The Federal Government has recently withdrawn minor contributions to ANCAP (for pedestrian testing). It should be noted that the European vehicle manufacturers have acknowledged that the EuroNCAP program has resulted in their vehicles achieving 5 and 4 star ratings instead of a 1.5 to 2 star rating which would have been if manufacturers had only conformed to regulations (equivalent to Australian Design Rules). It is anomalous that the European governments recognise the benefits of NCAP and the Australian Federal Government does not. The ANCAP is a far more effective tool to drive improved road safety outcomes by influencing consumers than the complex and lengthy ADR process.

Federal tax review of four wheel drives (4WD).

The current import duty (tariff) for four wheel drive vehicles is 5% compared to the 20% tariff for passenger vehicles. The tariffs should be reviewed to discourage the purchase of medium to large four wheel drive vehicles as some of these are not as safe and have generally higher fuel consumption. Federal government policy is

that tariffs on all vehicles are being reduced and will be the same in the near future.