

Red Light Cameras – Position Paper

Purpose

1. This paper outlines how red light cameras can be introduced in New Zealand as a safety tool to help reduce the number of casualties at intersections. The Ministry of Transport has developed this work in conjunction with the NZ Transport Agency, the New Zealand Police and Local Government NZ (represented by the TRAFINZ technical working group).
2. The position paper confirms the Government's commitment to red light cameras as an important road safety tool for New Zealand.

Background

3. Red light running is implicated in many signalised intersection crashes. In New Zealand between 2008 and 2012 there were 11 fatalities, 169 serious injuries and 1466 minor injuries at signalised urban intersections where red light running was a contributing factor. The average annual social cost of these crashes was \$43 million¹.
4. In 2009, the Ministry of Transport completed a literature review which concluded that red light cameras are an effective safety tool to reduce red light running and associated crashes. The review's conclusions were supported by a trial run by Auckland Transport between 2008-2010. This trial showed that intersections where red light cameras were deployed experienced an average reduction of:
 - 43 percent in red light running
 - 69 percent in crashes attributable to red light running
5. Although red light cameras can reduce red light running and crashes, the literature review also noted that other tools can be effective at reducing red light running. It is important to consider the costs and benefits of other interventions prior to installation of a red light camera. For example, intersection safety can be improved by:
 - education and awareness campaigns
 - engineering of intersections
 - changing the phasing of traffic lights
 - managing speed on intersection approaches

Position

6. Red light cameras are one safety tool available to reduce intersection crashes. Under a safe system approach all effective interventions should be considered. These include, understanding why people run red lights (for example, there could be

¹ Social cost of road crash or road injury is a measure of the total cost that occurs as the result of the crash or injury. It includes loss of life and life quality, loss of output, medical costs, legal costs and property damage costs.

problems with light phasing, poor visibility due to obstructions such as shop verandas and signage, or just impatience or lack of concentration), physical improvements to the intersection and raising awareness about the implications of red light running.

7. The Ministry of Transport, NZ Transport Agency and NZ Police agree that red light cameras are an appropriate road safety tool as long as they are:
 - considered within a safe system framework
 - targeted to risk
 - deployed in a cost-effective manner
8. To ensure these criteria are implemented consistently nationwide, the following sections outline how red light cameras should be used.

Appropriate site selection

9. The Ministry of Transport commissioned TRAFINZ to prepare a site selection methodology for identifying intersections that may benefit from the installation of a red light camera. Auckland Transport, on behalf of TRAFINZ, contracted Abley Transport Consultants to prepare the site selection methodology.
10. The methodology was developed to ensure red light cameras are only implemented when they are likely to be the best safety tool to enable the best safety outcome. The methodology is based on the identification of sites where there is an established crash record arising from red light running behaviour or if there is a significant risk of fatal or serious casualties.
11. The methodology is available on the Ministry of Transport's website. Although the methodology focuses on identifying intersections that could benefit from the installation of a red light camera, it is possible that dual function safety cameras (ie those with speed and red light functions) could be considered for implementation during the site selection process. However, a full assessment of the associated costs and benefits would be required before implementation.
12. The NZ Transport Agency will review and refine the site selection methodology to ensure red light cameras are only implemented when they are the best safety tool for the intersection. Before any amendments to the site selection methodology are made the NZ Transport Agency will engage with road controlling authorities.

Type of red light camera

13. The current model of camera used in New Zealand requires the physical collection of information from the camera site and the installation of sensors (or loops) in the road surface.
14. Future investment in red light cameras will be in models which function wirelessly and use radar technology. The wireless function allows information captured by the red light camera to be sent wirelessly to the Police. The radar technology detects whether a vehicle has failed to stop for a red light.

15. Investing in a wireless/radar camera model will:
- generate cost savings by reducing the capital cost associated with installing a camera as loop systems will no longer be required in the road
 - remove the need for physical collection of information from the camera site and enable the information to be processed in a more timely manner
16. This will deliver a greater automated process and create additional flexibility for cameras to be moved between sites. Investing in wireless/radar technology will also support dual function safety cameras (ie those with speed and red light functions) if suitable sites are identified.

Revenue arrangements

17. Under the Land Transport Act 1998:
- the Police are the only enforcement authority that is authorised to issue infringement notices for failure to comply with directions given by a traffic signal
 - revenue from infringement fees (unless subject to a specific exception) must be paid into a Crown bank account
18. Adjusting these arrangements would require an amendment to the Land Transport Act 1998 and was not considered as part of this paper's development.

Ownership and funding

19. For the Auckland trial:
- Prior to implementation, the Police approved the red light camera model and certificated the final sites.
 - The road controlling authority owned and managed the operation of red light cameras and the Police performed onsite device calibration and data collection, and processed infringement notices.
 - The capital cost of red light cameras was divided between the road controlling authority and the National Land Transport Fund. The on-site device calibration, data collection and infringement processing costs were met from the Road Policing Programme.
20. The Ministry of Transport, NZ Transport Agency and Police have considered variations to the ownership and funding structure and have agreed that the status quo will continue. However, changes could occur under the Second Safer Journeys Action Plan as road safety partners consider how to enhance automated enforcement (this includes red light cameras).

21. Until this work is complete, the Ministry of Transport, NZ Transport Agency and Police agree that:

- any investment in red light cameras will be implemented in a coordinated approach to produce the best safety outcomes for New Zealand
- the current revenue, ownership, operation and funding arrangements will continue