



LEGISLATIVE ASSEMBLY OF QUEENSLAND

PARLIAMENTARY TRAVELSAFE COMMITTEE

SPEED CAMERAS: SHOULD THEY BE USED IN QUEENSLAND?

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**Parliamentary Travelsafe Committee Report No. 15
November 1994**

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CHAIRPERSON'S SUMMARY

Speed cameras have the potential to reduce accidents.

They have distinct advantages over slant radar on busy roads and over radar guns in less heavily trafficked areas.

They also have been criticised by some people for detecting great numbers of motorists exceeding the speed limit on busy roads which is criticised as revenue raising.

Even if speeds are correctly set there will still be criticism by those who are fined and even more so by those who accumulate sufficient demerit points to lose their licences by persistent speeding.

However, Travelsafe and the community of Queensland cannot ignore the tragedy and trauma on our roads resulting from the culture of inappropriate and excessive speed, which has unfortunately developed in recent years.

There are some obvious reasons for the proliferation of speeding offences, including the obvious improvements which have occurred in vehicle performance, and the "hype" which has flowed from this in advertising; the cocooning of drivers in an air-conditioned environment; and the distractions of radios, tape decks and carphones, some of which are inappropriately used in urban areas; and the improvements to the road environment which, in many cases, has not been coupled with a reasonable increase in speed limit.

What has developed has been a growing disrespect for posted speed limits, together with a generally selfish attitude towards other members of the community on the part of a minority of motorists.

Speed cameras have the ability to strike at the heart of this "inappropriate speed culture" if used in the model being proposed.

It is essential, in the opinion of the Travelsafe Committee, that they should not be introduced unless there is a complete review of speed limits, and until action is taken to adjust speed limits where they are found to be inappropriate.

This will ensure that large numbers of responsible motorists do not get caught in a net, set to prohibit the irresponsible motorists from killing and maiming our citizens.

The statistics for last year show that 79 Queensland road users were killed, 176 were hospitalised, and 192 received other injuries, solely because of inappropriate speed.

A total of 829 reported crashes were caused by speed. This is only the tip of the iceberg, as speed was a contributory cause in a very large number of accidents, in which some other factor was also involved.

There was clear support in the community for a new initiative to remove the inappropriate speed culture, as demonstrated by the submissions reviewed, and the evidence given at

hearings Travelsafe conducted throughout Queensland and other places.

What are the aims of introducing speed cameras?

Firstly, to reduce fatal accidents. Secondly, to reduce the **severity** of accidents that do occur. Thirdly, to **reduce all casualty accidents**.

Fatal accidents, caused solely by speed, represent 1.8% of all accidents reported State-wide, but only 0.8% of all accidents in Brisbane. The ratio of fatalities caused by speed in the metropolitan area outside Brisbane City is nearly twice what it is in Brisbane City and actual numbers are higher in those areas and in provincial cities. The proportion of fatal accidents to all accidents, in areas outside the metropolitan area and provincial cities, is 3.3%, with a surprising one-third of those fatalities in speed zones below 100 km/h.

Clearly, if we are targeting fatal accidents with speed cameras, we would have to target all of those areas at least as much as Brisbane, including urban areas throughout the State. For this reason the Committee recommends blanket coverage of the State.

Evidence was given at every hearing that a large number of fatal and serious accidents (above 30%) occur in residential streets so they must also be targeted.

Evidence was given that the **severity** of accidents increases with speed. So that this would have to be considered as well as looking at fatalities.

It could be argued that an overall reduction in speed limits would reduce this risk but evidence was also given that speed limits which are not seen as credible are ignored. So enforcement is necessary. Evidence was also given that speed on major roads has to be set at a level which will accommodate the volumes using the road and that unrealistic limits encourage traffic to use other streets, which increases the risk. It must be realised that a major road with all necessary facilities for crossing and turning and pedestrian facilities, can accommodate a greater speed than other streets and roads.

It is therefore clear that speed limits must be considered and adjusted **BEFORE** speed cameras can be introduced or most motorists could be unfairly booked.

Inappropriate speed is deemed to be the cause of 4.2% of all reported accidents and to be a contributing factor in many more. Again, it is higher in the outer metropolitan area than in Brisbane, and Logan City claimed that 70% of accidents in their area are on Council-controlled roads, not the major highways.

Evidence was given that speed cameras could only be considered as part of an overall strategy to **reduce all accidents**. Education would be an important factor in this, not only to gain public support, but also as an equal tool to reduce inappropriate speed. Radar equipment would still be required in country areas and on long stretches of main highways.

It is clear from the evidence given by every Council officer, that any proposed model for setting the location and usage of cameras, principally on major roads, would not answer the problem of speeding in local streets, which means that one-third of the total problem is not being addressed. This is unacceptable. In addition, accidents would increase if fast traffic were encouraged to avoid speed cameras by travelling through

residential streets.

Submissions by other contributors, also show up flaws in any proposal to concentrate on major roads with high volumes. In that situation 15% of all fatalities (which occur in urban areas) and 35% of all fatalities (which occur on 100 km/h country roads and highways) would not be addressed by speed cameras. 22% of all non-fatalities (in urban areas) and 12% (approx) of all non fatalities (in non-urban areas) would not be addressed. Continued use of radar on country roads would answer the problems in those areas, but the major problem in suburban streets, needs to be addressed.

The situation in residential streets clearly calls for a quota of cameras to be dedicated to lower volume residential streets as suggested by Councils.

Some Councils, including Logan and Redcliffe, offered to contribute to the purchase of cameras and to operate them if this was the only alternative. However, most agreed the police should carry out this duty.

The cost of cameras would be recouped within a short period.

The evidence given by the Mt Glorious Group, regarding motor-cycle accidents is a different matter. The Northbrook situation seems to call for pole-mounted cameras which can be rotated around a number of sites to catch persistent offenders in given locations.

The very large benefit of speed cameras would be an overall reduction in inappropriate speeds, and therefore accidents, if they were properly allocated. They would also reduce the severity of accidents and reduce the almost hidden danger of speeding, paraplegia and severe injuries.

In the long term, a reduction in the number of accidents would reduce the financial cost of accidents and should reduce insurance premiums.

When we look at the overall 20,000 reported accidents in Queensland per annum, these two considerations should be concentrated on, as well as the reductions in fatalities.

Police should not be allowed to set tolerances. They should be set to allow for metering inaccuracies only.

Cameras should be phased in with a moratorium of about a month, during which motorists would be notified that they had been detected speeding but no penalty would be applied.

A sufficient period should be allowed to sort out any problems before they are introduced and then there should be blanket coverage, as only the certainty of being booked will deter irresponsible speeding drivers.

All police rendered surplus by the reduction of approximately 80% of officers involved in radar units, should be deployed to increase the number of sites to be used and to other road safety duties.

With the benefit of hindsight, Queensland has an opportunity to avoid the shortcomings of other systems. Speed cameras would make our roads safer for police, drivers, passengers, cyclists and pedestrians, but only if brought in correctly, and within the model outlined in the

report.

Members of Travelsafe Committee would expect me to give due credit and thanks to the Research Director of Travelsafe, Mr Rob Downey, almost a non-voting member of the Committee, for his valuable input into this and many previous reports to Parliament. Mr Downey will be completing his secondment to the Committee after this report is presented to Parliament, and he will return to his previous employment. He will be sorely missed for his absolute professionalism, his organisational ability, his dedication to the task at hand, his research methods, his incisive mind when applied to the information available and his pleasant personality.

His temporary assistant Ms Mary Dreves has also been invaluable to this investigation, with her research skills and knowledge.

Lastly, I must thank my fellow Committee Members for their dedication, particularly to this difficult investigation, which required very close attention to a large amount of data, which had to be sifted extremely carefully.

I now recommend the result of our careful investigation to the Parliament.

Len Ardill, MLA
Chairperson

INTRODUCTION

PURPOSE

- 1 The purpose of this report is to consider the road safety benefits of using speed cameras to enforce speed limits in Queensland; and to make recommendations on how a Queensland speed camera program should be implemented.

SCOPE

- 2 The Travelsafe Committee determined the parameters of this inquiry. In doing this, the Committee resolved to investigate all aspects of speed camera policies, management and operations.
- 3 This report is based on information gathered by the Committee from formal public hearings; from written submissions; from published literature relevant to the topic; from inspections conducted by the Committee during the inquiry; and from discussions with road safety authorities.

COMMITTEE BACKGROUND

- 4 The Travelsafe Committee of the 47th Parliament was appointed by the Legislative Assembly on 12 November 1992 to inquire into, report upon, and make recommendations in relation to all aspects of road safety in Queensland.
- 5 In appointing the Committee the Legislative Assembly determined the Committee's terms of reference to be:
 - (a) to monitor, investigate and report on the causes of road crashes in Queensland, and issues of road safety; and
 - (b) to review and report on countermeasures aimed at reducing deaths, injuries, and the social and economic cost to the community arising from road crashes or inappropriate road user behaviour.
- 6 The Committee considered an investigation into speed cameras to be within its terms of reference.

NORMAL INQUIRY PROCESS

- 7 Travelsafe Committee Members strongly believe that one of the Committee's prime roles is to be a mechanism through which members of the public can contribute to the development of road safety countermeasures. The inquiry and consultation process adopted by the Committee consists of:

- (a) announcing the inquiry and calling for public submissions through advertisements;
- (b) conducting inspections in Queensland and other States;
- (c) consulting available research which is relevant to the topic of the inquiry;
- (d) conducting public hearings in Brisbane and regional centres of Queensland;
- (e) collating all information gathered through this process and producing a report, with recommendations, for presentation to Parliament.

SPEED CAMERA INQUIRY PROCESS

- 8 The Committee's inquiry into speed cameras was commenced in July of this year. Advertisements announcing the inquiry and calling for public submissions were placed in major newspapers on 16 and 17 July 1994. A copy of the advertisement is shown in Appendix A. The closing date for submissions was 15 August 1994, however, late submissions were accepted and considered. The names of organisations and individuals who provided submissions are listed in Appendix B.
- 9 Public hearings were held in Townsville on 26 September 1994, Hervey Bay on 28 September 1994, and Brisbane on 10 and 11 October 1994. A copy of the advertisement announcing the public hearings is shown in Appendix C. Witnesses who appeared at all hearings are listed in Appendix D.
- 10 The Committee visited Sydney, Adelaide, Melbourne and New Zealand to meet various officials associated with the speed camera programs in those jurisdictions. Inspections of some aspects of the speed camera programs were also conducted.

RESPONSIBILITY OF MINISTERS

- 11 This report makes recommendations for the Government to implement. The resolution which re-established the Travelsafe Committee in November 1992 requires the responsible Minister or Ministers to respond to a Committee report. Specifically the resolution states:

"that where a report of the Committee recommends that a particular action be taken by the Government with respect to a matter, the appropriate Minister of the Crown shall, within a period of not more than six months after the tabling of the report in the Legislative Assembly, table a written report in the Legislative Assembly as to the action (if any) taken or proposed to be taken by the Government with respect to the recommendations of the Committee. If the Legislative Assembly is not sitting at the expiration of the six month period, the report is to be tabled at the next sitting of the Legislative Assembly."

STRUCTURE OF THIS REPORT

- 12 In dealing with the topic of speed cameras and whether they should be introduced in Queensland, this report presents:
- (a) research and statistical information about speed and speeding behaviour; and
 - (b) a model for the implementation of a speed camera program in Queensland.

CURRENT QUEENSLAND STATISTICS

THE INCIDENCE OF SPEEDING ON QUEENSLAND ROADS

- 13 There is currently no valid state-wide measure of the incidence of speeding on Queensland roads. Similarly, there is no measure of where (that is, on which types of roads) speeding is more likely to occur.

Traffic surveys of vehicle speeds

- 14 A number of traffic surveys have been conducted in various Queensland Transport districts throughout the state. These surveys provide an *indication* of the incidence of speeding drivers on roads in these districts. It is important to note that these surveys have been carried out on a somewhat ad hoc basis and that the sampling methodology used does not allow results to be generalised beyond those vehicles surveyed. In general, these surveys have shown that 85 percent of motorists in most sampled districts exceed the speed limit by amounts ranging from 4 km/h to 28 km/h.
- 15 Some local authorities have also undertaken traffic surveys of vehicle speeds (again on a somewhat ad hoc basis). The Committee heard evidence from a number of councils that 85th percentile speeds on residential streets have been recorded at in excess of 70 km/h.
- 16 Queensland Transport, in evidence, (11.10.94, p 47) summarised the perceived incidence of speeding throughout the state as follows :

"it is fair to say that the level of compliance to speed limits in Queensland is probably similar to other States and countries where they have enforcement practices similar to our own. In keeping with that, on particular types of roads, we have concerns about the levels of compliance."

Traffic offence notices

- 17 The number of traffic offence notices issued to speeding motorists also provides some indication of the incidence of speeding in Queensland. It is important to note that, to some degree, this measure is a reflection of the level of Police enforcement.
- 18 In the calendar year 1993/94, 337 618 traffic offence notices were issued. Fifty-seven percent (190 755) of these were issued for speeding offences. In the previous year, offence notices for speeding represented 61 percent of notices issued. The large majority of speeding notices issued were to offenders travelling 15 km/h or more over the posted limit.

THE INCIDENCE OF SPEED RELATED CRASHES IN QUEENSLAND

The incidence and severity of speed related crashes compared with all crashes

19 Speed was judged to be a contributing factor in four percent of all reported crashes occurring on Queensland roads during 1993. However, speed was judged to contribute to 22 percent of fatal crashes, for which it was the third most often cited factor. It would appear that speed may have made an increasing contribution to fatal crashes in recent years. Police cited speed as the major contributing factor in 18 percent of fatal crashes occurring in 1992 and in 14 percent of fatal crashes in 1991 (Queensland Transport, 1993a). A change in Police reporting methods in April 1991 may account for a portion of the increase between 1991 and 1992.

Severity of speed related crashes

20 Speed related crashes are generally more severe than other crashes. Table 1 below shows that in 1993, 31 percent of speed related crashes resulted in a fatality or injury requiring hospitalisation compared with 18 percent of all crashes.

**TABLE 1: Road Traffic Crashes by Severity
Queensland: 1993**

Severity of Crash	Speed related crashes		All Crashes	
	No	%	No	%
Fatal	79	10	357	2
Hospitalisation	176	21	3182	16
Medical Attention	129	16	4147	21
Minor Injury	63	7	2158	11
Property Damage only	382	46	9665	50
Total Crashes	829	100	19509	100

Source: Queensland Transport, Road Transport and Safety Division

Speed zones

21 Table 2 overleaf shows that the majority of crashes in 1993 occurred in 60-70 km/h speed zones (which, to some degree, reflects the high volume of traffic through these zones). Further, more than three-quarters of speed related crashes occurred in zones below 100 km/h.

**TABLE 2: Speed Related Crashes and All Road Traffic Crashes
by Speed Zone and Severity. Queensland: 1993**

Speed Zone (km/h)	Severity	Speed related crashes	All road traffic crashes
<40	Fatality	0	0
	Hospitalisation	0	1
	Medical attention	0	1
	Minor injury	0	2
	Property damage only	1	8
	Total	1	12
40-50	Fatality	1	1
	Hospitalisation	4	35
	Medical attention	3	42
	Minor injury	1	24
	Property damage only	6	81
	Total	15	183
60-70	Fatality	34	141
	Hospitalisation	111	1926
	Medical attention	86	3052
	Minor injury	47	1605
	Property damage only	275	7081
	Total	553	13805
80-90	Fatality	10	36
	Hospitalisation	15	261
	Medical attention	18	275
	Minor injury	2	121
	Property damage only	30	606
	Total	75	1299
100+	Fatality	34	179
	Hospitalisation	46	959
	Medical attention	22	777
	Minor injury	13	406
	Property damage only	70	1889
	Total	185	4210
Total crashes		829	19509

Source: Queensland Transport, Road Transport and Safety Division

Location of crashes

- 22 Table 3 shows that 71 percent of *all crashes* in 1993 occurred in the greater Brisbane urban area (Brisbane City and the rest of the Brisbane Statistical Division) and in Queensland provincial cities. By comparison, 64 percent of *all speed related crashes* occurred in the greater Brisbane urban area and in provincial cities.

TABLE 3: Location of Speed Related and all Crashes: Fatal and Total Crashes. Queensland, 1993

Location	Speed Related Crashes				All Crashes			
	Fatal		Total		Fatal		Total	
	No	%	No	%	No	%	No	%
Brisbane City	9	11	208	25	49	14	5793	30
Rest of Brisbane	13	16	154	19	52	15	3368	17
Provincial cities	15	19	166	20	68	19	4707	24
Rest of State	42	53	301	36	187	53	5625	29
Total	79	100	829	100	356	100	19493	100

Source: Queensland Transport, Road Transport and Safety Division

- 23 Table 3 also shows that 53 percent of fatal speed related crashes occurred in "rest of the state" areas. However, closer examination found that 15 (or 36%) of these crashes occurred in speed zones of less than 100 km/h.

The cost of speed related crashes

- 24 Haworth and Rechnitzer (1993, cited in Fildes and Lee 1993) noted that excessive speed was assigned as a contributing factor in 30 percent of fatal crashes occurring in Australia during 1991/92. On these statistics, it has been estimated that each year speed related crashes cost the Australian community up to \$1 billion (Fildes and Lee, 1993).
- 25 In Queensland, *"the social, economic and public health costs of the speed-related crashes which occurred in 1993 can be conservatively estimated at \$90 million"* (Queensland Transport submission, p 3).

SPEED AND CRASHES

THE DANGERS OF EXCESSIVE SPEED

Stopping distance

- 26 To gain some understanding of why excessive speed is dangerous, it is necessary to consider the relationship between vehicle travelling speed and the distance required for a vehicle to stop, once a driver has determined the need to stop (known as the stopping distance).
- 27 The ability of a vehicle to stop in an emergency is influenced by many physical variables, but can generally be thought to be a function of the following : the time taken by the driver to apply the brakes, having determined a need to stop; the distance travelled by the vehicle during that time; and the distance travelled by the vehicle after the driver applies the brakes. The relationship between vehicle speed and the stopping distance is such that disproportionate increases in stopping distance result from increased vehicle speeds (Queensland Transport, 1993b).
- 28 In real terms, this means that (all other conditions being equal) a driver travelling at 80 km/h needs an extra 35 metres to stop in an emergency compared with a driver travelling at 60 km/h. (Queensland Transport, 1993b). The impact of higher travelling speed was vividly illustrated by Waltz et al (1983) in his examination of pedestrian crashes. He showed that a vehicle travelling at 50 km/h is able to come to a complete stop and *not* hit an object, in this study, a pedestrian. However, the same vehicle travelling at 60 km/h will hit a pedestrian at the high impact speed of 40 km/h.

The role of speed in crashes

- 29 When examining the role that speed plays in crashes, there are two main factors to consider. They are the contribution of speed to crash causation (or risk of crash involvement) and the contribution of speed to the crash outcome (crash severity).

Speed and the risk of crash involvement

- 30 Little is known about how excessive speed leads to crashes. Early research conducted by Solomon (1964, cited in Fildes and Lee, 1993) showed that large variances above or below the mean traffic speed were associated with increased risk of crash involvement.
- 31 More recent studies, however, failed to confirm that *slow* travel was associated with increased crash risk. Furthermore, many of these studies were flawed in some way and in general, the research is considered to be inconclusive. Moreover, it has been suggested that it may be overly simplistic to look at the relationship between travel speed and crash involvement without considering the characteristics of the drivers who choose to travel at either slower or faster speeds (Fildes and Lee, 1993).

Speed and crash severity

- 32 Studies have consistently demonstrated that the severity of injury in the event of a crash increases with crash speed (Cameron, Cavallo and Gilbert, 1992). That is, the faster the travelling speed of a vehicle, the more severe any resultant injury is likely to be in a crash. According to the laws of physics, *impact speed* and energy dissipation in a crash are related directly and exponentially. This relationship between crash speed and injury risk can vary depending on a number of variables, including the type of road user involved, safety devices used, and age of victim (Fildes and Lee, 1993).

THE BENEFITS OF REDUCED TRAVELLING SPEED

- 33 Reducing vehicle travelling speed will reduce the distance necessary for a vehicle to come to a complete stop. As a result, reducing speed is likely to reduce the risk of crash involvement. Reduced speed will certainly lead to a reduction in injury severity in the event of a crash.
- 34 Whilst it is acknowledged that further research is required to determine the exact nature of the relationship between speed and the risk of crash involvement, the compelling evidence relating to the effect of speeding on injury severity, means that considerable benefits will result from reducing travelling speeds.

CONTROLLING SPEEDING BEHAVIOUR

THE PSYCHOLOGY OF SPEEDING BEHAVIOUR

- 35 Speeding is considered to be fundamentally different from other road safety behaviours. It is intrinsically rewarding to the motorist and tends to be glamorised by the mass media. As such, speeding behaviour has been more resistant to change (Travelsafe 1992).
- 36 In their submission (1994) and in evidence (11.10.94, p 51), Queensland Transport pointed to two further ways in which speeding differs from other deviant behaviour such as drink-driving. Firstly, there isn't readily acceptable evidence (or *social proof*) that speeding behaviour is dangerous. By contrast, well organised publicity and enforcement programs have made drink-driving behaviour socially unacceptable. Furthermore, most motorists readily accept the impairing qualities of alcohol (Queensland Transport submission, 1994).
- 37 However, many motorists have built up a history of safe driving while travelling in excess of the posted speed limit (Travelsafe, 1992). That is, they believe they can travel *safely* at speeds in excess of the posted limit on many roads. Consequently, drivers are unlikely to perceive exceeding the speed limit as dangerous unless the excess is substantial or considered inappropriate under certain circumstances, such as near schools during designated school danger times (Queensland Transport submission, 1994). For this reason, speed limit enforcement may be considered to be undertaken for the purpose of raising revenue rather than to meet road safety needs.
- 38 Secondly, motorists perceive and experience a low likelihood of being detected for speeding. The high rate of non-compliance with posted limits supports this belief. A Queensland Transport study (1986, cited in Queensland Transport submission, 1994) found that 55% of respondents thought it unlikely that they would be caught by the Police if they exceeded the speed limit. Based on evidence presented in many inquiries, the Committee believes that this perception remains today.
- 39 Queensland Transport (submission, 1994) point to two factors which appear to account for the lower perceived risk of detection for speeding compared with, for example, drink-driving. Random Breath Testing has been very successful in using highly visible enforcement and associated publicity to increase the public's perception of the risk of being detected for drink-driving. This deterrence-based approach to drink-driving enforcement can be contrasted to traditional methods of speed enforcement which have largely been detection-based, typically involving covert Police operations.
- 40 Secondly, the relatively transient nature of speeding compared with the fixed nature of drink-driving enables drivers to alter their behaviour from illegal to legal fairly quickly. Indeed many motorists believe they can minimise the risk of apprehension by staying vigilant to Police presence and altering their speed accordingly (Queensland Transport submission, 1994). Consequently, offending motorists who are apprehended for speeding generally feel unlucky.

SPEED LIMITS

- 41 As the *impact speed* in a crash cannot be directly controlled, authorities are confined to controlling *travelling speed*. Road safety authorities attempt to do this through the setting of speed limits and the enforcement of these limits. When setting speed limits, authorities must consider the *design speed* of the road, the road safety consequences of setting the speed limit too high, and the level of enforcement required to achieve compliance with the posted limit.
- 42 The design speed of some of the major roads in Queensland can be as high as 130 km/h. However, there could be dire road safety consequences if speed limits were set at such high levels. When choosing travelling speeds, motorists generally take into account road conditions and will drive at speeds at which they feel *safe*. Such speeds may or may not equate to posted limits.
- 43 Consequently, if motorists consider speed limits to be too low, levels of voluntary compliance are also likely to be low. This has implications for enforcement and the level of activity required to achieve acceptable levels of compliance with posted speed limits (Fildes and Lee, 1993).

ENFORCEMENT — DETECTION AND DETERRENCE

- 44 In their issues paper (1993b), Queensland Transport noted that Police enforcement of speed limits is thought to have two main functions: detecting and deterring speeding behaviour. Police use a variety of methods to detect speeding vehicles. These include estimation, following a suspect vehicle, and radar detection devices. These methods are discussed in detail later in this report (see paragraph 53).
- 45 Deterring speeding behaviour can be achieved either *specifically* or *generally*. Fildes and Lee (1993) described these approaches as follows :

"Specific deterrence is based on the assumption that drivers who are caught and punished for speeding will be discouraged from committing further speeding offences. General deterrence is based on the assumption that those exposed to enforcement, apprehended or not, will be deterred from speeding for fear of detection and punishment." (p 37).

- 46 A specific deterrence approach typically involves non-visible, covert Police operations. It assumes that concealed enforcement will increase the uncertainty as to where and when enforcement might be encountered. It is also likely to reduce the drivers' confidence that their own vigilance will prevent them from being detected and punished (Fildes and Lee, 1993).
- 47 The success of this approach relies on the detection and apprehension of large numbers of offenders. However, using traditional enforcement methods, the number of offenders detected often represents a small proportion of all offenders (Fildes and Lee, 1993). Consequently, unless a large proportion of all offenders is apprehended, the impact of specific deterrence is likely to be quite limited.
-

- 48 By contrast, general deterrence has the potential to influence the behaviour of all motorists. Through extensive publicity and highly visible (and often random) Police presence, this approach relies upon motorists perceiving a high risk of detection and punishment if they exceed the speed limit. In the long term, however, the perceived risk must be backed up by actual detections for the perception to be maintained (Fildes and Lee, 1993).

CAN SPEEDING BEHAVIOUR BE CONTROLLED ?

- 49 In evidence (11.10.94, p 51), Queensland Transport referred to the relationship between behaviour and attitude when explaining how drink-driving behaviour has modified over the years. Witnesses noted that 10-15 years ago the community attitude to drink-driving was very different. At that time, drink-driving was not considered to be either dangerous or anti-social.
- 50 The change in drink-driving behaviour and attitudes toward drink-driving can be largely attributed to the Random Breath Testing program and associated advertising and publicity campaigns. These two strategies combined to greatly increase the perceived risk of detection for drink-driving. This perception was backed up by a high levels of actual detection.
- 51 Consequently, motorists firstly modified their drink-driving behaviour and later changed their attitude towards drink-driving. The result has been that drink-driving is generally regarded by today's motorists to be anti-social and dangerous.
- 52 For authorities to have similar success in controlling speed and altering speeding behaviour, it will be necessary to greatly increase the perceived likelihood of being detected by Police for exceeding the speed limit. In the long term, the perceived risk of detection must equate with actual risk. Over time, driver attitudes would be expected to change so that speeding would be considered to be as anti-social and dangerous as drink-driving is today.

CURRENT ENFORCEMENT METHODS

- 53 In their submission (1994) Queensland Police advised that, traditionally, they have relied on various speed enforcement methods which are generally *detection-based*. These include estimation, following a suspect vehicle, and radar detection devices.
- 54 *Estimation* refers to an experienced officer making an estimation of the speed of a vehicle at a particular time. The *following vehicle* method is commonly used in Queensland and involves the Police vehicle following a suspect vehicle for a given distance during which time the distance between both vehicles is maintained. The Police also employ three different types of *radar detection devices*. These are AWA Fairey Slant, Kustom Falcon Hand-Held and Kustom KR1OSP Mobile.
- 55 The Kustom radar devices, in particular, are considered by Police to be very useful and effective traffic enforcement tools. However, the overall effectiveness of traditional enforcement methods in controlling speeding behaviour appears to be limited. There are also a number of operational limitations associated with using these methods.

THE LIMITED EFFECT OF CURRENT ENFORCEMENT METHODS ON CHANGING SPEEDING BEHAVIOUR

- 56 There is every indication that the number of speeding offenders detected in Queensland, using current speed limit enforcement methods, represents only a small proportion of all offenders. Consequently, the wider impact of current enforcement methods on controlling and modifying speeding behaviour, is very limited. Limited Police resources, the transient nature of speeding, and the general evasive nature of speeding behaviour, make it very difficult, if not impossible, to alter this situation using current enforcement methods.

OPERATIONAL LIMITATIONS OF TRADITIONAL ENFORCEMENT METHODS

- 57 The Committee was informed of a number of operational limitations with traditional enforcement methods.

Accuracy

- 58 The *estimation method* is very crude and can only be used in exceptional cases where a vehicle is exceeding the limit by an obviously gross amount. The basis of the *following vehicle method* is that the speedometer of the Police vehicle is certified as accurate every 60 days and so is able to give an **indication** of the speed of the suspect vehicle (Queensland Police Service submission , 1994).
- 59 By comparison, *radar speed detection devices* are more accurate. However, there have been occasions where it is unclear which vehicle in a traffic stream has triggered the device. In such cases the validity of the reading must be questioned. Further, these

devices must be tested regularly to ensure that the accuracy of readings is maintained.

Resources

- 60 Using the *estimation* and *following vehicle* methods, an officer is able to determine the speed of only *one* vehicle at any one time. The latter method, in particular, would also require the Police vehicle to observe the suspect vehicle for some time. In such respects, these methods are resource intensive.
- 61 The AWA Slant radar requires a minimum of three officers to operate effectively. For an optimum level of safety, however, four to five personnel are required. This places a heavy burden on human resources, particularly if it is operated over a number of sites during one day. The Kustom Hand-Held model can be operated by a single officer, although a minimum of two officers is preferable. The Kustom Mobile device can be adequately operated by one officer. (Queensland Police Service submission, 1994).

Site selection

- 62 Location and safety factors are particularly relevant for radar devices. The AWA Slant radar is the only device which can be used in heavy traffic conditions. Due to the design and operational factors of this equipment, vehicles must be intercepted at the time that the infringement is detected. This restricts site selection to those where officers can safely intercept vehicles which can then be parked safely.
- 63 In any location, however, safety can be compromised for those officers who negotiate traffic to "flag down" the offending vehicle, particularly on multi-lane roads; for traffic taking avoiding action of the Police and the intercepted vehicle(s); and for those vehicles re-entering the traffic stream after being apprehended.
- 64 The *Australian Standard 2898.1992* also prescribes certain restrictions on the selection of sites for the use of all radar equipment. When selecting a site for the use of a radar device, effects from radio frequency interference (such as from radio transmitters, power transformers, power lines) and reflections from stationary objects (such as traffic signs, parked vehicles, sheds, phone boxes) must be minimised. The standard also requires that vehicles detected must be monitored by the radar operator to the point of interception.

The number of offenders able to be detected

- 65 As noted earlier, the *estimation* and *following vehicle* methods allow an officer to determine the speed of **only one vehicle** at any one time. Using the Slant radar device, the number of offenders detected is limited by the number of officers available to detain and process offenders at any given time. The Kustom radar devices are only suitable for use in locations with low traffic volumes which limits the number of offenders detected and apprehended during any period.

THE POTENTIAL BENEFITS OF SPEED CAMERAS IN QUEENSLAND

THE POTENTIAL TO CONTROL SPEEDING BEHAVIOUR

- 66 The use of automatic camera enforcement allows a significant increase in the detection of speeding offences. As such, speed cameras could be used as part of either a specific or general deterrent approach to speed enforcement. To achieve a specific deterrent effect with speed cameras, it would be necessary to use a very large number of cameras in order to adequately cover a state the size of Queensland.
- 67 Speed cameras could also be used within a general deterrent enforcement framework using highly visible Police operations and associated high levels of public education and publicity. In this respect they are likely to have a more wide-spread influence on the driving behaviour of motorists.

AUSTRALIAN AND OVERSEAS EXPERIENCE

Australia

- 68 Speed cameras are in use throughout Australia with the exception of Queensland and the Territories. An evaluation of the speed camera program in Victoria (Cameron et al, 1992) and an interim evaluation of the program in New South Wales (RTA, 1992) have been published. An unpublished information paper, entitled *Evaluation of speed camera operations: Preliminary accident analysis*, has been prepared by the Analysis Unit of the New South Wales Roads and Traffic Authority (1993).

Victoria

Program description

- 69 In Victoria, speed cameras were introduced from December 1989 with the gradual introduction of 54 cameras until January 1991. The program was supported by an intensive Statewide publicity campaign which was designed not only to raise the level of awareness of speed cameras and legitimise speed camera operations, but also to develop a community agenda about speeding and safety (Cameron et al, 1992).
- 70 In general, speed cameras have been used in Victoria as a specific deterrent. The visibility of Police operations have been minimised by using cameras inside unmarked Police vehicles and general warning signs about the cameras were erected at specific locations, including every major road coming into Melbourne. This approach was used to maximise the number of offences detected (Queensland Transport submission, 1994).
- 71 There are currently 2,500 designated camera sites throughout Victoria. Over the course of operations, the program has resulted in an increase in the number of speeding drivers detected from approximately 20,000 per month before July 1990 to between 40,000 and 80,000 per month (Cameron et al, 1992).

Evaluation

- 72 Since the introduction of the speed camera program the road toll in Victoria has dropped by about 50% . In the same period, however, the Australian road toll dropped; a major advertising campaign conducted by the Transport Accident Commission (TAC) was operating; RBT operations were extensive; and the Victorian economy was in recession (Queensland Transport submission, 1994). A four phase evaluation of the speed camera program conducted by the Monash University Accident Research Centre (MUARC) has attempted to allow for such confounding effects and to isolate the effect of the speed camera operations.
- 73 Phase 1 of the evaluation examined casualty crashes and the general effects of the program throughout Victoria, in Melbourne, and in the rest of the State separately; Phase 2 attempted to link effects to the deterrence mechanisms of the program; Phase 3 assessed the "localised" effects in time and space related to the camera operations and Phase 4 examined the crash effect on changes in speed behaviour (Cameron et al, 1992).
- 74 Through their evaluation, Cameron and his colleagues (1992) found that :

Phase 1

- ◆ reductions had occurred in the frequency of reported casualty crashes which occur in low alcohol times of the week and in their injury severity level;
- ◆ the greatest reduction in the frequency of casualty crashes occurred :
 - on arterial roads in Melbourne (about 30%);
 - in Melbourne generally (about 20%); and
 - on 60 km/h roads in rural Victoria (about 20%);
- ◆ the pattern of results generally corresponded to where speed cameras had operated.

Phase 2

- ◆ the reductions in the frequency of casualty crashes (in low alcohol hours) appeared to be associated with :
 - speed camera Traffic Infringement Notices (TIN's) issued to detected drivers;
 - road safety publicity in general ; and
 - speed related publicity (as a lesser degree)
- ◆ reductions in the severity of injury of casualty crashes (in low alcohol hours) appeared to be linked with speed camera TINs issued and hours of camera operations.

Based on the results of Phase 1 and 2, the authors concluded "*it is clear that the speed camera program (enforcement and supporting publicity) has been effective*".

Phase 3

- ◆ a statistically significant reduction in casualty crashes within 1 km of a camera site

as a result of the receipt of a TIN. This appeared to have had a "halo" effect of about two weeks. The effect appears to have been restricted to "high alcohol times" on major roads;

- ◆ there was no statistically significant reduction in the number of crashes which occurred (within 1 km of the camera site) during the week immediately after the speed camera operation;
- ◆ there was no evidence of a difference in crash severity between crashes when a speed camera influence was assumed to be present and crashes when the speed camera influence was assumed to be absent.

Phase 4

- ◆ the percentage of vehicles exceeding the speed limit by more than 15 km/h decreased in both 60 km/h and 75 km/h speed zones.
- ◆ the distribution of vehicle speeds recorded in 100 km/h speed zones did not change; and
- ◆ there appeared to be little change in mean speeds.

New South Wales

Program description

- 75 Speed cameras were introduced in New South Wales by the NSW Police Service in March 1991. The program was developed in consultation with the Roads and Traffic Authority (RTA) and the National Roads and Motorists' Association (NRMA). The launch of the program was supported by a widespread publicity campaign, featuring television, radio and press advertisements. (Queensland Transport submission, 1994).
- 76 In New South Wales, speed cameras were introduced using a general deterrent approach. The emphasis of the program was on the visible use of cameras at locations with a speed-related crash problem. In June 1993, the visibility of Police speed camera operations was maximised with the use of uniformed operators in marked Police vehicles, unconcealed camera operations, and the use of portable signs when cameras were operating (Queensland Transport submission, 1994).
- 77 The program began with 12 speed cameras rotated around 93 sites. The number of sites was later increased to more than 300. Initial operations concentrated on urban areas. Operations were extended to rural areas in late 1993.
- 78 In the first month of operations, detected offenders were sent a warning letter rather than an infringement notice.

Evaluation

- 79 An interim evaluation of the NSW program was conducted by the Roads and Traffic Authority. In this study, speeds at a number of camera sites were measured both "pre" and "post" the program. Results showed:
- ◆ that the percentage of vehicles exceeding the speed limit by 10 km/h or more decreased from 34% to 26%;
 - ◆ that the percentage of vehicles exceeding the speed limit by 20 km/h or more decreased from 9% to 5%;
 - ◆ a reduction in 85th percentile speeds from 77 km/h to 75 km/h; and
 - ◆ a reduction in average speeds from 67 km/h to 65 km/h.
- 80 Significantly, later crash-based evaluation of the 15 sites with the highest rates of photographs and infringements found that:
- ◆ the rate of serious casualty crashes and total crashes had fallen at these sites by 30% and 28% respectively, compared to the before period. (This reduction was significantly greater than the decrease in fatal crashes observed at the sites with low levels of camera usage and at non-camera sites.); and
 - ◆ it was estimated that a decrease of approximately 14% more than the state-wide trend in total crashes occurred at the most effective speed camera sites.

Other Australian experience

- 81 No formal evaluation of the speed camera programs in South Australia, Western Australia or Tasmania is available. In the absence of properly controlled studies it is not possible to gauge what contribution speed cameras may have made to reducing the road toll. However, a brief description of program in each state is provided.

South Australia

- 82 The South Australian speed camera program has been operating since June 1990 when one camera was purchased. By the end of that year, 12 cameras were in use. Since January 1991, the program has been fully operational with extensive enforcement and publicity.
- 83 The South Australia Police use both visible and non-visible operational methods (communication with South Australian Police, cited in Queensland Transport submission, 1994).
- 84 Despite no known formal evaluation of speed camera operations being published in South Australia, personal communication with road safety authorities suggest that the use of speed cameras appears to be an effective road safety tool. Reported statistics indicate a 15 percent reduction in road crashes after the first year of operations. Notwithstanding that speed camera operations coincided with a recession, authorities claim that a large proportion of this reduction was due to speed camera operations.

Western Australia

- 85 In Western Australia, the use of speed cameras were initially trialed in 1986. The first cameras were purchased in May 1988 with additional cameras purchased in August of that year. Until March 1990, cameras were used for enforcement blitzes only (eg. during Christmas and Easter holiday periods).
- 86 In March 1990, "Operation Speedshot" was launched and operated until December 1990. This program involved the use of speed cameras for detecting speeding drivers, but these drivers were issued with cautionary notices only. The speed camera program, using 5 cameras, has been fully operational since January 1991 when legislative amendments allowed infringement notices to be mailed to vehicle owners (communication with Western Australian Police).

Tasmania

- 87 In Tasmania speed cameras were introduced in early 1993, with the purchase of four radar-based speed cameras. Tasmanian authorities indicated that the program is expected to be expanded with laser-based cameras in the future (communication with Tasmanian Police, cited in Queensland Transport submission, 1994).

Experience from overseas

New Zealand

- 88 Speed cameras were introduced in New Zealand in October 1993. The program currently operates using 31 cameras rotated around 300 sites. It is planned to increase the number of sites in the future. However, based on what the Committee saw during its inspection of the New Zealand speed camera program, it would appear that the program suffers from an insufficient number of speed cameras.

Other Countries

- 89 Automatic enforcement of speed limits has been used overseas for approximately 20 years. Despite this length of time, there have been a limited number of scientifically conducted evaluation studies dealing with the effect of speed camera equipment. Further, there have been deficiencies in the conducting or reporting of many of these studies to some degree. Notwithstanding this, the results of most studies show that automatic enforcement of speed limits has reduced the number of speeding offences and possibly also increased safety (Maekinen and Hway-liem, 1992).

OPERATIONS EXPERIENCE

- 90 Speed cameras have a number of operational advantages over traditional enforcement methods.

Accuracy

- 91 Radar detection technology has a similar level of accuracy whether used in current devices or as part of a speed camera. However, laser detection technology appears to be

less prone to giving false readings and, because it has a narrower beam than radar devices, is able to identify the *speeding vehicle* when it is in close proximity to other vehicles.

- 92 However, it is important to note that while preliminary investigations suggest that laser-based technology may have a number of advantages over conventional radar-based units, this technology has not been tested on a large scale either in Australia or overseas. The security and integrity of the laser-based technology is also yet to be assessed. It is understood that this technology is currently being trialed in South Australia. The results of this process would need to be assessed in order to determine the most appropriate technology for use in Queensland.

Resources

- 93 Speed cameras have significant resource advantages over current speed limit enforcement methods. Generally, only one person is required to operate a speed camera, compared with up to five officers to operate the current slant radar device. Speed cameras can also be pole-mounted and operate without supervision. Speed camera technology, therefore, has the potential to free up Police resources for use in other areas of traffic enforcement.

Site selection

- 94 There are obvious safety benefits with the use of speed cameras, given that intercepting vehicles at the time of detection is not necessary. This also has implications for site selection in that speed cameras can be used where it is unsafe for traditional methods to be operated.
- 95 Under *Australian Standard 2898.1992* speed cameras using radar technology are subject to the same site restrictions as other radar detection devices. The standard prescribes that the effects from radio frequency interference and reflections from stationary objects must be minimised. Laser technology is not susceptible to these forms of interference and so can be operated in areas where radar is inappropriate.

The number of offenders able to be detected

- 96 Compared with traditional enforcement methods, the number of offenders able to be detected is virtually unlimited. The effective vehicle speed measurement time is 2-3 seconds using radar-based cameras and 0.3 seconds using laser-based cameras (Laser Technology Inc. advertising literature).

COSTS AND BENEFITS

- 97 The Committee is not aware of any formal cost benefit analysis which has been conducted for the use of speed cameras to date. However, the estimated establishment and ongoing operating costs of the Victorian speed camera program are provided below. An estimate of the potential community savings which might be derived from a Queensland speed camera program is also provided.

Costs

- 98 In Victoria, the establishment costs in the initial year of the speed camera program in 1991 (using 54 cameras) were \$22 million. This figure includes costs for computer hardware and software; the purchase of 54 cameras and associated equipment; first year operating costs, including testing, training and incidental costs covering office equipment and furniture; and public awareness and advertising campaigns.
- 99 Current annual operating costs have been estimated to be approximately \$5.6 million. This figure includes the salaries of unsworn and sworn personnel, postal and telephone, computer facilities film processing, office equipment, bank charges and incidentals (communication with Victorian Police).

Benefits

- 100 In their submission to the Committee, Queensland Transport provided an estimate of the potential gains which might be derived from the operation of speed cameras in Queensland. Their estimate is based on the Victorian experience of speed cameras and utilises the evaluation conducted by the Monash University Accident Research Centre (MUARC). They state :

"The potential casualty crash reductions which could be achieved in one year from the operation of a speed camera program in Queensland amount to 613 crashes. These reductions would represent a saving to the Queensland community of approximately \$48 million. However, it should be borne in mind that these projections are a tentative estimate, based on a number of assumptions, and that these crash reductions may not be sustained, at the same level, over time" (p 25).

- 101 Perhaps most importantly, the estimate indicated that of the 613 crashes which might be prevented, 21 of them would be fatal crashes. This means that a Queensland speed camera program has the potential to save a minimum of 21 lives each year.

SHOULD SPEED CAMERAS BE USED IN QUEENSLAND?

- 102 The information presented so far in this report raises several issues. In considering these issues, the Committee will address the fundamental question to arise out of this inquiry: should speed cameras be used in Queensland to enforce speed limits and control speeding?
- 103 The Committee notes that speeding in Queensland is prevalent with over half of the traffic offence notices issued each year, being issued for speeding. Also significant is that the number of fatal crashes in which speed was the main contributing factor, has steadily increased in recent years. In 1993, speed was judged to be the main contributing factor in 22% of fatal crashes, up from 18% in 1992 and 14% in 1991. The Committee is also concerned that the involvement of speed in fatal and all crashes is believed to be understated.
- 104 Queensland road crash statistics for 1993 show that about two-thirds of both speed-related crashes and all crashes occurred in 60-70 km/h speed zones. Interestingly, the same number of fatalities from speed-related crashes (34), occurred in these speed zones as occurred in 100 km/h+ speed zones. Queensland Transport (submission, p 3) conservatively estimate the costs of all these speed-related crashes in 1993 at \$90 million.
- 105 Widespread research, and basic physics, clearly show that road crash severity increases as travelling and impact speeds increase. It is also known that higher travelling speeds result in longer reaction and braking distances in an emergency situation. Whilst the research is inconclusive, it is also thought that higher travelling speeds may increase the risk of crash involvement.
- 106 The Committee has also considered the difficulties faced by authorities in controlling speeding behaviour. The transient nature of speeding; the fact that many motorists have built up a long record of driving safely whilst exceeding the speed limit; the intrinsic rewards which motorists get from speeding; and the widely held belief that speeding is not dangerous or anti-social, all contribute to making speeding behaviour difficult to deter. The inability of the Police to detect and apprehend the majority of speeding motorists, using current enforcement methods, means that motorists illegal speeding behaviour is inadvertently, and positively, reinforced through their ability to escape detection.
- 107 By contrast, speed cameras will photograph every motorist who is exceeding the speed limit past a camera. This will challenge motorist perceptions about the risk of being detected for speeding, greatly increase their chances of being detected, and very probably result in changes to speeding behaviour. Speed cameras also represent a vastly more efficient, and safer, use of Police resources. This is important given road crash statistics which shows that "disobeyed traffic rules" was cited as a contributing factor in 35% of fatal crashes and 44% of all reported crashes in 1993. The "freed-up" Police resources could then be used to enforce other traffic laws.

- 108 The Committee noted the mixed success of speed camera programs in other jurisdictions. However, all programs reported reductions of varying amounts in excessive travelling speeds. Victoria have obtained the greatest road safety result, even allowing for the effect of other road safety initiatives operating at the same time. The Monash University Accident Research Centre (MUARC) evaluation of the program is highly regarded and shows a clear road safety benefit from speed cameras in Victoria. From what the Committee have seen, speed camera programs in other jurisdictions are prevented from achieving similar levels of success, principally through insufficient cameras to both detect and deter speeding behaviour.
- 109 Whilst the Committee is aware that the Victorian speed camera program generated considerable motorist backlash, recent surveys have shown, perhaps surprisingly, that about 80% of Victorian motorists support the use of speed cameras. In fact, different authorities from each jurisdiction reported similar results from surveys conducted by their respective organisations.
- 110 Using the MUARC evaluation of the Victorian speed camera program, Queensland Transport conservatively estimate that speed cameras in Queensland could save a minimum of 21 lives and prevent about 590 injury crashes in one year. These figures; the results of the MUARC evaluation; the success of the Victorian speed camera program; the growing contribution of speed to crash causation; the clear need to alter speeding behaviour; and even the less spectacular results of speed cameras in other jurisdictions, are all difficult to ignore.
- 111 Consequently, the Committee firmly believes that speed cameras can have a significant road safety benefit. However, the Committee also has firm ideas on how a Queensland speed camera program should operate to optimise this benefit. In essence, speed cameras will not achieve expected road safety improvements unless the program has strong political commitment; is carefully planned; is wholeheartedly implemented; is strategically managed; and is operated in strict accordance with pre-determined operational procedures.
- 112 As Recommendation 1 will show, the Committee recommends that speed cameras be used in Queensland. The rest of this report proposes a model for a Queensland speed camera program. The Committee believes that this model is the best way of achieving optimum road safety benefits from such a program.

Recommendation 1

The Committee recommends that speed cameras be used in Queensland. The Committee further recommends that a Queensland Speed Camera Program be developed, implemented, managed, and operated in accordance with subsequent recommendations of this report which address the core components of the program.

Ministerial Responsibility:

- Minister for Transport

PROPOSED MODEL FOR QUEENSLAND SPEED CAMERA PROGRAM

INTRODUCTION

113 As previously noted, the Committee examined speed camera operations in four other jurisdictions and heard evidence from many witnesses at public hearings in three centres. Consequently, the Committee is in a good position to be able to propose a model for a Queensland speed camera program.

114 The development of a speed camera program for Queensland can be broken down into several separate, yet linked, phases. The Committee have determined these phases to be:

- Pre-Speed Camera Implementation
- Implementation
- Post Implementation — Core Operational Issues.

115 The Committee recognises that these phases may not be as clear-cut as stated above. However, the model is presented in this way to emphasise the importance of implementing speed cameras in a managed and strategic manner, with the ultimate aim of enhancing road safety.

PHASE 1 — PRE-SPEED CAMERA IMPLEMENTATION

Speed Limit Review

116 Throughout the inquiry, the Committee was consistently told that in many circumstances, current speed limits in Queensland are *not* credible. Many examples of irrational speed limits were provided.

117 Everyday driving experience also confirms that many motorists regard current speed limits *as a guide*, not as the maximum permissible limit. In such instances, motorists typically judge the environment to be capable of supporting a speed limit different to that which is posted.

118 Previous Travelsafe reports have recommended changes to current speed limits. Notable amongst these are:

- increased highway speed limit of 110 km/h where the road and the environment are of sufficient high quality to support such an increase;
- slight speed limit increases for major and/or arterial roads;
- a reduction of the general urban speed limit from 60 km/h to 50 km/h (for residential streets).

119 These changes are intended to be part of a rational speed hierarchy, the overall aim of

which is to encourage motorists to use roads and streets for their intended purpose. That is, either as a through route or for residential access.

- 120 The Committee is aware that the Queensland Department of Transport is proceeding with a speed limit review as part of a broader speed management strategy. To assist in this review, a comprehensive Speed Management Issues Paper was circulated for comment late in 1993. The Committee understands that consideration of the speed management issues and implementation of appropriate strategies are progressing, albeit at a slower pace than may be desirable.
- 121 With these comments in mind, the Committee believes that a thorough speed limit review is fundamental to the credibility and integrity of a speed camera program. It is equally important that current speed limits be reviewed in a consistent and systematic manner. Queensland Transport have developed a computer based application, "Q-Limits", which will provide such consistency.
- 122 The Committee believes that a network-wide speed limit review must be completed prior to the introduction of speed cameras. This review must be completed within 12 months so that the introduction of speed cameras is not delayed any longer than necessary.
- 123 Importantly, the public must be informed that speed limits *are being* reviewed, and *have been* reviewed, before speed cameras are used. Furthermore, the public must see some proof that speed limits have been reviewed through changes to existing limits.
- 124 The intended outcome of a speed limit review would be a rational speed hierarchy designed to facilitate safe, efficient traffic flow. Consequently, it would be expected that motorists would perceive speed limits to be both rational and credible. This is likely to result in a higher level of voluntary compliance. Without a speed limit review, high levels of enforcement using speed cameras *will* be seen as revenue-raising, not as a road safety initiative.

Recommendation 2

The Committee recommends that the Queensland Department of Transport conduct a network-wide review of Queensland speed limits. Such review should be completed within 12 months and prior to the introduction of speed cameras. The review should be conducted by Queensland Department of Transport regional and district offices using standards and procedures approved by the Director-General of the Queensland Department of Transport.

Ministerial Responsibility:

- Minister for Transport

Publicity and Public Education Campaigns

- 125 During the inquiry process, the Committee heard an overwhelming amount of evidence that the introduction of speed cameras should be preceded by widespread and intense publicity and public education campaigns. In the Committee's view, this is a critical component of a speed camera program, both before and after the introduction of speed

cameras.

- 126 Prior to the introduction of speed cameras, such campaigns should inform the public of why speed cameras are needed. In this regard, it would also be necessary to establish a clear link between the use of speed cameras and improved road safety.
- 127 Although not an exhaustive list, other factors to emphasise may include:
- the dangers and consequences of speeding, particularly excessive and inappropriate speeding, and why this behaviour is unacceptable;
 - the benefits of reductions in travelling speed and widespread compliance with posted speed limits.
 - the notion that speed cameras will only be one of the enforcement tools available to Police for use within a wider speed management strategy;
 - the ability of speed cameras to be used where other speed limit enforcement methods cannot be used;
 - the non-discriminatory nature of speed cameras;
 - the improved safety for Police when operating speed cameras compared with conventional slant radar operations; and
 - the human resource savings to Police associated with operating speed cameras when compared with conventional slant radar operations.
- 128 Publicity should also emphasise that a network-wide review of posted speed limits has already been completed by the Queensland Department of Transport.
- 129 In the Committee's view, these publicity and public education campaigns should also introduce the concept of a moratorium period upon the introduction of speed cameras. During this period, motorists detected speeding by a speed camera, would be sent a warning letter instead of a Traffic Offence Notice (TON).
- 130 Informing motorists about the moratorium period at this stage would help dispel revenue-raising fears and heighten awareness about the impending use of speed cameras to enforce speed limits. This matter should receive more publicity immediately prior to the introduction of the speed camera program and will be discussed later in that context.

Recommendation 3

The Committee recommends that widespread and intense publicity and public education campaigns about speed cameras should precede their introduction. Such campaigns should concentrate on the road safety benefits available from speed cameras and introduce the concept of a moratorium period upon the introduction of speed cameras.

Ministerial Responsibility:

- Minister for Transport

Technology

- 131 The use of reliable, proven technology will be vital to establishing and maintaining the integrity and credibility of the speed camera program. Motorists must be convinced that speed camera detections are valid and that the technology used is accurate. The technology used to process camera photographs must also ensure that TONs are only issued for those offences where no doubt exists as to the speed and identity of the vehicle.
- 132 To ensure that the best available proven speed camera technology is selected, a thorough and rigorous tender process is necessary. A most important aim of this tender process should be to select the best available **proven** speed camera technology. It is equally important that such technology be capable of being upgraded to use emerging technologies such as digital processing and laser detection.

Recommendation 4

*The Committee recommends that a Queensland speed camera program use the best available **proven** speed camera technology. Such technology should also be capable of being upgraded for use with emerging, more efficient technologies.*

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

PHASE 2 — IMPLEMENTATION OF A SPEED CAMERA PROGRAM

Managing Implementation

- 133 The Committee is acutely aware that the degree of initial public acceptance of speed cameras will largely depend on how their implementation is managed.
- 134 During inspections of speed camera programs in other states, the Committee was informed that committees or task forces representing major stakeholders, were formed to manage the implementation of speed camera programs. In particular, NSW formed a Speed Management Task Force to develop policies and procedures for speed camera operations and to direct the implementation of the program.

- 135 The Committee have formed the view that such an arrangement should be used to implement a speed camera program in Queensland. In evidence (11.10.94, p 56), Queensland Department of Transport witnesses told the Committee of recent Ministerial approval for the establishment of a Speed Management Steering Committee. This Committee is chaired by a Queensland Department of Transport officer and comprises representatives from the Queensland Police Service; the Local Government Association; the Brisbane City Council; the RACQ; and the Institution of Engineers.
- 136 As speed cameras should be regarded as just one component of an overall speed management strategy, the Speed Management Steering Committee would seem an ideal vehicle for managing the development and implementation of a Queensland speed camera program. Given the sensitivity and importance of many issues surrounding the use of speed cameras, it may be appropriate for the full Committee to be involved with speed cameras. Alternatively, a sub-committee dedicated to speed cameras, could be formed.
- 137 Whichever option is used, the committee managing the implementation of speed cameras should be responsible for developing policies and procedures for all aspects of speed camera implementation, management, and operation. Specific attention should be given to establishing speed camera site selection criteria and Police operational procedures. These two aspects are integral to the credibility, success and acceptance of speed cameras. Using a representative committee to develop these criteria and procedures, will spread responsibility for all aspects of the speed camera program across the member stakeholders. This will help maintain the road safety focus.
- 138 However, the Committee is concerned that the Speed Management Steering Committee may not sufficiently represent the views and interests of the motoring public or of the community. Whilst it could be argued that these views will be put forward by the RACQ and the local government representatives, the Committee believes that community groups should be given an opportunity to more directly provide input. More importantly, the views of road users *other than motorists*, should be part of the consultation and decision-making process. This is particularly important during the development of speed camera site selection criteria where residents' complaints must be considered if speed cameras are to be used to *prevent* accidents instead of *in response* to accidents.

Initial Implementation

- 139 The Committee believes that the initial implementation period of speed cameras must have two key components.
- 140 Firstly, additional widespread and intense publicity and public education campaigns must be conducted to alert motorists to the impending use of speed cameras to enforce speed limits. These campaigns should commence just prior to the first use of speed cameras and continue for at least the first month of speed camera operations.
- 141 Secondly, and as discussed earlier, speed cameras should be introduced with a short moratorium period. The Committee has decided on one month as the minimum period for such a moratorium. A shorter period would not give motorists enough warning of

speed camera introduction. Too long a period may inadvertently signal to motorists that the control of speed and the enforcement of speed limits are unimportant.

- 142 Another advantage of a moratorium is that the Police, as the operating agency, will have time to identify and rectify any policy, procedure, processing and operational problems. The eradication of any such problems prior to the issue of TONs is important to establish community confidence in the program.

Recommendation 5

The Committee recommends that the Speed Management Steering Committee manage the implementation of a Queensland speed camera program. Furthermore, the Speed Management Steering Committee should be responsible for developing all policies and procedures in relation to speed camera operations.

Ministerial Responsibility:

- Minister for Transport

Recommendation 6

The Committee recommends that speed cameras be introduced with a short moratorium period during which offending motorists are issued with a warning letter instead of a Traffic Offence Notice.

Ministerial Responsibility:

- Minister for Police
- Minister for Transport

Recommendation 7

The Committee recommends that additional widespread and intense publicity and public education campaigns to inform the public of the impending use of speed cameras be conducted. Such campaigns should commence just prior to the introduction of speed cameras and continue throughout the moratorium period.

Ministerial Responsibility:

- Minister for Transport

PHASE 3 — POST-IMPLEMENTATION — CORE OPERATIONAL ISSUES

- 143 In the Committee's view, this third and final phase is critical to the success and community acceptance of speed cameras. Obviously, the issues discussed in this section will have to be decided upon well before speed cameras are introduced. Likewise, any administrative infrastructure necessary for the proper functioning of these aspects of the program, will have to be in place prior to speed camera implementation.

144 The issues discussed in this section are, in the Committee's opinion, the main ones which need to be addressed in the design and implementation of a Queensland speed camera program.

Part of A Broader Speed Management Strategy

145 The Committee was consistently told that speed cameras are, and should be, just one component of a broader speed management strategy. Speed cameras should be regarded as an additional tool available for Police to use in their efforts to deter and detect speeding drivers. In particular, speed cameras allow Police to enforce speed limits in areas where current enforcement methods are unsuitable, unsafe, or inefficient.

146 The Committee believes that an effective speed management strategy must provide for flexible use of the speed management and enforcement options available. Limiting the use of some of the options to particular circumstances simply reduces the flexibility, and potentially the effectiveness, of the overall strategy. Operational procedures for each of the enforcement options should be sufficient to ensure the enforcement tool is used as intended.

147 Consequently, the Committee rejects the argument that speed cameras should only be used at sites where all other enforcement methods are unable to be used. Because speed cameras provide greatly increased efficiencies in the use of Police resources, they should be used at sites where such efficiencies will benefit Police traffic enforcement operations.

Recommendation 8

The Committee recommends that speed cameras be used as part of a broader speed management strategy.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Recommendation 9

The Committee recommends that speed cameras be permitted to be used in any situation which satisfies the criteria for speed camera operation and that their use NOT be limited to only those locations where other speed limit enforcement tools are unable to be used.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Legislation

- 148 Evidence provided by Queensland Department of Transport officers (11.10.94, p 63) suggests that few legislative amendments are required to provide for the use of speed cameras in Queensland. The existing provisions for the operation of the red light cameras can be amended to include speed camera detection of speeding offences.
- 149 The Committee was also advised by the Minister for Justice and Attorney-General and Minister for the Arts, the Hon Dean Wells MLA, that amendments to the *Evidence Act 1977* may be required. These amendments may be necessary because of possible implications which could arise from allowing speed camera photographs to be admissible as evidence in a court of law.
- 150 From information received, it would seem that minimal legislative amendments will be necessary to enable speed cameras to be used. Upon a decision to proceed with a speed camera program, these amendments should be made.

Recommendation 10

The Committee recommends that the necessary amendments to legislation which will provide for the use of speed cameras in Queensland, be completed prior to the implementation of a Queensland speed camera program.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police
- Minister for Justice

Scope of Speed Camera Operations

- 151 In order to support a general deterrent effect, and in fact to achieve this effect, the Committee believes that speed cameras should be used throughout the State. Obviously, the cameras would have to be used at sites which satisfy the site selection criteria. However, the intended effect of this would be for motorists to come to believe that speed camera enforcement could be happening on any part of the Queensland road network at any time.

Recommendation 11

The Committee recommends that speed cameras be implemented for use throughout Queensland at any site which satisfies the speed camera site selection criteria.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Number of Cameras Required

- 152 The Committee believes that this issue is very important for the success of the speed camera program. Underlying the Committee's recommendation on the number of speed cameras to be used, is a strong belief that if a speed camera program is to be implemented, it should be "done properly" from the outset. Part of what the Committee sees as "properly" is sufficient numbers of cameras to effect State-wide speed camera enforcement.
- 153 Initial meetings with officials from New South Wales, South Australia and Victoria convinced the Committee that an insufficient number of speed cameras will severely damage the credibility and stated road safety intentions of the program. With too few cameras, detected motorists will very likely feel "unlucky" in much the same way as they do now with radar operations. This obviously runs counter to the aim of wanting motorists to perceive a very high chance of being detected anywhere at any time.
- 154 In evidence (10.10.94, p 12), Queensland Police officers estimated that 10-12 speed cameras would be sufficient for a Queensland-wide speed camera program. Based on what the Committee saw in New South Wales, South Australia, Victoria and New Zealand, this would appear to be a great under-estimation of the number required.
- 155 It could be argued that a small number of effectively deployed speed cameras will achieve the same result as a large number of speed cameras in use at any one time. The Committee accepts that speed camera resources must be effectively and strategically deployed to achieve maximum effort.
- 156 However, the Committee believes that, even with rigorous management and strategic deployment of speed cameras, the *absolute* minimum number of cameras required for Queensland would be 90. This would provide for six speed cameras per Police district.
- 157 The Committee concedes there is some uncertainty as to the exact number of cameras which will be required to ensure an effective speed camera program in Queensland. Therefore, the Committee believes that the proposed number of cameras must be reviewed after six months of operations. If worthwhile results are not forthcoming after this period, consideration must be given to purchasing additional cameras to expand the program.

Recommendation 12

The Committee recommends that the Queensland Speed Camera Program be implemented with an absolute minimum of 90 cameras. This number should be reviewed after six months operation.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Who Should Operate the Speed Cameras?

158 The Committee heard a number of suggestions regarding who should operate speed cameras. The most common options were:

- Uniformed Police officers;
- Queensland Department of Transport officers;
- Local government officers; and
- Police-trained, civilian operators.

159 The Committee understands that South Australia and Victoria are considering the use of Police-trained civilian operators. The respective Police Services will retain control of the program with civilians actually operating the cameras. The Committee accepts that this arrangement may be appropriate in the context of speed camera programs which have been in operation for several years.

160 An alternative option put to the Committee is for local authority enforcement officers to operate speed cameras. The Committee received submissions and heard evidence that some local authorities would like to use speed cameras to combat speeding problems in residential streets. The basis of these suggestions was that speed cameras would provide a more effective and less costly means of combating this problem than implementing local area traffic management (LATM) schemes.

161 On balance, the Committee believes that uniformed Police officers should operate speed cameras, at least in the initial stages. This is considered essential in order to establish the credibility and integrity of the program, and to reinforce the road safety importance of enforcing speed limits. The use of non-Police operators, at least in the initial years, would, in the Committee's view, downgrade the serious nature of speeding as a life-threatening offence. Motorists may come to believe that speeding is not serious enough to warrant Police attention and subsequently perceive speed cameras to be nothing more than revenue raising.

162 However, if after five years of successful speed camera operation, the program is judged to be effective in changing speeding behaviour, consideration should be given to using non-Police operators. Even if this should occur, the Queensland Police Service should retain control of the operation of the program.

Recommendation 13

The Committee recommends that uniformed Police should be the sole operators of speed cameras in Queensland for the first five years of the program. Other options for operation of the cameras could be considered after that time, but only if the Queensland Police Service retain operational control of the speed camera program.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Police Officer Training

- 163 In the Committee's view, only *trained Police officers* should be permitted to operate speed cameras. Whilst this may seem obvious, it is nonetheless fundamental to the success of a speed camera program.
- 164 In brief, the Committee believes that any Police officer who operates a speed camera should be properly trained in the use of the camera. This will help ensure that all procedures are observed and that any operational problems are appropriately handled. In addition, Police operators of speed cameras should be trained in the basic philosophy and aims of the speed camera program. In the Committee's view, this will facilitate adherence to operating procedures and guard against improper use of speed cameras.

Recommendation 14

The Committee recommends that only trained Police officers be permitted to operate speed cameras. Such training should cover operation of the cameras as well as instruction on the basic philosophy and aims of the speed camera program.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Police Operational Procedures

- 165 The Committee was informed that comprehensive speed camera operating procedures are used in other jurisdictions where speed cameras are in use. In evidence, Queensland Police Service witnesses tendered a copy of current Police procedures for the use and operation of the various radar detection devices. These procedures cover all aspects of the operation of these devices.
- 166 In the Committee's view, detailed speed camera operating procedures should be developed for use by all Queensland speed camera operators. The current guidelines for Queensland radar detection operations and speed camera operational procedures from other jurisdictions, should form the basis for such procedures.
- 167 The Committee is also of the view that the procedures contain clear processes for dealing with any officer who fails to comply with the operational guidelines. Appropriately, this will provide for the Police Service to deal with any possible abuse of the procedures by Police Service members. In addition to the Police Service dealing with the matter internally, the Committee believes that any breach of the guidelines should be reported to the Speed Management Steering Committee. This process will enhance accountability given that the committee will represent core stakeholders.
- 168 In line with a desire for accountability, the Committee believes that the Police operational procedures, and the level of Police compliance with them, should also be independently audited. This should occur on a regular basis and is seen by the Committee as one way of maintaining the integrity and credibility of the speed camera program.

Recommendation 15

The Committee recommends that detailed procedures for the operation of speed cameras be developed by the Queensland Police Service. Such procedures should incorporate procedures for dealing with any officer who fails to comply with the guidelines, with a report on any such incident being provided to the Speed Management Steering Committee.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Recommendation 16

The Committee recommends that the Police operational procedures, and the level of Police compliance with them, be independently audited on a regular basis.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Site Selection

- 169 This issue, perhaps more than any other, has the greatest potential impact on the success or failure of the speed camera program. Motorists will be vigilant for what they perceive to be inappropriate speed camera sites, such as at the bottom of hills and on straight, flat stretches of road.
- 170 During interstate and overseas inspections, the Committee heard that speed camera sites are primarily selected according to their history of crashes. Some jurisdictions used speed-related crashes as the principal crash-based selection criteria, whilst others considered all types of crashes. The severity of the crash is also considered.
- 171 The Committee accepts that one of the speed camera site selection criteria should be the history of speed-related crashes, and all types of crashes for locations where crash rates are high. This latter factor allows for an accepted under-reporting of speed as a contributing factor in crashes (Queensland Police Service evidence 10.10.94, p 2). Using this information as one of the speed camera site selection criteria will help ensure the program has a clear road safety focus.
- 172 However, the Committee notes that crashes rarely occur at the exact same location as previous crashes. Rather, accidents would appear to occur at different locations within a defined section of road. It is therefore possible that speed camera sites could be sections of road several kilometres long.
- 173 The Committee also firmly believes that site selection criteria should ensure that speed cameras are used to address speed-related traffic problems in residential streets. As Table 2 (p 6) in this report shows, two-thirds of speed-related crashes occur in 60-70

km/h speed zones. In the Committee's view, it would be fair to assume that a reasonable number of these crashes occur in residential streets.

- 174 Evidence heard from local authority representatives and members of the community, supports this assumption. The Committee heard that residents' complaints about speeding in residential streets was one of the major traffic problems in local authority areas. For example, Evanson (evidence 11.10.94, p 95) stated that residents complaints about excess traffic volume in their streets are, upon investigation, often complaints about excess speed. It was also commonly stated that the use of speed cameras on major roads, would encourage "rat-running", especially if speed cameras were not widely used in residential streets.
- 175 The Committee agrees that motorists would seek to avoid speed cameras on major roads by using alternate "rat-run" routes through residential streets. This would adversely affect the level of safety in these streets. Concentrating speed camera use on major roads may also endanger the level of public support for speed cameras. It is worth noting that whilst evidence heard by the Committee generally supported the use of speed cameras to enforce speed limits, much of this support was contingent upon speed cameras also being used to provide relief from speed-related traffic problems in residential streets.
- 176 Consequently, the Committee believes that the only way of ensuring speed cameras will be used in residential streets is for the site selection criteria to demand that they be used in residential streets for a set proportion of speed camera operating time. In this regard, the Committee believes that speed cameras must be used in residential streets for at least 25% of their operating time. This will help address widespread concerns about speeding traffic in residential areas. It will also clearly inform motorists that they will not avoid speed camera detection by "rat-running" through residential streets.
- 177 Local stakeholders should be involved in selecting actual speed camera *sites*, in accordance with the site selection *criteria* laid down by the Speed Management Steering Committee. Local stakeholders would include equal representation from Police, RACQ, local authority, Queensland Department of Transport, and community groups. The Committee considers this local input to be vital to the success and widespread acceptance of speed cameras. In the Committee's view, having the sites selected by a Brisbane-based committee would fail to sufficiently account for local factors and local knowledge.
- 178 It is important to note that the actual sites selected through this process would represent a pool of *potential* sites. In addition to satisfying the selection criteria, all potential sites would need to be audited to assess the suitability of the site for speed camera operations. It may be the case in some circumstances, that an alternative countermeasure such as an engineering modification would be more appropriate, or that locational characteristics would interfere with camera operations. This audit process is particularly important given that information about crashes, other than speed related crashes are included in the site selection process.
- 179 Further, the Committee believes that the sites selected must also be reviewed periodically. This process would ensure that use of speed cameras continues to be the most appropriate countermeasure at any chosen site.

180 In the Committee's opinion, site selection criteria and the processes of selecting potential sites, auditing and reviewing these sites, are issues fundamental to the credibility and success of the program. Standard criteria must be developed with the community given the opportunity to become involved in selecting speed camera sites in their area. An audit and periodic review of sites must be also conducted. Such an approach will ensure that sites are selected according to pre-determined road safety criteria; that speed cameras are the most appropriate road safety measure to use at the sites; and that the local community has some input, ownership and subsequent commitment to the use of speed cameras in their area.

Recommendation 17

The Committee recommends that speed camera site selection criteria be established by the Speed Management Steering Committee. The basis of such criteria should be the history of speed-related crashes and of all crashes where crash rates are high. The criteria should also require speed cameras to be used in residential streets for at least 25% of their operating time and provide for residents' complaints about speeding traffic to be input into the site selection process.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Recommendation 18

The Committee recommends that sites in all areas be selected by representatives from the local community. This would comprise equal representation from Police, RACQ, Local Government, Queensland Department of Transport, and residents. Site selection should be based upon the site selection criteria developed by the Speed Management Steering Committee.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Recommendation 19

The Committee recommends that all potential speed camera sites selected be subject to an audit to ensure the appropriateness of speed camera operations at each site. A periodic review of selected sites should also be conducted to ensure that the use of speed cameras continues to be the most appropriate road safety countermeasure at each chosen site.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Management/Deployment of Speed Cameras

- 181 The Committee heard strong evidence to suggest that the effectiveness of a speed camera program can be greatly enhanced through the strategic management and random deployment of speed cameras across all identified sites. The aim of this process is to create the perception that speed cameras could be operating anywhere at any time.
- 182 Queensland Department of Transport officers (evidence 11.10.94, p 52 and submission p 46) told the Committee of the management system which deploys Police resources under the Random Road Watch (RRW) program. The system randomly deploys Police resources to patrol sites throughout the various parts of the road network.
- 183 This approach serves to establish and maintain the perception among motorists that a Police vehicle could be located anywhere along a section of road (Queensland Transport, 1993b). In their submission (1994) Queensland Transport noted that the random scheduling techniques employed under this system enable a broad coverage of the road network whilst maintaining control over where and when enforcement resources are deployed.
- 184 The Committee believes that motorists must perceive a high probability of being detected for speeding whenever and wherever they drive. Random deployment of speed cameras across all selected speed camera sites appears to be the most effective way of using speed camera and Police resources to achieve this effect.

Recommendation 20

The Committee recommends that the management system used to deploy Police resources under the Random Road Watch program, be used to randomly deploy speed cameras across identified speed camera sites throughout the State.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Hours of Operation

- 185 Again, in order to achieve a general deterrent effect, it is important that speed cameras are operated at any time of the day. In this way, motorists will be persuaded to decide against speeding at *all* times, as they will perceive an enforcement presence at any time they travel.
- 186 The Committee heard anecdotal evidence that speed cameras in other jurisdictions are operated during the hours which are convenient to Police. However, on its visit to Victoria, the Committee saw how the Victorian Police are matching speed camera presence at a site, with the accident record of that site. This approach is supported by the Committee.

Recommendation 21

The Committee recommends that speed cameras operate at any time of the day or night. Ideally, speed cameras should operate at a site at the times which match the crash history, and/or speeding complaint history, of that site.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Speed Camera Signs

- 187 Many suggestions were received by the Committee on what method of signing should be used with speed cameras. Suggestions ranged between the two extremes of no signs to a proliferation of signs.
- 188 The method of signing used in other jurisdictions varied. In New South Wales, a large permanent sign is erected on the perimeter of a number of speed camera sites to warn motorists they are entering a speed camera area. A smaller, portable "sandwich board" sign is then used on the departure side of the actual speed camera. South Australia have similar signs after the speed cameras. New Zealand have a permanent sign which says "Speed Camera Zone Ahead". A speed camera could be used anywhere throughout the zone at any time. Victoria have general permanent perimeter signs at all entry points into the State. The sign is similar to those used in the Queensland Red Light Camera program and says "Speed Cameras in Use Throughout Victoria" (or similar).
- 189 The Committee has grave concerns about the merit of using signs before and/or after a speed camera. In the Committee's view, this simply tells motorists when and where they have to observe the speed limit if they are to avoid detection. It may also suggest that speeding is acceptable throughout other sections of the road network. For similar reasons, the Committee does not favour placement of a permanent sign at each speed camera site or on the perimeter of a number of sites. There is also a significant cost associated with these signs, and with sign removal when and if, the site no longer meets the criteria of a speed camera site.
- 190 The Committee is also concerned that general permanent perimeter signs *only* may not be sufficient reminder for motorists. Repeater signs, similar to the perimeter signs, at strategic locations throughout the road network, would provide regular reminders to motorists of their need to observe speed limits.

Recommendation 22

The Committee recommends that general, permanent perimeter signs, similar to those used in the Queensland Red Light Camera program be used to warn motorists of speed camera use. These signs should be placed on all major roads and supported by repeater signs at strategic locations throughout the road network.

Ministerial Responsibility:

- Minister for Transport

Tolerance Levels

- 191 The Committee heard a variety of methods for setting tolerance levels on speed cameras. Tolerance levels are necessary to provide a margin of error on both vehicle speedometers and the equipment used by Police to detect speeding motorists.
- 192 In New South Wales, speed cameras were initially introduced with a 15 km/h tolerance. After allowing a further 1 km/h for equipment error, this meant that a motorist had to be exceeding the speed limit by 17 km/h before being detected with a speed camera. However, it also meant that authorities were able to promote the use of speed cameras as a means of detecting excessive speeders.
- 193 Other Australian authorities use either a 10 percent variance above or 10 km/h above the speed limit as tolerance levels. The Committee notes that a 10 km/h tolerance above the speed limit would allow a travelling speed of 50 km/h in 40 km/h zones. This would appear to negate the benefits of establishing a 40 km/h or 50 km/h zone in the first place.
- 194 New Zealand authorities have based their tolerance level on 85th percentile speeds. The aim of this approach is to target excessive speeders. In effect, the enforcement speed is set by the travelling speed of 85 percent of the motorists, with the 15 percent of motorists who exceed this speed, subsequently targeted for speed camera detection.
- 195 The Committee is concerned about how this approach works in practice. Eighty-fifth percentile speeds vary throughout the day on even the smallest sections of road. If implemented strictly, speed cameras would require constant change. On every occasion, this would require initial monitoring of the traffic stream to measure current vehicle speeds so that the 85th percentile speed could be calculated. Further, this approach is likely to result in some public backlash with motorists being booked at different enforcement speeds at the same site on the same day.
- 196 The Committee accepts that some tolerance is necessary in order to allow for vehicle speedometer and detection equipment error. However, despite hearing evidence to the contrary, the Committee is concerned that a high tolerance level would result in a de facto speed limit being established.
- 197 The Committee favours using a tolerance level of 10% above the posted speed limit as the optimum enforcement level. Even if this fact is publicised, it will help keep speeding to a manageable level and provide sufficient margin for speedometer and detection equipment error. Furthermore, the Committee is of the view that motorists should need

little margin for error if all other factors of the speed camera program, such as a speed limit review, publicity, education, signing etc, are implemented.

Recommendation 23

The Committee recommends that the tolerance level for speed camera detection be set at 10% above the speed limit. This will allow for speedometer and speed detection equipment error and help maintain travelling speeds at or near the speed limit.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Demerit Points

198 The Committee notes that different jurisdictions have different policies regarding the accumulation of demerit points for speed camera detected offences. The three main options appear to be:

- demerit points do not apply to any driver;
- demerit points do not apply to the registered owner of a vehicle but they do apply to any other nominated driver; and
- demerit points apply to all drivers in the same way as they do for all other offences which attract accumulation of demerit points.

199 The Committee notes a significant body of research which shows that accumulation of demerit points is effective in deterring drivers from committing traffic offences. When compared with the accumulation of demerit points, the imposition of monetary fines has a more immediate, but short-lived effect. However, accumulation of demerit points may result in a driver losing his/her licence whilst the payment of monetary fines will not affect the person's ability to hold a licence.

200 In addition, the imposition of monetary fines does not affect all drivers equally in terms of deterring deviant driving behaviour. Monetary fines will obviously affect low income earners far more dramatically than high income earners. Low income earners may modify behaviour to avoid further loss of money, whereas high income earners may not, given their greater capacity to pay fines. Accumulation of demerit points, as well as the imposition of monetary fines, will treat all drivers equitably irrespective of their income level.

201 The Committee does support the use of owner/onus legislation. This legislation allows registered owners to avoid speed camera fines if they were not driving the vehicle at the time of the offence. Registered owners must, however, name the person driving at the time of the offence or declare that the car was stolen or taken without their knowledge and/or consent, in order to avoid fine payment and accumulation of demerit points. This could be accomplished using a statutory declaration. The Committee is aware that similar provisions exist for the Queensland Red Light Camera program.

Recommendation 24

The Committee recommends that the accumulation of demerit points applies to speed camera detected offences, in the same way as they do for speeding offences detected using other speed enforcement tools.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Recommendation 25

The Committee recommends that suitable owner/onus legislation provide for registered owners of motor vehicles to declare they were not driving the vehicle at the time of the offence. The declaration should name the person driving at the time of the offence or state that the car was stolen or taken without knowledge and/or consent; otherwise the registered owner shall be liable for both the payment of the monetary fine and accumulation of demerit points.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Corporately Registered Vehicles

- 202 A Queensland speed camera program should include procedures for dealing with offenders driving vehicles registered in a corporate or organisational name.
- 203 The Committee were informed that Victorian speed camera legislation requires a "notice of intention to proceed" and "demand for details" to be sent to corporately registered vehicle owners. The registered owner must nominate who was driving the vehicle at the time of the offence or risk being fined \$600, having the vehicle registration suspended for three months, and having to pay the original speeding fine. It is not known if corporate vehicle owners in Victoria can avoid payment if the car was being used without their knowledge and/or consent.
- 204 However, the Committee believes a Queensland Speed Camera program should include some mechanism for corporate vehicle owners, in much the same way as private vehicle owners can, to declare absence of knowledge and/or consent.

Recommendation 26

The Committee recommends that owners of corporately registered vehicles be required to provide details of the driver of any of their vehicles photographed by speed cameras. Appropriate penalties should apply for failure to provide such details. Corporately registered vehicle owners should also be given the opportunity to declare the vehicle was stolen or being used without their knowledge and/or consent at the time the offence was committed.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Marked Or Unmarked Speed Camera Vehicles

- 205 Speed cameras are usually operated from a specially equipped Police vehicle or on a tripod immediately outside the vehicle. The manner in which speed cameras are set up within the vehicle is largely dependent on the type of speed cameras used. Pole-mounted speed cameras have also recently been introduced in some jurisdictions.
- 206 The use of marked or unmarked Police vehicles for speed cameras operated from within, or just outside, a vehicle varies across jurisdictions. To enhance the general deterrent effect of speed cameras, the Committee believes that a Queensland speed camera program should use marked Police vehicles for all vehicle mounted or operated speed cameras. This would avoid accusations of covert detection of speeding vehicles.

Recommendation 27

The Committee recommends that marked Police vehicles be used for all speed cameras operated from or immediately adjacent to Police vehicles. Such markings should clearly identify the vehicle as a Police vehicle and the vehicle should be clearly visible throughout its use with a speed camera at a speed camera site.

Ministerial Responsibility:

- Minister for Police

Speed Camera Offence Processing

- 207 It is imperative that processing time for speed camera detected offences be kept to an absolute minimum. The Committee were told of varying times for offence processing in other jurisdictions, ranging from 3-5 days to 6 weeks.
- 208 Road safety research has shown that the closer the receipt of a penalty is to the time the offence is committed, the greater the deterrent effect is likely to be. This clearly links the offence with its consequences and immediately informs the motorist that errant behaviour will be swiftly and surely punished. A short processing time is also important for speed camera offences so that drivers do not run the risk of unlicensed driving through the unknown accumulation of demerit points.

- 209 In evidence, Queensland Police (10.10.94, p 2) told the Committee that a three day processing time for speed camera offences would be reasonable. Indeed, such a short turnaround time should be the goal, with technological advances reducing this time in the future.
- 210 Offence processing should also include procedures for culling out unsuitable photos. This would reduce the number of disputes, with motorists receiving the benefit of any doubt. Examples of unsuitable photos include two vehicles in a photo and unclear or obscured number plates.
- 211 The Committee also believes that speed camera photographs should not be automatically sent out with Traffic Offence Notices. Rather, they should be available on request. Motorists could have photos mailed out (for a nominal fee) or could attend the processing office to view the photo.
- 212 Offence processing procedures should ensure that drivers of all types of vehicles are treated equitably. In particular, drivers of Police and other emergency vehicles should not escape punishment unless vehicle and officer logs verify and justify their speeding behaviour.
- 213 It is also fundamental that speed camera offence processing include security and quality checks, whilst being completely tamper-proof. Offence processing operations inspected by the Committee in Victoria and New Zealand, provide good models upon which to base this aspect of a Queensland speed camera program.

Recommendation 28

The Committee recommends that speed camera offence processing times be as short as possible, with three days from the time the offence is committed to when a Traffic Offence Notice is mailed out, the initial aim for processing time.

Ministerial Responsibility:

- Minister for Transport
- Minister for Police

Recommendation 29

The Committee recommends that speed camera offence processing include procedures and guidelines for culling unsuitable photographs. Such procedures should also incorporate clearly defined steps for processing offences involving Police or other emergency vehicles.

Ministerial Responsibility:

- Minister for Police

Recommendation 30

The Committee recommends that speed camera offence processing incorporate appropriate security and quality checks.

Ministerial Responsibility:

- Minister for Police

Use of Speed Camera Revenue

- 214 Much of the public debate and comment about a Queensland speed camera program is likely to be about the significant amount of revenue the program will generate. The Victorian speed camera program collects about \$50m of revenue annually whilst New Zealand expects to collect about \$20m in the first year of operation. Operating costs are then recovered from this revenue.
- 215 The Committee sought many opinions on what should be done with speed camera revenue. Three main options emerged:
- all speed camera revenue should go to consolidated revenue;
 - all speed camera revenue should be used to fund road safety programs;
 - speed camera revenue should be apportioned between consolidated revenue and road safety programs.
- 216 The most common suggestion was for all speed camera revenue to be used to fund road safety programs. This would include programs across all areas of road safety such as, for example, road construction, eradication of "black spots", and road safety education.
- 217 The Committee strongly believes that speed camera revenue could also be used to establish and improve road crash victim treatment facilities. Speed camera revenue could also provide funding for road safety research.
- 218 However, the Committee is concerned that this approach could raise allegations of "revenue targets" from the speed camera program. That is, accusations of a need to attain and maintain pre-determined speed camera revenue levels to fund certain road safety programs, may emerge. This is most likely to occur with long-term, recurring road safety programs.
- 219 Consequently, the Committee supports the use of speed camera revenue to fund short-term, non-recurring road safety programs or projects. Furthermore, funding should be provided from the previous year's speed camera revenue.
- 220 In the Committee's view, the use of speed camera revenue for road safety programs would be a very effective way of convincing the public that speed cameras are benefiting motorists. Not only will speed cameras contribute to improved road safety through driver behaviour modification, but the resulting revenue will be channelled back into

road, vehicle and driver improvements. Motorists are far more likely to accept a speed camera program which has a clear operational focus on road safety, and with further road safety benefits accruing from revenue raised.

Recommendation 31

The Committee recommends that all revenue generated by a Queensland speed camera program be used to fund short-term, non-recurring road safety programs and projects. Such funding should be provided from the previous year's speed camera revenue and should be used across the broad spectrum of road safety programs.

Ministerial Responsibility:

- Minister for Transport
- Treasurer

CONCLUSIONS

- 221 There is no doubt that speed cameras are a very sensitive community issue. Part of this sensitivity results from the perception that speed cameras are no more than revenue-raisers. It is also the result of the still widely held view that speeding is not dangerous, nor is it believed to be anti-social. The fact that motorists can exceed the speed limit by varying amounts and not be caught or have a crash, continually reinforces this view.
- 222 However, road safety research shows that speed is clearly related to the severity of injuries likely to be sustained in a crash. Obviously, the higher travelling speeds are, the more likely it is that a road crash will result in a fatality or serious injury. Consequently, it is of considerable concern to the Committee that road crash statistics reveal a disturbing upward trend in the number of fatal crashes in which speed is a major contributing factor.
- 223 The Committee believes that speed cameras can be very effective in detecting speeding motorists and in deterring speeding behaviour, so that this trend is slowed, and eventually reversed. It is also obvious to the Committee, that current speed enforcement tools will not achieve the same result.
- 224 Similarly, the Committee cannot ignore the potential road safety benefits which would very likely result from using speed cameras. Many lives could be saved and hundreds more road users could avoid road crash injuries, *each year*, in Queensland. **Substantial cost savings to the community would also accrue from these reductions.**
- 225 In the Committee's view, the model proposed by the recommendations in this report represents the best way of achieving road safety benefits from speed cameras in Queensland. The Committee also believes the model represents the best way of establishing and maintaining community support for speed cameras.

SUMMARY OF RECOMMENDATIONS

Recommendation 1

The Committee recommends that speed cameras be used in Queensland. The Committee further recommends that a Queensland Speed Camera Program be developed, implemented, managed, and operated in accordance with subsequent recommendations of this report which address the core components of the program. Page 23

Recommendation 2

The Committee recommends that the Queensland Department of Transport conduct a network-wide review of Queensland speed limits. Such review should be completed within 12 months and prior to the introduction of speed cameras. The review should be conducted by Queensland Department of Transport regional and district offices using standards and procedures approved by the Director-General of the Queensland Department of Transport. Page 25

Recommendation 3

The Committee recommends that widespread and intense publicity and public education campaigns about speed cameras should precede their introduction. Such campaigns should concentrate on the road safety benefits available from speed cameras and introduce the concept of a moratorium period upon the introduction of speed cameras. Page 27

Recommendation 4

The Committee recommends that a Queensland speed camera program use the best available **proven** speed camera technology. Such technology should also be capable of being upgraded for use with emerging, more efficient technologies..... Page 27

Recommendation 5

The Committee recommends that the Speed Management Steering Committee manage the implementation of a Queensland speed camera program. Furthermore, the Speed Management Steering Committee should be responsible for developing all policies and procedures in relation to speed camera operations..... Page 29

Recommendation 6

The Committee recommends that speed cameras be introduced with a short moratorium period during which offending motorists are issued with a warning letter instead of a Traffic Offence Notice..... Page 29

Recommendation 7

The Committee recommends that additional widespread and intense publicity and public education campaigns to inform the public of the impending use of speed cameras be conducted. Such campaigns should commence just prior to the introduction of speed cameras and continue throughout the moratorium period. Page 29

Recommendation 8

The Committee recommends that speed cameras be used as part of a broader speed management strategy. Page 30

Recommendation 9

The Committee recommends that speed cameras be permitted to be used in any situation which satisfies the criteria for speed camera operation and that their use NOT be limited to only those locations where other speed limit enforcement tools are unable to be used. . Page 30

Recommendation 10

The Committee recommends that the necessary amendments to legislation which will provide for the use of speed cameras in Queensland, be completed prior to the implementation of a Queensland speed camera program. Page 31

Recommendation 11

The Committee recommends that speed cameras be implemented for use throughout Queensland at any site which satisfies the speed camera site selection criteria. Page 31

Recommendation 12

The Committee recommends that the Queensland Speed Camera Program be implemented with an absolute minimum of 90 cameras. This number should be reviewed after six months operation. Page 32

Recommendation 13

The Committee recommends that uniformed Police should be the sole operators of speed cameras in Queensland for the first five years of the program. Other options for operation of the cameras could be considered after that time, but only if the Queensland Police Service retain operational control of the speed camera program. Page 33

Recommendation 14

The Committee recommends that only trained Police officers be permitted to operate speed cameras. Such training should cover operation of the cameras as well as instruction on the basic philosophy and aims of the speed camera program. Page 34

Recommendation 15

The Committee recommends that detailed procedures for the operation of speed cameras be developed by the Queensland Police Service. Such procedures should incorporate procedures for dealing with any officer who fails to comply with the guidelines, with a report on any such incident being provided to the Speed Management Steering Committee. Page 35

Recommendation 16

The Committee recommends that the Police operational procedures, and the level of Police compliance with them, be independently audited on a regular basis. Page 35

Recommendation 17

The Committee recommends that speed camera site selection criteria be established by the Speed Management Steering Committee. The basis of such criteria should be the history of speed-related crashes and of all crashes where crash rates are high. The criteria should also require speed cameras to be used in residential streets for at least 25% of their operating time and provide for residents' complaints about speeding traffic to be input into the site selection process. Page 37

Recommendation 18

The Committee recommends that sites in all areas be selected by representatives from the local community. This would comprise equal representation from Police, RACQ, Local Government, Queensland Department of Transport, and residents. Site selection should be based upon the site selection criteria developed by the Speed Management Steering Committee. Page 37

Recommendation 19

The Committee recommends that all potential speed camera sites selected be subject to an audit to ensure the appropriateness of speed camera operations at each site. A periodic review of selected sites should also be conducted to ensure that the use of speed cameras continues to be the most appropriate road safety countermeasure at each chosen site. Page 37

Recommendation 20

The Committee recommends that the management system used to deploy Police resources under the Random Road Watch program, be used to randomly deploy speed cameras across identified speed camera sites throughout the State. Page 38

Recommendation 21

The Committee recommends that speed cameras operate at any time of the day or night. Ideally, speed cameras should operate at a site at the times which match the crash history, and/or speeding complaint history, of that site. Page 39

Recommendation 22

The Committee recommends that general, permanent perimeter signs, similar to those used in the Queensland Red Light Camera program be used to warn motorists of speed camera use. These signs should be placed on all major roads and supported by repeater signs at strategic locations throughout the road network. Page 40

Recommendation 23

The Committee recommends that the tolerance level for speed camera detection be set at 10% above the speed limit. This will allow for speedometer and speed detection equipment error and help maintain travelling speeds at or near the speed limit. Page 41

Recommendation 24

The Committee recommends that the accumulation of demerit points applies to speed camera detected offences, in the same way as they do for speeding offences detected using other speed enforcement tools. Page 42

Recommendation 25

The Committee recommends that suitable owner/onus legislation provide for registered owners of motor vehicles to declare they were not driving the vehicle at the time of the offence. The declaration should name the person driving at the time of the offence or state that the car was stolen or taken without knowledge and/or consent; otherwise the registered owner shall be liable for both the payment of the monetary fine and accumulation of demerit points. Page 42

Recommendation 26

The Committee recommends that owners of corporately registered vehicles be required to provide details of the driver of any of their vehicles photographed by speed cameras. Appropriate penalties should apply for failure to provide such details. Corporately registered

vehicle owners should also be given the opportunity to declare the vehicle was stolen or being used without their knowledge and/or consent at the time the offence was committed... Page 43

Recommendation 27

The Committee recommends that marked Police vehicles be used for all speed cameras operated from or immediately adjacent to Police vehicles. Such markings should clearly identify the vehicle as a Police vehicle and the vehicle should be clearly visible throughout its use with a speed camera at a speed camera site..... Page 43

Recommendation 28

The Committee recommends that speed camera offence processing times be as short as possible, with three days from the time the offence is committed to when a Traffic Offence Notice is mailed out, the Page 44

Recommendation 29

The Committee recommends that speed camera offence processing include procedures and guidelines for culling unsuitable photographs. Such procedures should also incorporate clearly defined steps for processing offences involving Police or other emergency vehicles..... Page 44

Recommendation 30

The Committee recommends that speed camera offence processing incorporate appropriate security and quality checks. Page 45

Recommendation 31

The Committee recommends that all revenue generated by a Queensland speed camera program be used to fund short-term, non-recurring road safety programs and projects. Such funding should be provided from the previous year's speed camera revenue and should be used across the broad spectrum of road safety programs..... Page 46

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**APPENDIX A — NEWSPAPER ADVERTISEMENT
CALLING FOR SUBMISSIONS**

**Parliamentary Travelsafe Committee
The Road Safety Committee of the Queensland Parliament**

CALL FOR SUBMISSIONS
on
Speed Cameras
Should they be used in Queensland?

The Parliamentary Travelsafe Committee is an all-party Parliamentary Committee appointed by the Legislative Assembly of Queensland to monitor, investigate and report on the causes of road crashes in Queensland, and to review and report on countermeasures aimed at reducing deaths, injuries and the social and economic costs to the community arising from road crashes.

The Committee is investigating whether speed cameras should be used in Queensland. Results from other States, particularly Victoria, indicate that speed cameras have been an effective tool in reducing the road toll. The Travelsafe Committee will look at all aspects of speed camera operations including site selection criteria, hours of operation, who should operate speed cameras, the cost-effectiveness and road safety benefits of speed cameras, use of revenue generated from speed cameras, best-practice method of implementing and operating speed cameras, the appropriateness and credibility of current speed limits, and speed camera technology.

The Committee is inviting written submissions from members of the public and interested parties to assist in its inquiries.

Submissions should be forwarded by 15 August 1994 to:

**The Research Director
Parliamentary Travelsafe Committee
Parliament House
Cnr George and Alice Streets BRISBANE QLD 4000**

Submissions made to the Committee will be treated as public documents unless the Committee determines that confidentiality is required. Requests for confidentiality should be clearly marked.

Persons making submissions to the Committee may be called upon to give evidence before the Committee, regarding their submission.

For further information and a list of issues relevant to the inquiry, contact the Research Director: Telephone (07) 226 7669 or Facsimile (07) 210 0128.

**Len Ardill MLA, Chairman
15 July 1994**

APPENDIX B — SUBMISSIONS RECEIVED

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| 1 | Mr George W Wilmot
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APPENDIX C — ADVERTISEMENT OF PUBLIC HEARINGS

The Parliamentary Travelsafe Committee

NOTICE OF PUBLIC HEARING
on
**Speed Cameras: Should they
be used in Queensland?**

The Road Safety Committee of the Queensland Parliament

The Parliamentary Travelsafe Committee is conducting an inquiry into the possible use of speed cameras as a means of improving road safety in Queensland.

The Committee will hold a public hearing concerning this matter in:

**Townsville on Monday 26 September 1994,
Hervey Bay on Wednesday 28 September 1994
and Brisbane on Monday 10 and Tuesday 11 October 1994.**

Evidence will be heard from Queensland Police, RACQ, Queensland Transport, local authorities, industry bodies and community groups.

Members of the public are welcome to attend and observe proceedings.

Further enquiries may be made to the Research Director: Telephone (07) 226 7669 or Facsimile (07)210 0128.

Len Arund MLA, Chairman

APPENDIX D — WITNESSES AT PUBLIC HEARINGS
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TOWNSVILLE — 26 SEPTEMBER 1994

Insp Warren Butterworth	Regional Traffic Co-ordinator	Qld Police Service
Sgt Richard Turner		Qld Police Service
Sgt Barry Lewthwaite		Qld Police Service
Mr Bob Neunhoffer	Acting Manager Planning & Investigation	Townsville City Council
Mr Douglas Lee	Senior Engineer Roads & Traffic	Townsville City Council
Mr Peter Salsbury	Manager	Townsville Trade Waste
Mr Larry Mudge	Manager Infrastructure Delivery	Qld Dept of Transport
Mr David Robinson	Principal Engineer Traffic Services	Qld Dept of Transport
Mr Neville Fry	Principal	Mundingburra State School

HERVEY BAY — 28 SEPTEMBER 1994

Const Anthony McCarthy	Traffic Branch	Qld Police Service
Mr Neville Lavey	Manager, Engineering Design Services	Hervey Bay City Council
Mrs Gilda Mildwaters		Qld Council of P & C Assoc
Mrs Sarah Nelson		Qld Council of P & C Assoc

BRISBANE — 10 & 11 OCTOBER 1994

Insp Michael Hannigan	State Traffic Support Group	Qld Police Service
Chief Supt Patrick Doonan	Policing Advancement Division, Operational Support Command	

Qld Police Service Greg Wessling	Snr Sgt	State Traffic Support Group	Qld Police Service
Mr John Wikman		Manager Traffic and Safety	Royal Automobile Club Qld
Mr Sam Weller		Policy Co-ordinator	Royal Automobile Club Qld
Mr Terry Mallon		Manager Support Services	Redcliffe City Council
Mr Gregory Lester		Acting Director Engineering Services	Logan City Council
Cr George Swanston			Logan City Council
Mr Paul Blake		Director Road Transport & Safety	Qld Dept of Transport
Mr Barry Watson		Snr Behavioural Scientist Road User Behaviour	Qld Dept of Transport
Ms Margot Sallows		Chairperson	Mt Glorious Rd Action Group
Mr McIlwraith		Committee Member	Mt Glorious Rd Action Group
Mr Imhoff		Committee Member	Mt Glorious Rd Action Group
Mr Trevor Small		Executive Director	Qld Road Transport Assoc
Mr Phil Russell		Managing Director	R B Russell Transport
Mr Jim Evanson		Principal Engineer Traffic Planning	Brisbane City Council
Mr Brian Davis		Principal Engineer Traffic Planning	Brisbane City Council

REPORTS OF THE TRAVELSAFE COMMITTEE

Report No.	Title	Date Presented to Parliament
1.	Annual Report for the period 10 May 1990 to 30 June 1990	5 September 1990
2.	The need for some form of compulsory periodic inspections of passenger vehicles as an effective means of reducing road crashes and the severity of associated injuries,	4 December 1990
	AND	
	The need to improve the standards of motor vehicle repairs as a means of improving vehicle and road safety	
3.	Road Safety Education AND Traffic Law Enforcement	4 September 1991
4.	Annual Report for the period 1 July 1990 to 30 June 1991	2 October 1991
5.	Bicycle Safety	28 November 1991
6.	Achieving High Levels of Compliance with Road Safety Laws - a review of road user behaviour modification	18 March 1992
7.	Road Environment and Traffic Engineering	28 April 1992
8.	Annual Report for the period 1 July 1991 to 30 June 1992	25 August 1992
9.	Pedestrian and Cyclist Safety	15 July 1993
10.	Annual Report for the period 1 July 1992 to 30 June 1993	18 November 1993
11.	The Safety and Economic Implications of Permitting Standees on Urban and Non-Urban Bus Services	18 November 1993
12.	Local Area Traffic Management	28 April 1994
13.	Annual Report for the period 1 July 1993 to 30 June 1994	27 October 1994
14.	The Desirability of Requiring Compulsory Third Party Insurance Cover for Boats and Trailers	22 November 1994