

Economic Development Committee

Inquiry into the road safety benefits of fixed  
speed cameras

Submission 33



**Submission by RoadSense.com.au**

**Inquiry into road safety benefits of fixed speed cameras**

**Economic Development Committee**

**Issues Paper No. 2**

**Closing 30th April 2010**

The Research Director  
Economic Development Committee  
Parliament House  
George Street  
BRISBANE QLD 4000

PO Box 975 Broadbeach Qld 4218 Australia  
2/195 Varsity Pde Varsity Lakes Qld 4227  
Harry@RoadSense.com.au  
www.RoadSense.com.au  
Ph: 07 5657 5222 Mob: 0403 910 866

Att. Mr. Evan Moorhead MP - Chair

29th April 2010

**Submission: Inquiry into road safety benefits of fixed speed cameras.**

Dear Mr. Moorhead and The Committee,

Thank you for your invitation to make a submission in regard to fixed speed cameras in Queensland and their possible benefits.

There is really only one question that needs to be answered.

**How many lives will additional speed cameras save?**

At the outset this would seem a simple question and one would expect readily available scientific data to provide the answer. Unfortunately the vast majority of studies into the effects of speed limit enforcement by speed camera fail to provide data as to how many crashes and fatalities occur through travel above set speed limits. The studies invariably make reference to excessive speed, caused by speed and the like whereas it should be **above** the speed limit in reference to the effects of speed cameras.

This above the speed limit data is absolutely vital as it is the whole basis upon which speed cameras are justified. It is important to note that a speed camera can only reduce the rate of travel on our roads above set speed limits, they are technically incapable of detecting the rate of vehicle travel below set speed limits. The offences and penalties to motorists are for exceeding the speed limit, not for "excessive speed". Yet I would suggest that not a single study mentioned in your Issues Paper (No.2) nor any of the major National studies includes **above** or **below** the speed limit data.

Instead of "above" and "below" the speed limit data the studies use terms such as speeding and non speeding, caused by speed and more. Your own paper calling for this submission uses the term "excessive speed" and does not differentiate between above and below the speed limit.

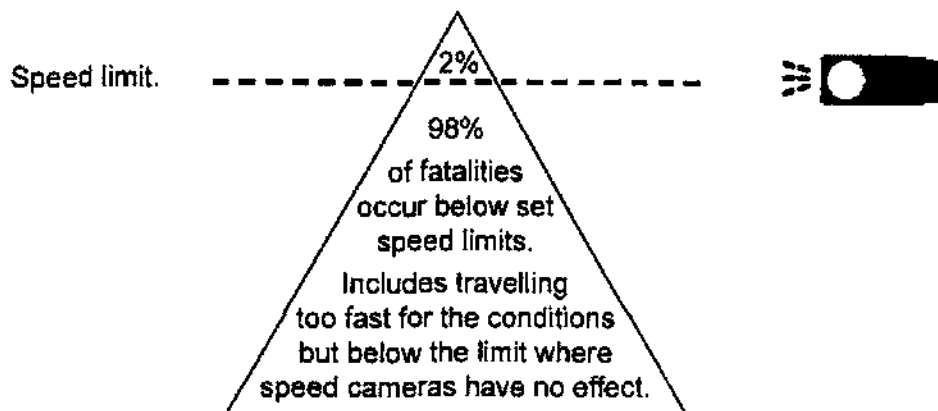
I would suggest that the reason this above and below data is void is simply that when it is made available then the justification for the use of speed cameras as a safety tool is virtually negated. This is the major reason why there are a vast number of studies used to justify the use of speed cameras rather than one single definitive study defining the number of crashes and fatalities that occur above and below the speed limit.

The most definitive study available is the Queensland Governments' own research conducted prior to the introduction of speed cameras which reveals that not even 1.8% (one point eight percent - call it 2%) of road fatalities are caused solely by speeding. In addition there are claims that around half of that 2% involve illegal activity and Police chases. Therefore, even with impossible to achieve state wide speed limit compliance the road toll could only reduce by around 1%. Based on existing speed limit enforcement already in place any new cameras will only reduce the road toll by a fraction of that 1%.

This while 98% of fatalities occur below the speed limit.

This 2% fact is difficult to comprehend at first when we have been conditioned to believe that the vast majority of road crashes are caused through travel above the speed limit (speeding). This 2% (1.8%) is based on the Queensland Parliamentary Travelsafe Committee Report No. 15 dated November 1994, copy attached.

### Road fatalities above and below the speed limit.



Studies used to justify the use of speed cameras make claims that 30% or 40% of fatalities are caused by "speeding". The reason is that these studies use crash data from below set speed limits where vehicle travel was too fast for the conditions yet below the speed limit. I suggest that this data is then added to the 2% above the speed limit data and called "speeding", "excessive speed" and the like. The critical point is the vast majority of crashes occur below the speed limit where a speed camera has no effect.

The provision and segmentation of above and below the speed limit data is the only measure by which the effectiveness of a speed camera can be determined yet this data is not available.

I would therefore respectfully suggest that you request this data from the appropriate authorities, that is "above" and "below the speed limit" data, not "speeding", "caused by speed", "excessive speed" or similar.

I would be very interested in reviewing this data should you be able to obtain it. It will provide you with a definitive answer as to the justification for speed cameras in Queensland.

When we consider that impossible to achieve state wide speed limit compliance would only reduce the road toll by around 1% then it is no wonder we are not seeing any reduction in the road toll as massive speed limit enforcement campaigns grow in magnitude, we are looking in the wrong place to reduce fatalities on the road. More of the same is not working.

The major negative aspect of high emphasis on speed limit compliance is that it sends a false safety message to members of the motoring public who come to believe that providing they are travelling at or below the speed limit they are safe. Nothing could be further from the truth, 98% of fatalities occur below the speed limit.

This raises a new question that needs to be addressed. If all crashes caused by "speeding" or "excessive speed" only include a minor percentage that occurred above set speed limits then the vast majority involve "below the limit speeding". New technology needs to be developed which can detect and deter below the limit speeding because current speed cameras are incapable of doing so.

Based on how few crashes speed cameras can prevent there is only limited justification for their presence which is at severe black spots such as dangerous bends on open roads.

In response to the issues for comment in the paper.

1. What is the appropriate role for fixed speed cameras in enforcing speed limits Queensland?
  - A. Fixed speed cameras should only be situated precisely at definite black spots where a reduction in speed will save lives, such as on dangerous bends.
2. Does prominent speed camera signage promote a safer road speed environment?
  - A. It is absolutely essential that there be prominent signage otherwise road users will not be aware of the danger. This signage should also not cause additional undue distractions.
3. How effective are existing speed cameras in decreasing crash risks and changing driver behaviour in Queensland?
  - A. They are not effective and can only reduce the road toll by 1% with impossible to achieve state wide speed limit compliance. Covered as the main subject of this submission.
4. What criteria should be used to select speed camera sites?
  - A. They should only be situated at clearly defined black spots such as dangerous bends where they can reduce road crashes at the site, not down the road.
5. Are fixed speed cameras more suited to specific road environments?
  - A. Dangerous bends on open roads.
6. Will the roll out of new speed detection technology lead to excessive monitoring of Queensland drivers' speed?
  - A. Monitoring is not a road safety issue, the consequences of the distraction of speed monitoring devices is. Responsible motorists having to pay excessive attention to speed limit compliance rather than the prevailing conditions is a distraction and distractions are one of the greatest causes of road crashes.
7. Are there other technologies that would be more appropriate for reducing crash risk associated with excessive speed?
  - A. The question states "excessive speed" whilst the subject is speed cameras which can only detect and deter travel above set speed limits. This while 98% of fatal road crashes occur below the speed limit. This is a perfect example of how misleading language creeps in in reference to speed cameras and their justification. The focus is shifted from speed limits to excessive speed. They are two different things when it comes to enforcement by speed cameras which can only detect travel above, not below set speed limits.  
New technology is required that detects travel too fast for the conditions yet below the speed limit.
8. Are there other issues regarding the use of fixed speed cameras to reduce road-related risks in Queensland?
  - A. There is strong evidence to suggest that the introduction of speed cameras increases the road toll. I would be happy to provide the argument should there be genuine interest. The main issue is that they convey a false safety message that travelling below the speed limit is safe, it is not because this is where the vast majority of road users die on our roads.

Sincerely



Harry Brelsford  
RoadSense.com.au

**LEGISLATIVE ASSEMBLY OF QUEENSLAND**

**PARLIAMENTARY TRAVELSAFE COMMITTEE**

**SPEED CAMERAS: SHOULD THEY BE USED IN QUEENSLAND?**

**Report No. 15**

## CONTENTS

	Page
<b>CHAIRPERSON'S SUMMARY.....</b>	<b>(i)</b>
<b>INTRODUCTION.....</b>	<b>1</b>
<b>PURPOSE.....</b>	<b>1</b>
<b>SCOPE.....</b>	<b>1</b>
<b>COMMITTEE BACKGROUND.....</b>	<b>1</b>
<b>NORMAL INQUIRY PROCESS.....</b>	<b>1</b>
<b>SPEED CAMERA INQUIRY PROCESS.....</b>	<b>2</b>
<b>RESPONSIBILITY OF MINISTERS.....</b>	<b>2</b>
<b>STRUCTURE OF THIS REPORT.....</b>	<b>3</b>
<b>CURRENT QUEENSLAND STATISTICS.....</b>	<b>4</b>
<b>THE INCIDENCE OF SPEEDING ON QUEENSLAND ROADS.....</b>	<b>4</b>
<b>THE INCIDENCE OF SPEED RELATED CRASHES IN QUEENSLAND.....</b>	<b>4</b>
<b>SPEED AND CRASHES.....</b>	<b>8</b>
<b>THE DANGERS OF EXCESSIVE SPEED.....</b>	<b>8</b>
<b>THE BENEFITS OF REDUCED TRAVELLING SPEED.....</b>	<b>9</b>
<b>CONTROLLING SPEEDING BEHAVIOUR.....</b>	<b>10</b>
<b>THE PSYCHOLOGY OF SPEEDING BEHAVIOUR.....</b>	<b>10</b>
<b>SPEED LIMITS.....</b>	<b>11</b>
<b>ENFORCEMENT — DETECTION AND DETERRENCE.....</b>	<b>11</b>
<b>CAN SPEEDING BEHAVIOUR BE CONTROLLED ?.....</b>	<b>12</b>
<b>CURRENT ENFORCEMENT METHODS.....</b>	<b>13</b>
<b>THE LIMITED EFFECT OF CURRENT ENFORCEMENT METHODS     ON CHANGING SPEEDING BEHAVIOUR.....</b>	<b>13</b>
<b>OPERATIONAL LIMITATIONS OF TRADITIONAL     ENFORCEMENT METHODS.....</b>	<b>13</b>
<b>THE POTENTIAL BENEFITS OF SPEED CAMERAS IN QUEENSLAND.....</b>	<b>15</b>
<b>THE POTENTIAL TO CONTROL SPEEDING BEHAVIOUR.....</b>	<b>15</b>
<b>AUSTRALIAN AND OVERSEAS EXPERIENCE.....</b>	<b>15</b>
<b>OPERATIONS EXPERIENCE.....</b>	<b>19</b>
<b>COSTS AND BENEFITS.....</b>	<b>20</b>
<b>SHOULD SPEED CAMERAS BE USED IN QUEENSLAND?.....</b>	<b>22</b>
<b>PROPOSED MODEL FOR QUEENSLAND SPEED CAMERA PROGRAM.....</b>	<b>24</b>
<b>INTRODUCTION.....</b>	<b>24</b>
<b>PHASE 1 — PRE-SPEED CAMERA IMPLEMENTATION.....</b>	<b>24</b>
<b>PHASE 2 — IMPLEMENTATION OF A SPEED CAMERA PROGRAM.....</b>	<b>27</b>
<b>PHASE 3 — POST-IMPLEMENTATION — CORE OPERATIONAL ISSUES.....</b>	<b>29</b>

**CONCLUSIONS.....47**  
**SUMMARY OF RECOMMENDATIONS .....48**  
**REFERENCES.....53**  
**BIBLIOGRAPHY.....54**

- APPENDIX A - Newspaper Advertisement calling for Submissions**
- APPENDIX B - Submissions Received**
- APPENDIX C - Newspaper Advertisement for Public Hearings**
- APPENDIX D - Witnesses at Public Hearings**



## 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