



Transport  
for NSW

# ANNUAL NSW SPEED CAMERA PERFORMANCE REVIEW

NSW Centre for Road Safety

AUGUST 2013

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## Executive summary

The purpose of the *Annual NSW Speed Camera Performance Review* is to provide a systematic process for monitoring the effectiveness of speed cameras in NSW to ensure they are having a positive road safety effect. This report summarises the analysis undertaken by the NSW Centre for Road Safety (CRS) for the annual speed camera review against criteria outlined in the *NSW Speed Camera Strategy 2012*.

This report addresses the recommendation from the 2011 NSW Auditor-General's audit of speed cameras,<sup>1</sup> to provide the community with information about the road safety impact of speed cameras. Where it is determined a camera has not been effective, alternative road safety countermeasures will be considered. The findings from this annual review will guide the planning of future speed enforcement priorities and operations.

### Evaluation

The evaluation criteria for each camera type outlined in the Strategy has been determined by CRS based on the road safety benefit that is expected to be achieved from the program. Broadly speaking camera effectiveness is measured by two key criteria:

- The impact the speed camera has on slowing drivers down and therefore reducing crashes and casualties, and
- The impact the speed cameras have on achieving greater speed compliance through a reduction in infringement rates.

Typically at least five years of crash and casualty data are required to make a statistically significant assessment of a camera's effectiveness. The red-light speed camera and point-to-point enforcement programs are in their early stages, with locations only operational for three years or less. Given the infancy of these programs, the data analysed in this annual review will not be sufficient to reliably assess the effectiveness of individual camera locations. Due to the mobility of mobile speed cameras and their purpose of creating a general deterrence effect across the road network, the analysis examined crash data for the entire state, not individual mobile speed camera locations.

### Key findings

Table 1: Key findings for NSW speed camera programs

Camera type	Size of NSW program as at 31 December 2012	Program effectiveness
Mobile	642 locations Approximately 930 hours of enforcement per month	<p>Overall, the trend in road fatalities and annual speed surveys demonstrates that the small-scale interim mobile speed camera program continues to deliver positive road safety benefits, compared with results prior to the re-introduction of the mobile speed camera program in 2010.</p> <ul style="list-style-type: none"> <li>• The provisional 2012 road toll of 370 persons killed on NSW roads is the second lowest annual figure since 1932 (with 366 fatalities).</li> <li>• The results of the 2012 annual speed survey were mixed with a decrease in the percentage of light vehicles exceeding the speed limit by up to 10km/h in most speed zones. However when looking at the percentage of light vehicles exceeding the speed limit by more than 10km/h, while there was continued suppression of speeding in 40km/h school zones, 50km/h and 100km/h speed zones, there was a slight increase in speeding in the remaining speed zones compared to 2010 and 2011.</li> </ul> <p>The increase in speeding observed in 2012, compared with 2010 and 2011 results can be expected given the size of the program and provides evidence that the general deterrence effect provided by mobile speed cameras can be enhanced by a larger program.</p>

<sup>1</sup> Audit Office of NSW (2011). *Improving Road Safety: Speed Cameras*. New South Wales Auditor-General's Performance Audit Report

Camera type	Size of NSW program as at 31 December 2012	Program effectiveness
Red-light speed	106 cameras at 91 intersections	Overall, when comparing the five years before the red-light speed cameras were installed to the post installation period there has been: <ul style="list-style-type: none"> <li>• a 23 per cent reduction in crashes; and</li> <li>• a 30 per cent reduction in casualties at these locations</li> </ul>
Fixed	133 cameras at 108 locations*	Overall, when comparing the five years before the fixed speed cameras were installed to the most recent five years there has been: <ul style="list-style-type: none"> <li>• a 42 per cent reduction in the number of crashes;</li> <li>• a 90 per cent reduction in fatalities; and</li> <li>• a 41 per cent reduction in injuries at camera locations</li> </ul>
Point-to-point	19 lengths**	Preliminary analysis of point-to-point enforcement lengths shows that there has been a low number of heavy vehicle crashes since camera operation. Infringement data for average speed offences in point-to-point enforcement lengths show a high level of compliance and a low number of infringements.

\* Of the 108 fixed speed camera locations, seven locations operate in warning mode and six locations are 'high risk' locations (typically located in tunnels). These locations were not included in the fixed speed camera analysis.

\*\* The total proposed point-to-point program is 25 enforcement lengths to be installed by the end of 2013.

### Red-light speed cameras

The Centre for Road Safety has identified four locations where there has been a fatality since red-light speed camera operation. While the cameras at these locations will not be considered for removal due to the infancy of the program, CRS will investigate the nature of the fatal crash that occurred and, where appropriate, conduct field inspections to determine whether additional treatments are required to further improve safety at these intersections. The locations are:

- Griffiths Road and Turton Road, Lambton
- O'Riordan Street and Gardeners Road, Mascot
- Anzac Parade and Lang Road, Moore Park
- Corrimal Street and Burelli Street, Wollongong

### Fixed speed cameras

In this analysis a total of 96 fixed speed camera locations have been reviewed, excluding the seven locations in warning mode and six 'high risk' camera locations. One location, F6, Gwynneville, has two cameras operating approximately 1,000 metres apart and infringing in different directions, therefore these cameras were analysed as two separate locations. The evaluation found that a total of 91 out of 96 locations were effective based on the crash analysis outlined in the report.

There are five locations that were identified for comprehensive safety reviews to be undertaken by CRS due to an increase in crashes and/or casualties at the locations, including:

- Hume Highway, Ashfield (school zone)
- Hume Highway, Bankstown (school zone)
- Fairfield Street, Fairfield East
- McCaffrey Drive, Rankin Park
- Pacific Highway, Sandgate

If during the field reviews it is determined that any camera is not delivering the expected road safety benefits at the location, it will be recommended for removal and possible relocation.

The NSW Centre for Road Safety will continue to annually review all individual speed cameras as well as the overall performance of speed camera programs as set out in the *NSW Speed Camera Strategy 2012*. These reviews will be annually published to ensure that the programs remain transparent to the community.

## Introduction

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In response to the Auditor-General's recommendation the NSW Government announced the *NSW Speed Camera Strategy* on 1 June 2012. The strategy provides an integrated framework for speed enforcement in NSW and aims to improve the transparency and understanding of the use of speed cameras in NSW through increased community engagement and education. The strategy was developed in consultation with the NSW Police Force and NRMA Motoring and Services and reinforces the Government's commitment to reducing fatalities and serious injuries on NSW roads.

One of the key actions outlined in the *NSW Speed Camera Strategy* is the annual publication of camera performance against criteria outlined in the Strategy. This action also meets the NSW Auditor-General's recommendation to provide the community with information about the road safety impact of speed cameras.

The purpose of the *Annual NSW Speed Camera Performance Review* is to present the results of performance evaluations carried out on each of the speed camera programs in NSW. The Auditor-General found that the right speed camera in the right place can save lives. Cameras not delivering the expected road safety benefits will be monitored and evaluated and if considered not effective will be removed or relocated. The findings from this report will guide the planning of future speed enforcement operations.

### **The speeding problem**

Speeding, which encompasses excessive speed (driving above the speed limit) or inappropriate speed (driving too fast for the prevailing conditions), is unquestionably recognised as a major contributing factor in both the number and severity of traffic crashes.

Speeding increases the risk of having a crash, and increases the risk of serious injury or death in the event of a crash. In addition to car occupants, our roads are used by vulnerable road users such as pedestrians. Studies of survival and impact speed show that small increases in travel speed can result in large increases in braking distances and impact speed resulting in both an increased risk of a crash and a more severe outcome. This is especially the case for crashes with less protected road users such as pedestrians and cyclists.

### **Effectiveness of camera enforcement**

Speed camera enforcement is an important road safety initiative that has proven road safety benefits. Speed enforcement helps to reduce the proportion of drivers who exceed the speed limit on our roads, which in turn reduces the risk of being involved in a fatal or injury crash and the severity of outcomes in the event of a crash.

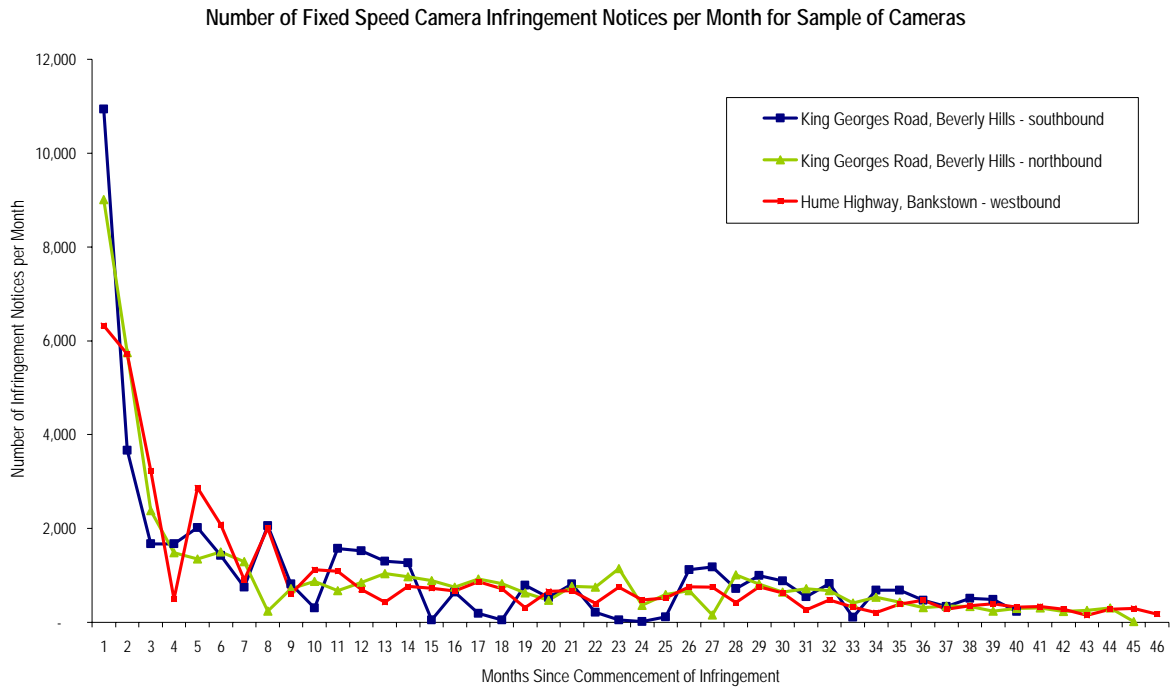
Speed enforcement activities aim to increase the perceived threat of being caught speeding and in doing so help to reduce the mean travel speed on our roads, and therefore reducing the risk of being involved in a fatal or injury crash for all road users. Automated camera enforcement supplements enforcement conducted by police and the NSW Police Force routinely requests locations to be considered for automated speed enforcement. Speed cameras are commonly employed methods of speed enforcement in many best practice road safety jurisdictions throughout the world and have proven safety benefits.

The various types of speed cameras have different roles. In NSW, fixed speed cameras are located at specified road lengths or intersections where there is a demonstrated crash history or where speed is considered to be a problem. Mobile speed cameras can be moved around the network at various times and locations and, like police enforcement, this mobility increases the deterrence effect due to the unpredictability of the exact location of speed enforcement.

## Changing driver behaviour

Speed cameras are used to change driver behaviour, which can be measured by changes in infringements over time. An example of this trend is illustrated in Figure 1 which depicts the number of infringements per month since the commencement of enforcement at three high profile fixed speed camera locations. This pattern shows an initial high number of infringements followed by a rapid and sustained decrease in infringements as drivers modify their behaviour which is reflected in a reduction in crashes over time. Appendix C contains this type of infringement graph for every fixed speed camera location.

Figure 1: Example of trend in speed camera infringements over time.



## Speed camera programs in NSW

Speed cameras are speed enforcement tools that supplement enforcement conducted by the NSW Police Force. They have been proven to make roads safer by reducing speeding and in turn the number and severity of crashes. Table 1 shows the four types of speed cameras used in NSW.

Table 2: Types of speed camera enforcement in NSW

Speed cameras used in NSW			
Type	Main purpose	Introduced	Size of NSW program as at 31 December 2012
Mobile	General network deterrence	First introduced in 1991. Ceased operation in December 2008 and re-introduced in 2010	642 locations Approx 930 hours of enforcement per month
Red-light Speed	Location specific (To address high risk intersections)	2009	106 cameras at 91 intersections
Fixed	Location specific (To address black spot/high risk)	1997	133 cameras at 108 locations*
Point-to-Point	Route enforcement (For heavy vehicles only)	2010	19 lengths**

\* Of the 108 fixed speed camera locations, seven locations operate in warning mode and six locations are 'high risk' locations (typically located in tunnels). These locations were not included in the fixed speed camera analysis.

\*\* The total proposed point-to-point program is 25 enforcement lengths to be installed by the end of 2013.

### Mobile speed cameras

Mobile speed cameras produce a sustained change in driver behaviour by creating a perception that speeding can be enforced anywhere at any time. Therefore they reduce speeding not only at identified enforcement locations but also spread the deterrence effect of cameras across more of the road network. This is because drivers are less able to predict where enforcement will occur; the less predictable the enforcement, the more broadly speed limit compliance can be achieved and the greater the crash problem that is addressed. Mobile speed cameras can be moved around the road network at various times and locations.

### Red-light speed cameras

Red-light speed cameras are also location-specific as they address speeding and red-light running at signalised intersections where drivers are vulnerable to right angle crashes and there is an elevated risk of a pedestrian crash. Both of these crash types can result in severe injuries even in lower speed accidents.

The NSW Police Force previously managed red-light cameras at 183 intersections across the Sydney, Newcastle and Wollongong metropolitan areas. These cameras were becoming outdated and used obsolete wet-film technology and the program was handed over to the former Roads and Transport Authority in December 2008. The newer red-light speed cameras, which use digital technology, were introduced in late 2009 to replace some of these wet-film locations as well as enforce new intersections.

### Fixed speed cameras

Fixed speed cameras are located at specified road lengths where there is a high crash risk or a demonstrated crash history.

In early 2011 there were 172 cameras operating at 141 locations. When the audit of speed cameras was released in July 2011, the Minister for Roads and Ports directed the deactivation of fixed speed cameras that were found to not be delivering the expected road safety benefit at 38 locations. Safety reviews have now been conducted at these locations and implementation of a program of alternative safety works has commenced. Cameras at these locations will be removed upon completion of works. Cameras at seven of these locations remain in warning mode following safety concerns expressed by the community.

Following the results of the 2012 annual speed camera review, another nine locations were identified for further review based on the crash analysis criteria. After desktop reviews were undertaken for these locations, four were deemed effective and five were recommended for comprehensive field reviews to be lead by an independent road safety auditor. These locations were: New South Head Road, Edgecliff; Northern Distributor (Memorial Drive), Corrimal; Pacific Highway, Hungry Head (Valla); New England Highway, Kootingal; and New England Highway, Lochinvar. A further location, Cowpasture Road, Green Valley, was also recommended for comprehensive field review to assess whether camera enforcement was still required following a significant upgrade of the road in December 2010.

Reviews of these six fixed speed camera locations were completed in December 2012. The review team, lead by an independent road safety auditor included CRS, councils, nearby schools, NRMA Motoring and Services, the NSW Police Force and local communities. The reviews recommended that the speed cameras at Cowpasture Road, Green Valley and New England Highway, Kootingal be decommissioned while cameras at the remaining four locations be retained as they continue to provide road safety benefits.

In December 2012, cameras at the two locations were decommissioned. Cowpasture Road was upgraded in December 2010 from a two lane road to a four lane divided carriageway with traffic signals and key intersections. Since the upgrade, the crash rate at this location has reduced, as has the severity of crashes. The cameras at this location were removed on 16 April 2013. At New England Highway, Kootingal the safety review found a very low number of crashes and minimal ongoing road safety concerns. The review recommended that the speed camera would be better utilised at another high risk location on the road network. This camera will be removed once minor road safety works have been implemented.

### **Point-to-point enforcement**

Point-to-point enforcement addresses speeding along travel routes with a demonstrated history of crashes. Point-to-point enforcement in NSW targets heavy vehicles as they are over-represented in crashes on known heavy vehicle routes. Point-to-point enforcement works by measuring the amount of time it takes a heavy vehicle to travel between two points and then calculating the average speed of the vehicle. If the vehicle's average speed is faster than the speed limit for the length of road, the driver will be infringed for speeding.



## Evaluation criteria

The ultimate indicator of performance for all speed cameras in NSW is a reduction in people killed and injured in crashes. The following tables outline the criteria that have guided the evaluation of speed cameras in NSW as well as the overall effectiveness of the *NSW Speed Camera Strategy*.

Table 3: Criteria for measuring camera effectiveness

Enforcement type	Evaluation data	Measure of effectiveness
Mobile speed cameras	Annual speed surveys	Reduction in vehicles exceeding speed limit across the road network/ random sample of locations
	Compliance data	Increase in compliance rates/Reduction in infringement rates
	Crash data	Reduction in crashes and casualties across NSW
Red-light speed cameras	Speeds	Reduction in vehicles exceeding speed limit at intersection
	Compliance data	Increase in compliance at intersection/Reduction in infringement rates
	Crash data	Reduction in casualties and crashes at intersection
Fixed speed cameras	Speeds	Reduction in vehicles speeding within 500 metres of the camera
	Compliance data	Increase in compliance at camera location/Reduction in infringement rates
	Crash data	Reduction in casualties and crashes within 500 metres of the camera
	Risk	Level of risk continues to be reduced at the location (for example low level of speeding and/or crashes in tunnels)
Point-to-Point enforcement	Speeds	Reduction in heavy vehicle speeding within enforcement length
	Compliance data	Increase in compliance within the enforcement length/Reduction in infringement rates
	Crash data	Reduction in crashes within enforcement length

Table 4: Criteria for measuring overall effectiveness of enforcement programs

Program	Outcome
Mobile speed camera	Reduction in road trauma, speed-related crashes and speeding across the entire road network
Red-light speed camera	Reduction in frequency and severity of crashes at enforced intersections (and at all signalised intersections due to deterrent effect across the network)
Fixed speed	Reduction in vehicles speeding and the frequency or severity of crashes at fixed speed camera locations
Point-to-Point	Reduction in speeding and the frequency and severity of crashes on point-to-point enforcement lengths

## Evaluation method

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### 2012 Road toll data

The crash data used in this annual review include crashes which occurred between 1 January 2012 and 31 December 2012. It is important to note that this is still preliminary data. Annual road toll statistics are not finalised until approximately nine months after the end of the calendar year. This is because of the time lag involved with the receipt of late reports and the processing of exclusions arising from Coronial inquiry determinations. Based on the experience from previous years, the final road toll for 2012 may be around three per cent lower than the provisional road toll figure.

The crash statistics recorded by Transport for NSW and included in this annual review are confined to those crashes which conform to the national guidelines for reporting and classifying road vehicle crashes<sup>2</sup> and are based on the following criteria:

1. The crash was reported to the police
2. The crash occurred on a road open to the public
3. The crash involved at least one moving road vehicle
4. The crash involved at least one person being killed or injured or at least one motor vehicle being towed away.

### Speed camera crash data

Crash data have been examined at individual speed camera locations for fixed, red-light speed and point-to-point cameras to ascertain performance at camera locations. For mobile speed cameras, the annual review examined crash data for the entire state rather than individual locations due to the mobility of mobile speed cameras and their purpose of creating a general deterrence effect across the road network.

Typically at least five years of crash and casualty data are required to make a statistically significant assessment of a camera's effectiveness.<sup>3</sup> Since the red-light speed camera and point-to-point enforcement programs have been operational for less than three years, the data provided in the annual review were not sufficient to reliably assess the effectiveness of individual camera locations and only preliminary observations are made.

### Red-light speed cameras

Preliminary analysis of the red-light speed camera program has been conducted by intersection, rather than by camera. There are currently a total of 106 red-light and red-light speed cameras operating at 91 intersections around Sydney, Newcastle and Wollongong with 15 intersections having two cameras.

Crash data were examined at each intersection with a red-light speed camera for all crashes that occurred within 10 metres of the intersection. The analysis provides crash data for the five year pre installation period, ending 91 days before the commencement date (as this is the period in which the camera was under construction). The post installation period is from the commencement date to the end of 2012. Red-light speed cameras operate in warning mode for a period prior to issuing infringements.

In addition to total casualties at each location, pedestrian casualties have also been specifically examined given the greater exposure of pedestrians at signalised intersections and the higher likelihood of severe casualty outcomes for this group due to their lack of protection in a crash. Data is also provided for adjacent, right through and rear-end crashes before and after camera installation as these are the crash types that typically occur at intersections. Adjacent and right-through crashes are often more severe as drivers and passengers are not as protected from side impact crashes, with low-speed side impact crashes potentially resulting in severe injuries. The frequency and severity of these crash types are expected to reduce at intersections enforced by red-light speed cameras. Rear-end crashes are included in the preliminary analysis as it has been reported that red-light cameras can lead to an increase in rear-end crashes due to drivers suddenly stopping on an amber light.<sup>4</sup>

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<sup>2</sup> More information about how crash data is processed in NSW is available online at [www.roadsafety.transport.nsw.gov.au](http://www.roadsafety.transport.nsw.gov.au).

<sup>3</sup> Austroads (2009). *Guide to Road Safety Part 8: Treatment of Crash Locations*. Publication No. AGRS08/09.

<sup>4</sup> New South Wales Centre for Road Safety (2011). *NSW Safety Camera Review*. NSW Roads and Traffic Authority. Publicly available and downloadable from: [http://roadsafety.transport.nsw.gov.au/downloads/mobile\\_speed\\_camera\\_review.pdf](http://roadsafety.transport.nsw.gov.au/downloads/mobile_speed_camera_review.pdf).

*Additional technical notes for the analysis of red-light speed cameras:*

1. Crashes are assigned to the traffic signal controlled intersections enforced. An intersection crash is one which occurs within, or up to 10 metres from an intersection. Initially crashes geo-coded as within 90 metres of the Traffic Control System (TCS) feature and that occurred at the intersection were selected.
2. These were viewed and attributed to the intersection under analysis taking into account the geo-coding as well as the values in the street name, the ID feature, and the intersection-type fields
3. Where unclear, the correct location of the crash was confirmed or inferred from the original police report.
4. The commencement of the warning letter period is listed for each camera. For the analysis of intersections with two cameras, the post installation period began with the earlier commencement date.
5. Data for each crash type (adjacent, right-through and rear-end) was reported based on Road User Movement (RUM) codes. RUM codes describe the first impact that occurred during the crash. Adjacent crashes are indicated by RUM code 10; Right-through crashes are coded 21 and rear-end crashes are coded 30. More information on RUM codes can be found in the Annual Statistical Statement at [http://roadsafety.transport.nsw.gov.au/downloads/accident\\_statistics\\_dl4.html](http://roadsafety.transport.nsw.gov.au/downloads/accident_statistics_dl4.html)
6. The improvement rates for crashes and casualties are based on the annual averages in crashes and casualties at each location before and after the cameras were installed. This allows an approximate comparison to be made between the five year pre installation period and the available data for the post installation period until December 2012 (currently less than five years for all red-light speed camera locations).
7. Data for the crash analysis have not been ranked and are presented alphabetically by suburb of the camera location.

### Fixed speed cameras

Analysis of the fixed speed camera program has been conducted by fixed speed camera location, rather than by camera. While there are currently 108 fixed speed camera locations across NSW, 96 fixed speed camera locations were analysed in this report. Of the 108 locations, seven locations operate in warning mode following the 2011 audit of speed camera programs. These cameras are not evaluated as part of this report however they will continue to be monitored and information on crashes and infringements at the locations is available at Appendix D. A further six locations were not assessed for their individual effectiveness because they are located in tunnels and no pre-installation data are available, however crash and infringement data for these locations is included in Appendix C. One location, F6, Gwynneville, has two cameras operating approximately 1,000 metres apart and infringing in different directions, therefore these cameras were analysed as separate locations in the directions they enforce.

For each of the 96 locations included in the analysis, typically crash data within 500 metres either side of the fixed speed camera was examined. For cameras located within a school zone, crash data was examined from patch-to-patch (i.e. the length of road designated as a school zone, as identified by the start and end patches marked on the road). For locations with more than one camera in operation (where cameras are less than 100 metres apart), the crash analysis length was for 500 metres either side of the mid-point of the two cameras.

Fixed speed camera performance was measured through an evaluation of pre and post installation crash data. In most cases, the analysis provides crash data for the five year pre installation period, ending three months directly before the commencement date (as this is the period in which warning letters are issued). The post installation period is the most recent five calendar year period (2008- 2012) to assess the current performance of the speed camera.

For the seven locations operating in warning mode, crash and infringement results are provided from July 2012 until the end of the review period. These cameras began operating in warning mode at different times, starting from August 2011. By July 2012, cameras at all seven locations commenced operating under a 'three strike' scheme where vehicle owners receive an infringement notice on the third speeding offence at any of the seven locations. Vehicles detected speeding more than 30km/h over the speed limit receive a court attendance notice and face significant penalties.

For each of the six 'high risk' camera locations, crash data has been reported for the 2012 calendar year only as there is no pre-installation data for analysis (typically tunnel locations).

Based on the pre and post installation crash analysis, and along with other relevant site specific information, the report lists a recommendation for each fixed speed camera location. The camera location is listed as either:

- a) Delivering the expected road safety benefits; or
- b) Recommended for review.

Fixed speed camera locations have been classified as being effective and delivering the expected road safety benefits if the current crash analysis satisfies any one of the following criteria:

1. There is a lower number of total casualties and the same or lower number of crashes in the after period compared to the before period, and no fatalities in the after period.
2. There is the same number of total casualties but a lower number of total crashes in the after period compared to the before period, and no fatalities in the after period.
3. If there was at least one fatality in the before or after period, the combined cost to the community of fatalities and injuries in the after period is less than the combined cost in the before period. This acknowledges the greater cost to the community of fatalities compared to injuries. The estimated cost of road crash casualties is calculated using the willingness to pay methodology, which reflects the accumulated value the NSW community is willing to pay or forgo in exchange for a reduction in the probability of crash related injuries and road crash deaths on NSW roads. According to willingness to pay, casualty costs are \$6.337 million per fatality, and \$0.136 million per injury.<sup>5</sup>
4. Fixed speed cameras have been installed in tunnels and other areas under the 'high risk' site selection criteria. For these locations, there are no available data in the before period due to there being no crash history prior to camera implementation. However, any crash that occurs in these areas would have potentially catastrophic consequences due to difficulties of access by ambulance and emergency vehicles to the crash site.

Fixed speed camera locations have been identified for review if the current crash analysis satisfies any one of the following criteria:

1. There is a higher number of total casualties and total crashes in the after period compared to the before period.
2. There is a higher number of total casualties in the after period compared to the before period, and the same number of total crashes in both before and after periods.
3. There is a higher number of total casualties but a lower number of total crashes in the after period compared to the before period, and no fatalities in the after period.
4. There is a slightly lower number of total casualties but a higher number of total crashes in the after period compared to the before period, and no fatalities in the after period.
5. There is the same number of total casualties, and the same number of total crashes, in both before and after periods (and no fatalities in the after period).
6. If there was at least one fatality in the after period, the combined cost to the community of fatalities and injuries in the after period is greater than the combined cost in the before period. This acknowledges the greater cost to the community of fatalities compared to injuries (with calculations based on the willingness to pay methodology, as already outlined).
7. Major road works such as curve re-alignment or highway duplication have significantly improved safety at the existing location.

Where a fixed speed camera location satisfied any of these criteria, a further desktop review of the location was conducted, to determine the appropriateness of the recommendation. This analysis considered the trend in casualty crashes, the circumstances of fatal crashes at the location and the

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<sup>5</sup> Transport for NSW Principle and Guidelines for Economic Appraisal of Transport Investment and Initiatives, 2012

specific types of crashes that occurred at the location. Where there was additional information which indicated the camera was effective, this is indicated in the report.

*Additional technical notes for the analysis of fixed speed cameras:*

1. The commencement date listed for each location refers to the month and year that the fixed speed camera commenced infringement at that location. For locations where more than one fixed speed camera is in operation, the date listed refers to the month and year that the *first camera* started infringing at that location unless specified otherwise.
2. For each location, the pre and post installation periods vary depending on the date the camera commenced infringement, and excluded the three month period directly before the commencement date. For each location, the pre installation period was defined as the five year period up to three months prior to the commencement date of camera infringements. The post installation period was defined as the most recent five year period.
3. In instances where there was less than five years post installation data, the five year pre installation data was adjusted so that it reflected an average number of crashes and casualties over an equivalent time period (e.g. four years). The post installation period was calculated as the time from when the camera began infringing to the end of 2012 (i.e. 3 years and 338 days). Analysis of some recently installed school zone locations was necessarily based on shorter post installation time periods.
4. In instances when there was less than five years of pre installation data, the pre installation period was adjusted so that it represented an equivalent five year period.
5. The percentage reduction for crashes and casualties are based on the annual averages in crashes and casualties at each location before and after the cameras were installed. This allows an approximate comparison to be made between the five year pre installation period and the most recent five calendar year post installation period (2008-2012).
6. Data for the crash analysis have not been ranked and are presented alphabetically on the location description of the camera location.

### Point-to-point enforcement

There are 25 lengths that are part of the point-to-point enforcement program with 19 of these lengths rolled out by the end of 2012: two lengths were installed in 2010; 13 lengths were installed in 2011; and four lengths were installed in 2012. Of the remaining six point-to-point lengths, two were installed in early 2013 and four are being rolled out later in 2013. There are eight lengths that have enforced for the entire 2012 review period; however this has been for a period of two years or less and is too early to assess the effectiveness of individual enforcement lengths.

The current report provides heavy vehicle crash data for the five year period prior to the length commencing enforcement and available data for the period after the length was activated in warning period.

### **Speed survey data**

Vehicle speeds are assessed state-wide through annual speed surveys undertaken by CRS at the same locations every year. These speed surveys are conducted across NSW on a range of roads with a range of speed limits to gather current information about speeding behaviour of both light vehicles and heavy vehicles. In 2012 annual speed surveys were conducted at 164 locations across NSW.

The annual speed surveys measure free travel speeds, with a headway of four seconds. That is, only the speeds of vehicles that are unimpeded by other traffic are measured. Therefore the survey provides a measure of the speed that drivers choose to travel rather than a measure of traffic congestion.

Speed surveys in 2012 were not undertaken at specific speed camera enforcement locations, therefore at camera locations infringement data were used as a proxy for speed data in this review. Speed surveys will continue to be undertaken at a sample of speed camera enforcement locations in the future so that speeding behaviour can be assessed for these programs.

### **Infringement data**

Infringement data were used as a proxy measure of speeding behaviour at camera locations. Infringement data analysed in this report includes penalty notices detected by Roads and Maritime Services speed cameras from July 2002 onwards (no infringement data is available prior to this date).

Infringement data for red-light speed cameras, fixed speed cameras and mobile speed cameras are publically available through the NSW Office of State Revenue (<http://www.osr.nsw.gov.au/about/corporate/statistics/>). It should be noted that data for prior July 2004 is not currently published on the Office of State Revenue website.

## Results and discussion

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This review has found that across the four programs, speed cameras are continuing to improve road safety in NSW. Early results in new programs show that drivers are changing their behaviour, which overall is resulting in a reduction in crashes and casualties at camera locations and across the road network. However three of the four programs are still in their infancy and a better understanding of the longer term effectiveness of these programs will require ongoing monitoring of their performance by CRS into the future.

### Key findings

#### Mobile speed cameras

The analysis of the mobile speed camera program is available at **Appendix A**.

In August 2011, a review of the NSW mobile speed camera program found that in the first year of operation (19 July 2010 to 18 July 2011) the program contributed to a 19 per cent statistically significant reduction in fatalities throughout NSW. This represents a saving of 84 lives and an estimated community saving of around \$490 million.

The immediate impact of the small-scale interim mobile speed cameras is evident. The significant reduction in fatalities (and speed-related crashes) in the first year of the program can be attributed to the effect of enforcement as well as the deterrence effect, which produced broader speed limit compliance due to the less predictable enforcement of mobile speed cameras. The rollout of the mobile speed camera program was also supported by an extensive communication campaign and media coverage which further reinforced the message for drivers to reduce their speed.

The ongoing impact of the mobile speed camera program is reflected in the provisional 2012 road toll. The provisional 2012 road toll is 370 persons killed on NSW roads. This result is the second lowest annual figure since 1932 (with 366 fatalities). The lowest recorded road toll since 1932 occurred in 2011 with 364 fatalities.

In 2010 there was an immediate and significant reduction in vehicle speeds following the reintroduction of the mobile speed camera program. The results in 2011 showed a continued suppression of speeding, when compared to results from 2008 to 2009 however there were some increases in speeding when compared to 2010.

The results from the 2012 speed surveys were mixed. When looking at the percentage of light vehicles exceeding the speed limit by up to 10km/h, there has been a decrease in speeding in all speed zones compared to the previous year with the exception of 40km/h, 60km/h and 110 km/h speed zones. However when looking at the percentage of light vehicles exceeding the speed limit by more than 10km/h, there has been an increase in speeding in a number of speed zones. While there is continued suppression of speeding in the 50km/h and 100km/h speed zones there was a slight increase in speeding in the remaining speed zones for light vehicles compared to 2010 and 2011. Of particular concern is the larger increase in speeding in the 60km/h as well as the 110km/h speed zones.

The results for heavy vehicles follow a similar trend to that of light vehicles, in that there has been an overall decrease in the percentage of heavy vehicles exceeding the speed limit by up to 10km/h in most speed zones compared to the previous year. When looking at the percentage of heavy vehicles exceeding the speed limit by more than 10km/h, there has been an increase in speeding in the 40km/h, 60km/h, 80km/h and 100km/h. Generally however, a lower proportion of heavy vehicles exceed the speed limit than light vehicles.

The increase in speeding at higher speed zones across both light and heavy vehicles support that 60km/h urban roads and higher speed zones should be the target of future mobile speed camera enforcement.

Overall, the trend in road fatalities and annual speed surveys demonstrates that the small-scale interim mobile speed camera program continues to deliver positive road safety benefits, compared with results

prior to the re-introduction of the mobile speed camera program. However the increase in speeding observed in the 2012 annual speed surveys, compared with 2010 and 2011 results provides evidence that the general deterrence provided by mobile speed cameras can be enhanced by a larger program. A gradual return to pre-2010 results may occur in future years without an increased enforcement presence.

With a larger program, there will be greater coverage of the road network at various times and locations and, like police enforcement, this mobility increases the deterrence effect due to the unpredictability of the exact location of speed enforcement.

The mobile speed camera program will be expanded later this year and once completed, will result in about 45 marked vehicles operating for 7,000 enforcement hours per month at around 2,500 locations. This way forward aims to increase the general deterrence of speeding, which is expected to deliver continued reductions in crashes and casualties and reductions in vehicles exceeding the speed limit.

In 2012 there were a total of 17,371 infringements resulting in total fine revenue of \$2.87 million from mobile speed camera enforcement. The infringement data for mobile speed cameras show a downward trend in the number of infringements issued during 2012. The significant decrease in infringements from June 2012 can be attributed to the enhanced visibility of mobile speed camera vehicles as well as additional signage being placed before a mobile speed camera to ensure drivers see and recognised the enforcement activity. At the same time, mobile speed cameras also switched from enforcing in both directions to single direction enforcement, further contributing to the lower volume of infringements.

An increase in the volume of infringements is anticipated as the program is expanded, coinciding with the increase in the number of sites used for enforcement. Following the program increase and the use of new sites, the number of infringements is expected to stabilise and return to a downward trend as driver behaviour changes.

### Red-light speed cameras

The analysis of red-light speed camera locations is available at **Appendix B**.

Overall, based on an annualised average at the 91 intersections, there has been a 23 per cent reduction in crashes and a 30 per cent reduction in casualties at these locations since the cameras were installed compared with a five year period prior to installation. Of the total casualties, there has been a 44 per cent reduction in pedestrian casualties at red light speed camera locations. There has also been a reduction in the three main intersection crash types with a 30 per cent reduction in adjacent crashes; a 30 per cent reduction in right-through crashes; and a 13 per cent reduction in rear-end crashes. The reduction in rear-end crashes is a positive result for the combination of red-light and speed enforcement because previous research has found that while red-light speed cameras reduce more severe right-angle crashes, rear-end crashes can increase.

In 2012 there were a total of 210,103 infringements resulting in total fine revenue of \$60.19 million at red-light speed camera intersections. At this stage cameras have not been in operation for long enough for there to be a meaningful trend in infringements. However, it is expected that red-light running and speeding at red-light speed camera intersections will decrease over time, thereby reducing the number of infringements and fine revenue at these locations. This was recently shown in an evaluation undertaken by the Centre for Automotive Safety Research in South Australia<sup>6</sup>, which found that in the first year of operation, red-light speed cameras resulted in decrease in red-light running and speeding over time. While red-light running decreased slowly over time, speeding decreased more rapidly. This demonstrates an improvement in driver behaviour as a result of red-light speed cameras.

Early results for the NSW program indicate that the expected road safety benefits are being achieved when compared with the evaluation of a similar program in Victoria. While these early results are encouraging, it is too early to conclusively determine the effectiveness of individual locations and therefore no recommendations for review are proposed in this report. Typically at least five years of

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<sup>6</sup> Mackenzie, J.R.R., Kloeden, C.N., and Hutchinson, T.P. (2012) *Analysis of infringement data from fixed red light and speed cameras at signalised intersections in South Australia*, Report No. CASR071, Centre for Automotive Safety Research, The University of Adelaide, South Australia.



crash and casualty data are required to make a statistically significant assessment of a camera's effectiveness. The Centre for Road Safety has however identified four locations where there has been a fatality since camera operation, including:

- Griffiths Road and Turton Road, Lambton
- O'Riordan Street and Gardeners Road, Mascot
- Anzac Parade and Lang Road, Moore Park
- Corrimal Street and Burelli Street, Wollongong

While the cameras at these locations will not be considered for removal, the Centre for Road Safety will investigate the nature of the fatal crash that occurred and where appropriate, conduct field inspections to determine whether additional treatments are required to further improve safety at these intersections.

### Fixed speed cameras

The analysis of fixed speed camera locations is available at **Appendix C**.

Overall, when comparing the five years before the fixed speed cameras were installed to the current five year analysis period, the fixed speed camera program has delivered a 42 per cent reduction in the number of crashes, a 90 per cent reduction in fatalities and a 41 per cent reduction in injuries at camera locations. In the five years before the cameras were installed there were 3,959 crashes, resulting in 61 fatalities and 2,124 injuries. In the current five year analysis period there were 2,460 crashes resulting in 6 fatalities and 1,340 injuries. In 2012 a total of 326,173 infringements were issued resulting in total fine revenue of \$59.89 million at fixed speed camera locations.

Based on the analysis of 96 fixed speed camera locations, 91 locations were deemed effective, with five locations recommended for comprehensive field reviews to be undertaken by CRS due to an increase in crashes and/or casualties at the location. These include:

- Hume Highway, Ashfield (school zone)
- Hume Highway, Bankstown (school zone)
- Fairfield Street, Fairfield East
- McCaffrey Drive, Rankin Park
- Pacific Highway, Sandgate

Safety reviews involve examining crash history, traffic volumes, road conditions, land use and high risk user behaviour near the fixed speed camera location. Safety reviews also involve the consideration of road safety issues raised by the community in regard to the locations. If during the review it is determined that the camera is not delivering the expected safety benefits at the location, it will be recommended for removal and possible relocation.

If a camera is recommended for removal, it will be determined what alternative road safety treatments are suitable to address any road safety issues. Alternative treatments may involve improved signage, road works, traffic facilities, speed zoning reviews and targeted communications.

Following the results of the 2011 audit of speed cameras, the Minister for Roads and Ports directed the deactivation of fixed speed cameras that were found to not be delivering the expected road safety benefit at 38 locations. Cameras at seven of these locations remain in warning mode following reviews by CRS and safety concerns expressed by the community. These seven locations are not included in the fixed speed camera analysis, however a report on crash and infringement results since the camera locations began operating under the '3 strikes' warning letter program is available at **Appendix D**.

### Point-to-point speed cameras

The analysis of the point-to-point speed camera program is available at **Appendix E**.

It is too early to assess the effectiveness of individual point-to-point enforcement lengths as 13 lengths were installed in 2011, with another four installed in 2012. Only one point-to-point length, Great Western Highway between Meadow Flat and Raglan, has enforced for a full two year period (2011 and 2012). At this length, in the five year period before installation (2005- 2009) there were 11 heavy vehicle crashes resulting in one fatality and eight injuries. In the two year post installation period (2011-2012) there were

five heavy vehicle crashes resulting in one fatality and two injuries. There were 45 speeding infringements issued at this length in 2012.

A total of 1,617 speeding infringements were issued resulting in total fine revenue of \$1.02 million at point-to-point lengths in 2012. Infringement data for average speed offences in point-to-point enforcement lengths shows a high level of compliance within the enforcement lengths and a low number of infringements. This is consistent with results in other point-to-point programs. Numerous studies have shown that point-to-point enforcement is typically associated with very high rates of compliance with posted speed limits even when traffic volume is high<sup>7</sup>. For example, rates of infringement associated with point-to-point enforcement (light and heavy vehicles) on the Hume Highway, Victoria have been reported at 1-2 per cent.<sup>8</sup>

### **Future of NSW speed camera programs**

The NSW Centre for Road Safety will continue to annually review all individual speed cameras as well as the overall performance of speed camera programs as set out in the *NSW Speed Camera Strategy*. These reviews will be annually published to ensure that the programs remain transparent to the community.

The fixed speed camera program continues to provide positive road safety benefits to the locations where they are installed, and will be annually assessed to ensure they continue delivering a positive road safety benefit. The NSW Centre for Road Safety will review locations that do not show crash and/or casualty reductions, and will remove cameras at locations that are found to not deliver clear road safety benefits.

While the red-light speed, mobile speed and point-to-point speed camera programs are still in their infancy, early results are encouraging, with some evidence of changes in driver behaviour. This is also reflected in an improvement in the provisional road toll for 2012. It is expected that the expansion of the red-light speed and mobile speed camera programs will deliver even greater results than the small-scale programs that operated in 2012. While statistically significant analyses of these programs will not be possible for a few more years, the CRS will continue to annually monitor their performance.

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<sup>7</sup> Soole, D. W., Fleiter, J. and Watson, B. (2011) *Point-to-point speed enforcement: A technological overview, review of the empirical evidence and recommendations for better practice*, Draft final report for Austroads Steering Committee, Austroads, Sydney, Australia.

<sup>8</sup> Soole, D. W., Fleiter, J. and Watson, B. (2012). *Point-to-point speed enforcement*. Austroads Research Report, AP-R415-12.

## **Appendices**

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Appendix A: Analysis of NSW mobile speed camera program

Appendix B: Analysis of NSW red-light speed camera program

Appendix C: Analysis of NSW fixed speed camera program

Appendix D: Overview of NSW fixed speed cameras operating in warning mode

Appendix E: Analysis of NSW point-to-point enforcement program

## Appendix A: Analysis of the NSW mobile speed camera program

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### NSW Road toll data

In August 2011, the review of the NSW mobile speed camera program<sup>1</sup> found that in the first year of operation there was a 19 per cent statistically significant reduction ( $p < 0.001$ ) in fatalities throughout NSW since the re-introduction of mobile speed cameras (chi-square test of independence at 0.05 probability level).

In the year before mobile speed cameras (19 July 2009 – 18 July 2010) there were 449 fatalities in NSW, whereas in the year after mobile speed cameras (19 July 2010 – 18 July 2011) there were 357 fatalities. This represents a saving of 92 lives and an estimated community saving of around \$537 million (based on willingness-to-pay methodology).

The ongoing impact of the mobile speed camera program is reflected in the provisional 2012 road toll.

There were 370 persons killed on NSW roads in 2012 (provisional figure). The 2012 provisional road toll is the number of fatalities recorded for 2012 as at 1 January 2013. The provisional 2012 road toll result for NSW is a continuation of the significant improvements in the road toll over several decades. From a peak of 1,384 fatalities in 1978 the NSW road toll has reduced by more than 70 per cent to the 2012 provisional figure.

The 2012 result represents the second lowest annual figure since 1932 (with 366 fatalities) - the lowest fatality total since 1932 occurred in 2011 (with 364 fatalities). Current NSW road toll levels are impressive given the tripling of the population in NSW, the eighteen fold increase in licence holders and the twenty-two fold increase in registered motor vehicles since 1932. However more can be done to further drive reductions in the NSW road toll, and mobile speed cameras will continue to play an important role.

### 2012 Annual speed surveys

The results represent a summary of annual speed survey results from 2008-2012. Results are presented separately for light and heavy vehicles and show:

- mean speed;
- 85th percentile speed (i.e. speed that 85 per cent of vehicles are below and 15 per cent of vehicles are exceeding);
- percentage exceeding the speed limit by up to 10km/h; and
- percentage exceeding the speed limit by more than 10km/h.

Vehicle speeds are assessed state-wide through annual speed surveys undertaken by CRS at the same locations every year. These speed surveys are conducted across NSW on a range of roads with a range of speed limits to gather current information about speeding behaviour of both light vehicles and heavy vehicles.

In 2012 annual speed surveys were conducted at 164 locations across NSW. They were not undertaken at specific speed camera enforcement locations. The annual speed surveys measure free travel speeds, with a headway of four seconds. That is, only the speeds of vehicles that are unimpeded by other traffic are measured. Therefore the survey provides a measure of the speed that drivers choose to travel rather than a measure of traffic congestion.

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<sup>1</sup> NSW Centre for Road Safety (2011). NSW Mobile Speed Camera Review. NSW Centre for Road Safety.

**Mean speed and 85th percentile speed survey results, 2008-2012**

Posted Speed Limit	Light Vehicles Mean Speeds (km/h)					Light Vehicles 85th Percentile Speeds (km/h)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
	40 km/h School Zone	45.7 km/h	45.1 km/h	43.6 km/h	44.2 km/h	43.3 km/h	53.5 km/h	52.7 km/h	50.9 km/h	51.4 km/h
40 km/h	38.7 km/h	38.9 km/h	38.4 km/h	38.3 km/h	39.3 km/h	44.2 km/h	44.6 km/h	44.0 km/h	43.8 km/h	44.7 km/h
50 km/h	53.6 km/h	53.6 km/h	52.1 km/h	52.3 km/h	51.4 km/h	60.8 km/h	61.1 km/h	59.1 km/h	59.4 km/h	58.5 km/h
60 km/h	58.6 km/h	58.7 km/h	57.7 km/h	57.4 km/h	58.1 km/h	65.4 km/h	65.6 km/h	64.2 km/h	64.3 km/h	65.0 km/h
70 km/h	69.8 km/h	69.6 km/h	67.9 km/h	67.8 km/h	67.6 km/h	77.7 km/h	77.8 km/h	75.8 km/h	75.6 km/h	75.3 km/h
80 km/h	77.4 km/h	77.8 km/h	76.1 km/h	76.4 km/h	77.2 km/h	85.6 km/h	85.9 km/h	84.5 km/h	86.4 km/h	85.0 km/h
90 km/h - small sample	89.0 km/h	88.1 km/h	91.1 km/h	90.9 km/h	86.5 km/h	97.7 km/h	96.7 km/h	99.0 km/h	99.2 km/h	95.2 km/h
100 km/h	97.9 km/h	98.8 km/h	98.6 km/h	99.1 km/h	98.4 km/h	105.7 km/h	106.5 km/h	106.2 km/h	106.7 km/h	106.0 km/h
110 km/h*	109.6 km/h	109.9 km/h	108.8 km/h	109.2 km/h	109.8 km/h	117.7 km/h	118.0 km/h	116.6 km/h	116.7 km/h	117.2 km/h

Posted Speed Limit	Heavy Vehicles Mean Speeds (km/h)					Heavy Vehicles 85th Percentile Speeds (km/h)				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
	40 km/h School Zone	42.3 km/h	41.9 km/h	41.2 km/h	42.4 km/h	40.8 km/h	48.9 km/h	48.3 km/h	47.1 km/h	49.2 km/h
40 km/h	37.5 km/h	38.6 km/h	37.7 km/h	37.3 km/h	39.1 km/h	42.7 km/h	44.2 km/h	42.7 km/h	42.4 km/h	44.9 km/h
50 km/h	51.9 km/h	53.2 km/h	51.8 km/h	51.2 km/h	50.3 km/h	59.3 km/h	60.3 km/h	58.6 km/h	58.1 km/h	57.2 km/h
60 km/h	56.9 km/h	56.4 km/h	56.2 km/h	55.8 km/h	57.2 km/h	64.3 km/h	63.8 km/h	63.2 km/h	63.0 km/h	65.0 km/h
70 km/h	66.4 km/h	66.1 km/h	65.4 km/h	64.9 km/h	64.2 km/h	75.2 km/h	75.5 km/h	74.4 km/h	73.4 km/h	72.9 km/h
80 km/h	72.7 km/h	76.3 km/h	72.0 km/h	72.9 km/h	75.5 km/h	82.4 km/h	89.6 km/h	81.6 km/h	81.9 km/h	83.9 km/h
90 km/h - small sample	85.9 km/h	85.0 km/h	91.1 km/h	90.0 km/h	85.6 km/h	95.6 km/h	94.5 km/h	99.4 km/h	98.9 km/h	95.5 km/h
100 km/h	96.3 km/h	97.4 km/h	98.0 km/h	98.0 km/h	97.6 km/h	102.7 km/h	103.5 km/h	104.4 km/h	104.4 km/h	104.0 km/h
110 km/h*	101.4 km/h	100.7 km/h	101.8 km/h	100.6 km/h	101.8 km/h	106.7 km/h	106.4 km/h	109.0 km/h	106.8 km/h	107.4 km/h

\* Note HV Speed Limit is 100 km/h and results presented indicate the percentage of HV's exceeding 100km/h in this section

**Percentage of vehicles exceeding the speed limit, 2008-2012**

Posted Speed Limit	Light Vehicles Exceeding the Speed Limit - by up to 10km/h					Light Vehicles Exceeding the Speed Limit +10km/h				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
	40 km/h School Zone	46.2 %	46.4 %	44.0 %	45.1 %	42.0 %	25.7 %	23.0 %	17.5 %	19.7 %
40 km/h	29.4 %	30.2 %	27.8 %	27.2 %	32.0 %	4.0 %	4.5 %	3.4 %	3.7 %	6.0 %
50 km/h	49.5 %	48.8 %	46.4 %	46.6 %	42.8 %	17.0 %	16.8 %	12.6 %	13.2 %	13.0 %
60 km/h	31.8 %	32.3 %	28.8 %	28.2 %	29.9 %	7.2 %	7.3 %	5.4 %	5.8 %	7.8 %
70 km/h	36.4 %	35.9 %	31.3 %	30.2 %	28.2 %	10.1 %	10.4 %	6.6 %	6.3 %	7.3 %
80 km/h	28.4 %	29.8 %	26.3 %	26.1 %	24.8 %	7.8 %	8.8 %	6.3 %	6.6 %	7.1 %
90 km/h - small sample	32.5 %	29.6 %	38.0 %	38.5 %	22.9 %	10.3 %	9.0 %	11.8 %	13.4 %	10.0 %
100 km/h	33.6 %	34.5 %	32.2 %	34.4 %	31.0 %	7.6 %	8.2 %	9.0 %	8.9 %	9.4 %
110 km/h*	38.7 %	40.8 %	37.5 %	38.9 %	41.2 %	9.9 %	9.3 %	6.4 %	7.0 %	11.4 %

Posted Speed Limit	Heavy Vehicles Exceeding the Speed Limit - by up to 10km/h					Heavy Vehicles Exceeding the Speed Limit +10km/h				
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012
	40 km/h School Zone	41.1 %	42.2 %	36.2 %	43.3 %	39.5 %	13.1 %	10.1 %	10.2 %	12.6 %
40 km/h	21.4 %	26.6 %	22.8 %	21.0 %	29.9 %	2.9 %	5.4 %	3.6 %	3.0 %	6.2 %
50 km/h	43.0 %	45.6 %	44.7 %	42.5 %	40.4 %	14.0 %	16.7 %	12.5 %	10.7 %	10.0 %
60 km/h	27.0 %	26.7 %	25.8 %	25.4 %	25.4 %	6.4 %	5.0 %	3.9 %	4.5 %	9.6 %
70 km/h	28.7 %	28.6 %	27.3 %	23.7 %	21.4 %	5.4 %	5.7 %	4.2 %	3.5 %	3.6 %
80 km/h	22.4 %	23.6 %	21.2 %	23.2 %	19.4 %	5.5 %	9.8 %	5.1 %	5.9 %	6.2 %
90 km/h - small sample	28.3 %	27.2 %	41.3 %	34.8 %	22.6 %	6.6 %	6.3 %	14.0 %	13.6 %	11.2 %
100 km/h	34.3 %	34.5 %	34.1 %	34.0 %	33.4 %	3.0 %	3.2 %	4.8 %	4.8 %	5.8 %
110 km/h*	45.8 %	48.1 %	39.8 %	44.9 %	8.8 %	8.7 %	8.1 %	12.9 %	8.8 %	3.2 %

\* Note HV Speed Limit is 100 km/h and results presented indicate the percentage of HV's exceeding 100km/h in this section

### Light vehicles

In 2012, light vehicle speed survey results indicate:

- 50km/h speed zones
  - 43 per cent of drivers were speeding up to 10km/h above the posted speed limit, and a further 13 per cent were exceeding the speed limit by 10km/h or more.
  - The 85th percentile speed was 59km/h, the mean speed was 51km/h.
- 100km/h speed zones
  - 31 per cent of drivers were speeding up to 10km/h above the posted speed limit, and a further nine per cent were exceeding the speed limit by 10km/h or more.
  - The 85th percentile speed was 106km/h, the mean speed was 98km/h.

### Heavy vehicles

In 2012, heavy vehicle speed survey results indicate:

- 50km/h speed zones
  - 40 per cent of drivers were speeding up to 10km/h above the posted speed limit, and a further 10 per cent were exceeding the speed limit by 10km/h or more.
  - The 85th percentile speed was 57km/h, the mean speed was 50km/h.
- 100km/h speed zones
  - 33 per cent of drivers were speeding up to 10km/h above the posted speed limit, and a further six per cent were exceeding the speed limit by 10km/h or more.
  - The 85th percentile speed was 104km/h, the mean speed was 98km/h.

### **Trends in speed survey results**

Over the last five years the general trend has been a decrease in the proportion of light vehicles exceeding the speed limit across most speed zones. This includes a significant decrease in the proportion of vehicles exceeding the speed limit in 2010, coinciding with the introduction of mobile speed cameras and installation of red-light speed cameras. The results in 2011 showed a continued suppression of speeding, when compared to results from 2008 to 2009 however there were some increases in speeding when compared to 2010.

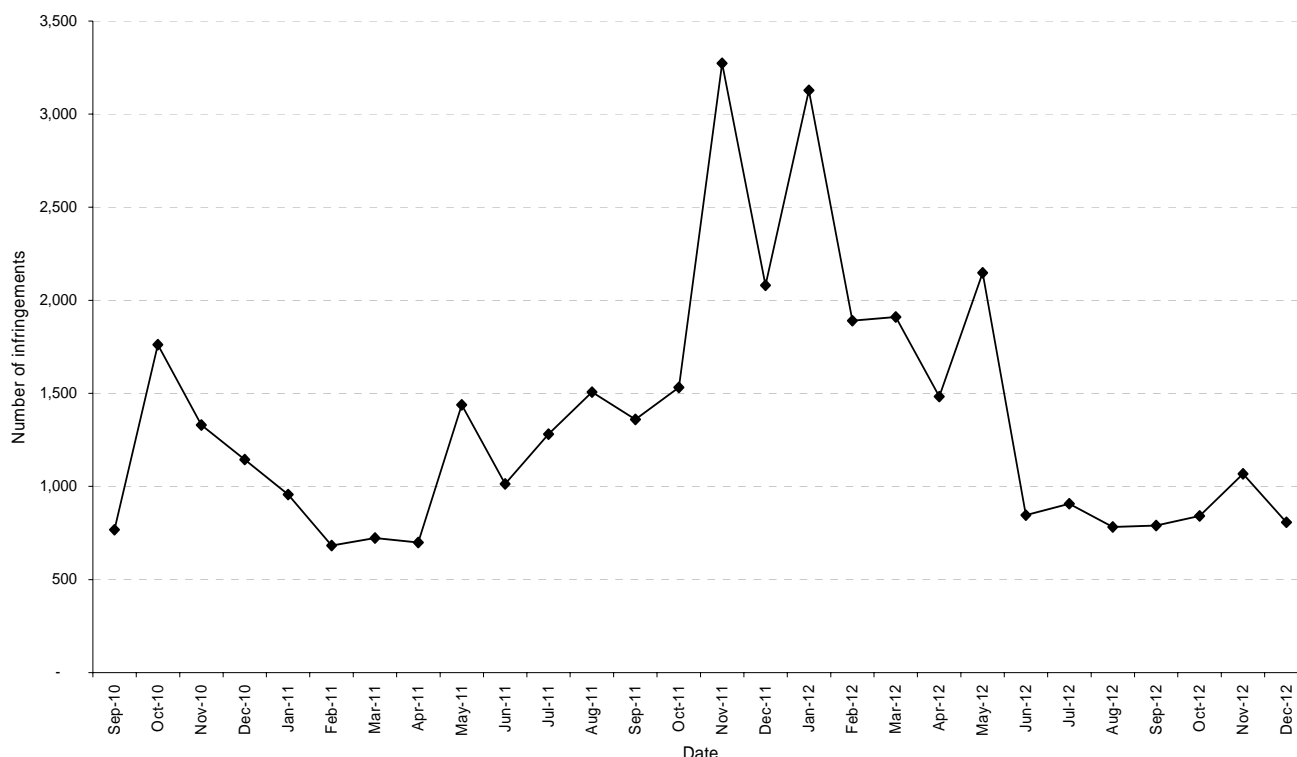
The results from the 2012 speed surveys were mixed. When looking at the percentage of light vehicles exceeding the speed limit by up to 10km/h, there has been a decrease in speeding in all speed zones compared to the previous year with the exception of 40km/h, 60km/h and 110 km/h speed zones. However when looking at the percentage of light vehicles exceeding the speed limit by more than 10km/h, there has been a increase in speeding in a number of speed zones. While there is continued suppression of speeding in the 50km/h and 100km/h speed zones there was a slight increase in speeding in the remaining speed zones for light vehicles compared to 2010 and 2011. Of particular concern is the larger increase in speeding in the 60km/h as well as the 110km/h speed zones.

The results for heavy vehicles follow a similar trend to that of light vehicles, in that there has been an overall decrease in the percentage of heavy vehicles exceeding the speed limit by up to 10km/h in most speed zones compared to the previous year. When looking at the percentage of heavy vehicles exceeding the speed limit by more than 10km/h, there has been an increase in speeding in the 40km/h, 60km/h, 80km/h and 100km/h. Generally however, a lower proportion of heavy vehicles exceed the speed limit than light vehicles.

The increase in speeding at higher speed zones across both light and heavy vehicles support that 60km/h urban roads and higher speed zones should be the target of future mobile speed camera enforcement.

## Mobile speed camera infringements

Mobile speed camera program infringement data



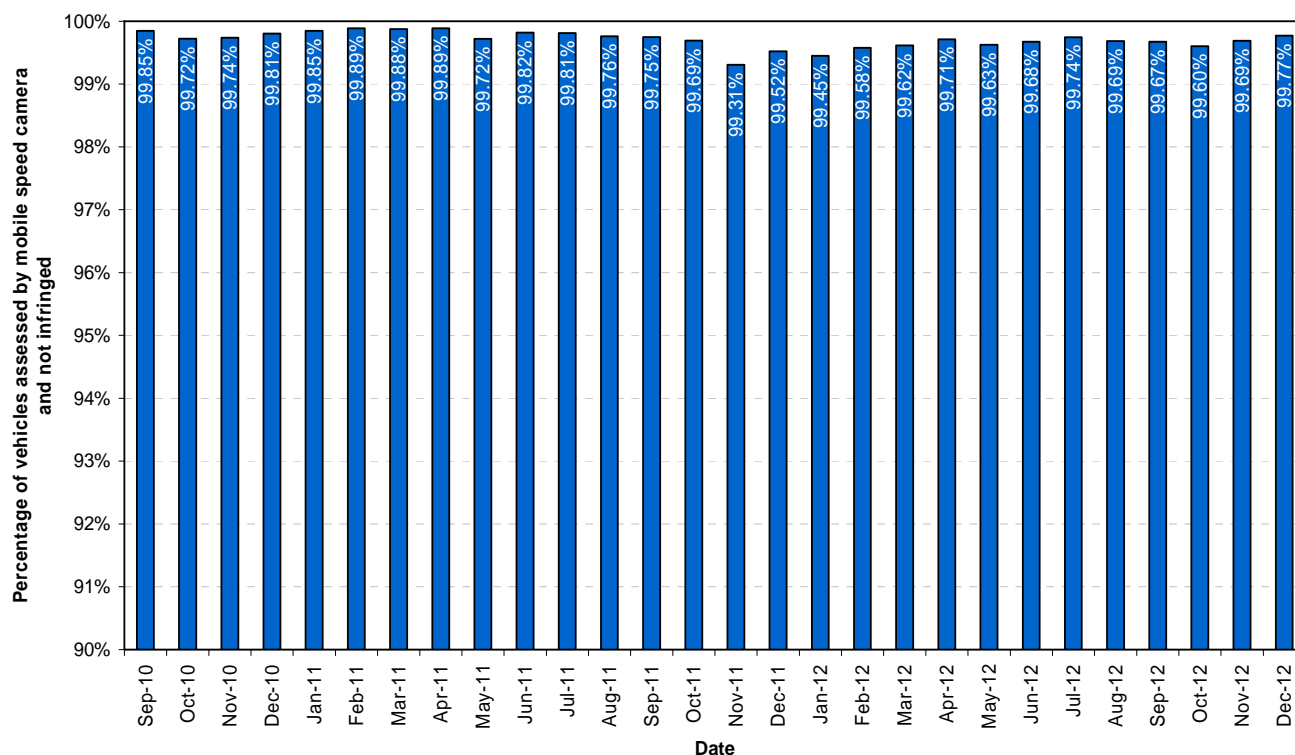
In 2012 there were a total of 17,371 infringements resulting in total fine revenue of \$2.87 million from mobile speed camera enforcement. The infringement data for mobile speed cameras show a downward trend in the number of infringements issued during 2012.

Since the program commenced, the number of sites available for use and the number of sites used each month has increased over time as ongoing assessments to identify suitable enforcement sites are completed. However, all selected sites are published on the Centre for Road Safety website. In 2011, there are two months where there are peaks in infringement volumes. An increase in infringements usually comes when mobile speed cameras are enforcing in less frequently used locations or locations that have not been used before. In both May 2011 and November 2011 there were increases in the number of sites used for enforcement in those months. In the months following the use of new sites, the number of infringements decreased or stabilised. This trend is to be anticipated; for example fixed speed enforcement follows the same type of pattern, with the difference being that fixed speed cameras are in the same place 24/7 meaning that reductions in infringements are more consistent.

The significant decrease in infringements from June 2012 can be attributed to the enhanced visibility of mobile speed camera vehicles as well as additional signage being placed before a mobile speed camera to ensure drivers see and recognised the enforcement activity. At the same time, mobile speed cameras also switched from enforcing in both directions to single direction enforcement, further contributing to the lower volume of infringements.

The figure below shows the compliance rate of vehicles at mobile speed camera locations. Compliance data compares the number of vehicles that pass a camera with the number of fines detected by the camera. As can be seen below, over 99 per cent of vehicles passing mobile cameras are not infringed for speeding.

### Compliance rate of vehicles at mobile speed camera locations



### Summary

Overall, the trend in road fatalities and annual speed surveys demonstrates that the small-scale interim mobile speed camera program continues to deliver positive road safety benefits, compared with results prior to the re-introduction of the mobile speed camera program. However the increase in speeding observed in the 2012 annual speed surveys, compared with 2010 and 2011 results provides evidence that the general deterrence provided by mobile speed cameras can be enhanced by a larger program. A gradual return to pre-2010 results may occur in future years without an increased enforcement presence.

With a larger program, there can be greater coverage of the road network at various times and locations and, like police enforcement, this mobility increases the deterrence effect due to the unpredictability of the exact location of speed enforcement.

The mobile speed camera program will be expanded later this year and once completed, will result in about 45 marked vehicles operating for 7,000 enforcement hours per month at around 2,500 locations. This way forward aims to increase the general deterrence of speeding, which is expected to deliver continued reductions in crashes and casualties and reductions in vehicles exceeding the speed limit.

An increase in the volume of infringements is anticipated as the program is expanded, coinciding with the increase in the number of sites used for enforcement. In the months following the use of new sites however, the rate of infringement per hour of enforcement is expected to stabilise and return to a downward trend as driver behaviour changes.



## Appendix B: Analysis of the NSW red-light speed camera program

### Overview of red-light speed camera locations (intersections)

	Main Street	Cross Street	Suburb
1	Park Avenue	Northcott Drive	Adamstown
2	McEvoy Street	Botany Road	Alexandria / Waterloo
3	Frederick Street	Hume Highway	Ashfield
4	M4 Wb Off Ramp / Silverwater Road	M4 W/B on Ramp / Silverwater Road	Auburn
5	Meredith Street	Hume Highway	Bankstown
6	Windsor Road	Old Northern Road / Seven Hills Road	Baulkham Hills
7	Forest Road	Harrow Road	Bexley
8	Bungarribee Road	Reservoir Road	Blacktown
9	Great Western Highway	Reservoir Road	Blacktown
10	Lancaster Street	Kildare Road	Blacktown
11	Newton Road	Flushcombe Road	Blacktown
12	Sunnyholt Road	Main Street	Blacktown
13	Old South Head Road	Bondi Road	Bondi Junction
14	Parramatta Road	Burwood Road	Burwood / Concord
15	Cumberland Highway	Cabramatta Road West	Cabramatta West
16	Kellicar Road	Narellan Road	Campbelltown
17	Moore-Oxley Bypass	Broughton Street	Campbelltown
18	Canterbury Road	Bexley Road	Campsie
19	Cumberland Highway	St Johns Road	Canley Heights
20	Sackville Street	Canley Vale Road	Canley Vale
21	Kingsway	Gannons Road	Caringbah
22	Showground Road	Victoria Avenue	Castle Hill
23	Waldron Road	Hector Street	Chester Hill / Sefton
24	Pacific Highway	Hume Street	Crows Nest
25	Craigend Street	McLachlan Avenue	Darlinghurst
26	Pittwater Road	Harbord Road	Dee Why
27	Blaxland Road	May Street	Eastwood
28	Hamilton Road	The Boulevarde	Fairfield
29	Princes Highway	O'Briens Road	Figtree
30	Fairlight Street	Ramsay Road	Five Dock
31	Woodville Road	M4 on Ramp	Granville
32	Woodville Road	Guildford Road	Guildford
33	Dobroyd Parade	Mortley Drive	Haberfield
34	Parramatta Road	Sloane Street	Haberfield
35	Tudor Street	Beaumont Street	Hamilton
36	Pacific Highway	Parry Street	Hamilton East
37	Arthur Street	Centenary Drive	Homebush West
38	Ryde Road	Pittwater Road	Hunters Hill
39	Anzac Parade	Todman Avenue	Kensington
40	Bexley Road	William Street	Kingsgrove
41	Acacia Road	President Avenue	Kirrawee
42	Park Road	Princes Highway	Kogarah Bay
43	Griffiths Road	Turton Road	Lambton
44	Henry Lawsons Drive / Woodville Road	Hume Highway	Lansdowne / Villawood
45	Parramatta Road	West Street	Leichhardt
46	Olympic Drive	Vaughan Street	Lidcombe
47	Copeland Street	Elizabeth Drive	Liverpool
48	Sydenham Road	Victoria Road	Marrickville
49	O'Riordan Street	Gardeners Road	Mascot
50	O'Riordan Street	Coward Street	Mascot
51	Maitland Road	Maud Street	Mayfield West
52	Great Western Highway	Coleman Street / Hawkesbury Road	Mays Hill / Westmead
53	Newbridge Road	Henry Lawson Drive	Milperra
54	Kingsway	Port Hacking Road	Miranda
55	Anzac Parade	Lang Road	Moore Park
56	Anzac Parade / Flinders Street	Moore Park Road	Moore Park
57	Newbridge Road	Stockton Avenue	Moorebank
58	Military Road	Cowles Road	Mosman
59	Wicks Road	Epping Road	North Ryde
60	Old Windsor Road	Cumberland Highway (Hart Drive)	Northmead
61	Moore Park Road	Oxford Street	Paddington
62	South Dowling Street	Fitzroy Street / Moore Park Road	Paddington / Surry Hills
63	Victoria Road	Church Street	Parramatta
64	Pennant Hills Road	Beecroft Road (W)	Pennant Hills
65	Gordon Street	New Canterbury Road	Petersham

66	Avoca Street	Darley Road	Randwick
67	Chalmers Street	Cleveland Street	Redfern
68	Bestic Street	West Botany Street	Rockdale
69	Princes Highway	Bay Street / the Sevenways	Rockdale
70	King Georges Road	Moorefields Road	Roselands
71	Canterbury Road	King Georges Road	Roselands / Wiley Park
72	Victoria Road	Evans Street	Rozelle
73	Wellington Street	Victoria Road	Rozelle
74	Victoria Road	Devlin Street	Ryde
75	Silverwater Road	M4 E/B on Ramp	Silverwater
76	Victoria Street	Hassall Street	Smithfield
77	Parker Street	Jamison Road	South Penrith
78	Cumberland Highway	Old Prospect Road	South Wentworthville
79	Great Western Highway	Charles Hackett Drive / Pages Road	St Marys
80	Cleveland Street	South Dowling Street	Surry Hills
81	Pennant Hills Road	Parkes Street	Thornleigh
82	Wattle Street	William Henry Street	Ultimo
83	Princes Highway	Five Islands Road	Unanderra
84	Hume Highway	Bigge Street	Warwick Farm
85	Bourke Street	Botany Road	Waterloo
86	Great Western Highway	Station Street	Wentworthville
87	Pennant Hills Road	Eaton Road	West Pennant Hills
88	Ryde Road	Lady Game Drive	West Pymble
89	Windang Road	Boronia Avenue	Windang
90	Corrimal Street	Burelli Street	Wollongong
91	Gladstone Avenue	Princes Highway	Wollongong

## Park Avenue and Northcott Drive, Adamstown

- There is one camera at this intersection.
- The camera at the intersection of Park Avenue and Northcott Drive commenced issuing warning letters in May 2011.
- While the results available show a decrease in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

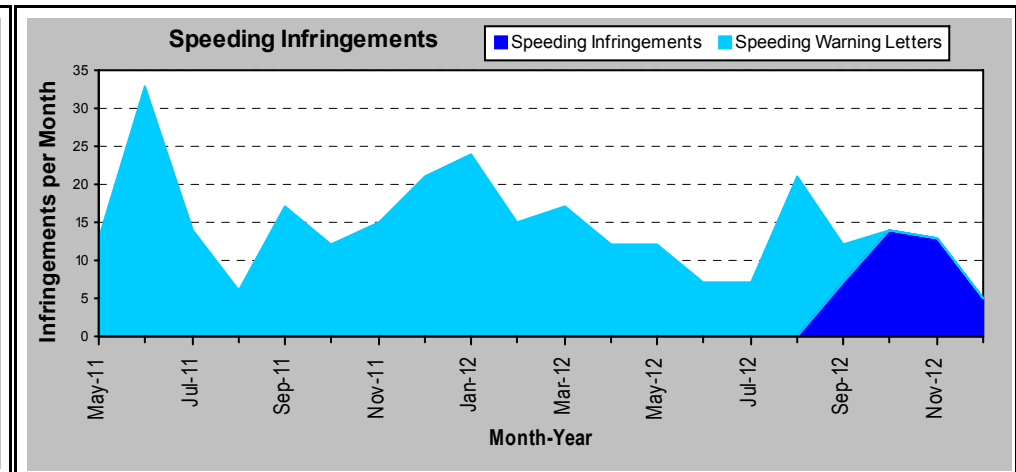
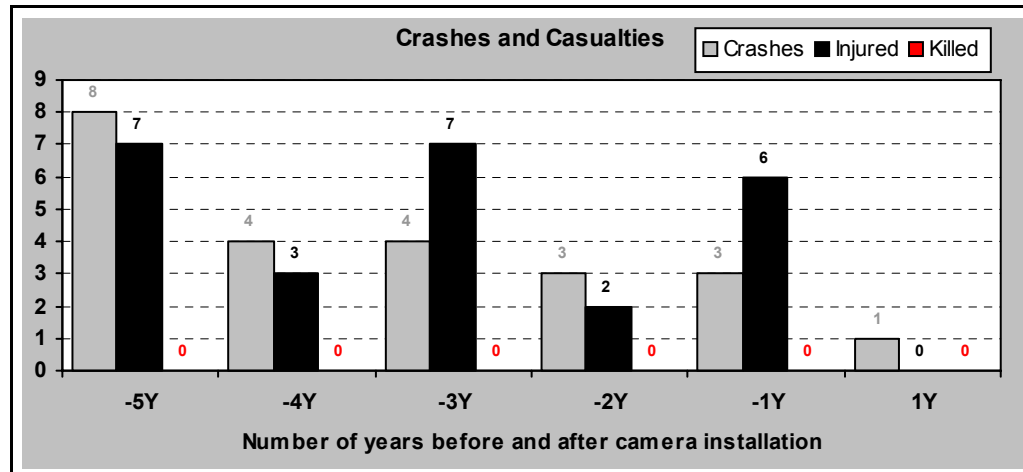
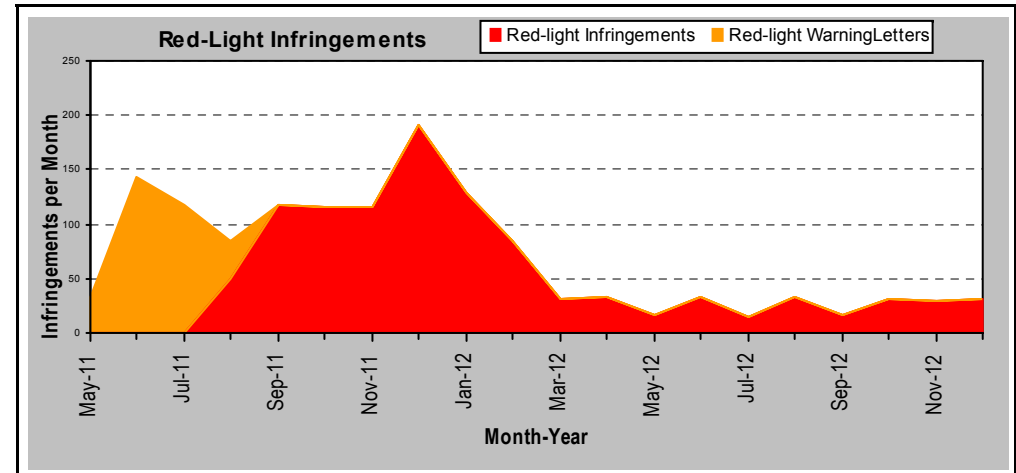
	5 years before installation <sup>1</sup>	1 year and 224 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	25	0	100%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	22	1	86%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	12	0	100%
<i>Rear End Crashes</i>	5	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## McEvoy St and Botany Rd, Alexandria / Waterloo

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- Both cameras at the intersection of McEvoy St and Botany Rd commenced issuing warning letters in June 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

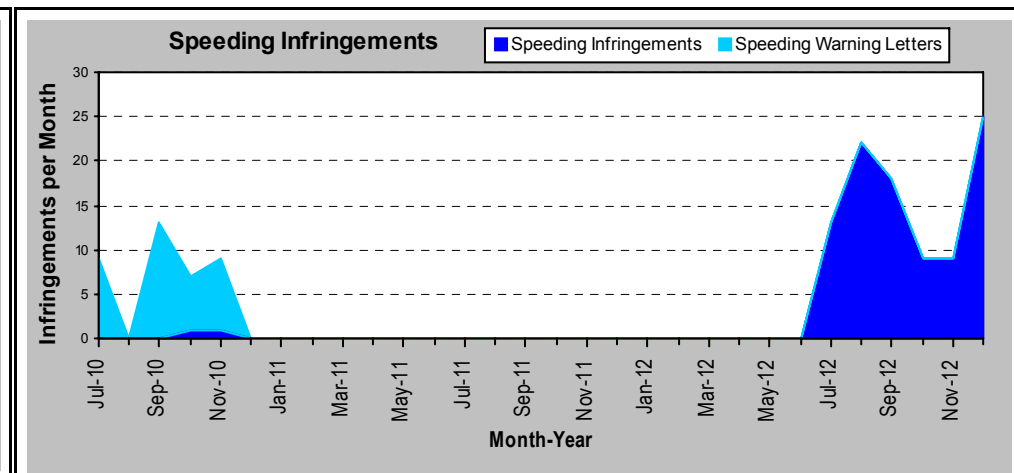
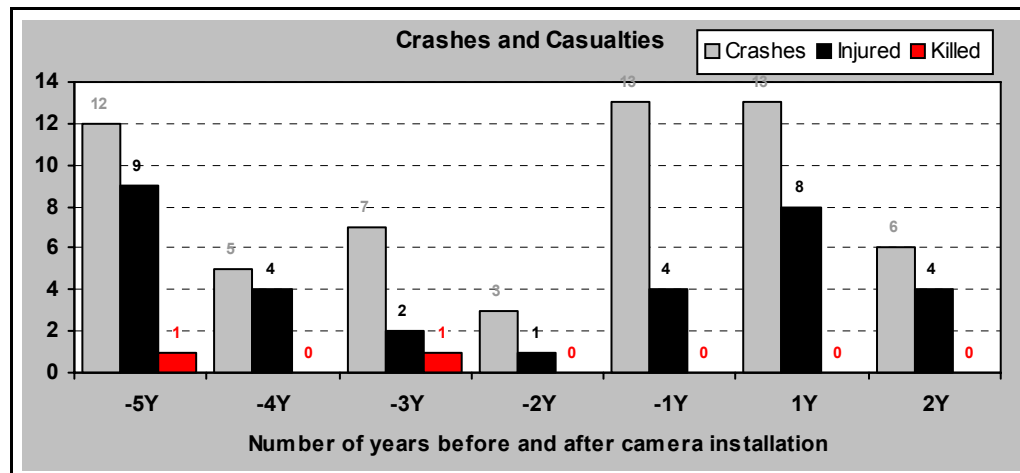
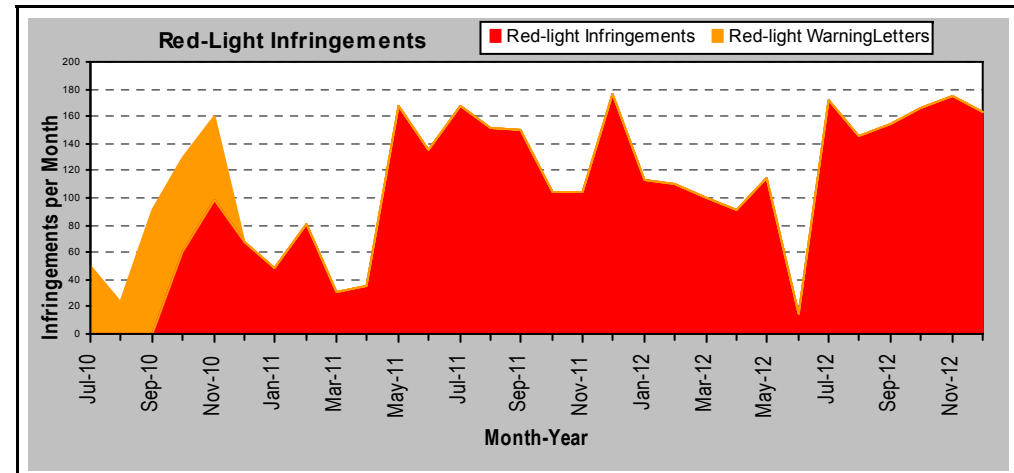
	5 years before installation <sup>1</sup>	2 years and 186 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	2	0	100%
<b>Injuries</b>	20	13	+30%
<i>Pedestrian Casualties</i>	6	0	100%
<b>Crashes</b>	40	21	+5%
<i>Adjacent Crashes</i>	14	15	+114%
<i>Right Through Crashes</i>	8	2	50%
<i>Rear End Crashes</i>	8	1	75%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Frederick Street and Hume Highway, Ashfield

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Frederick Street and Hume Highway commenced issuing warning letters in March 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

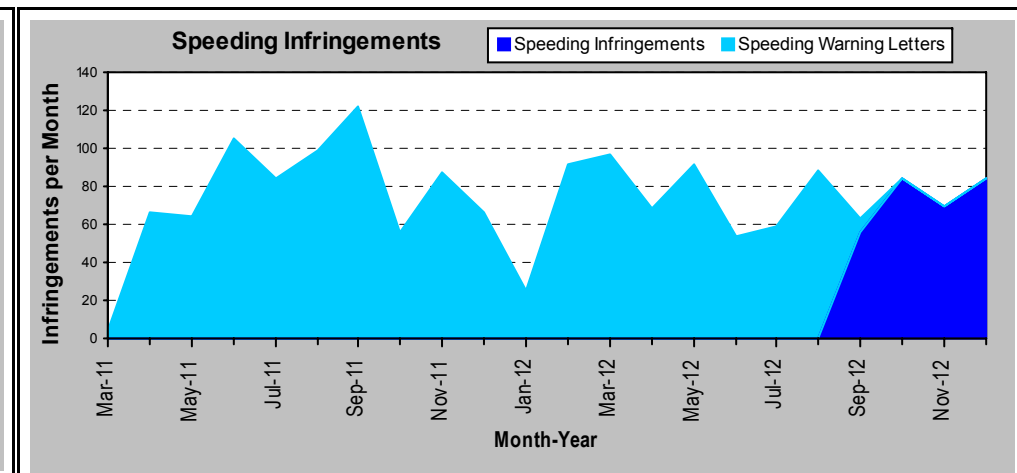
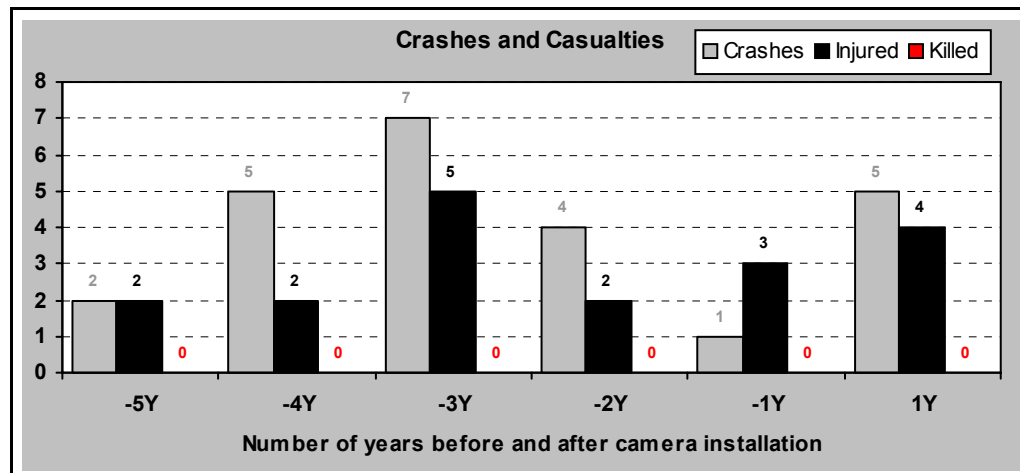
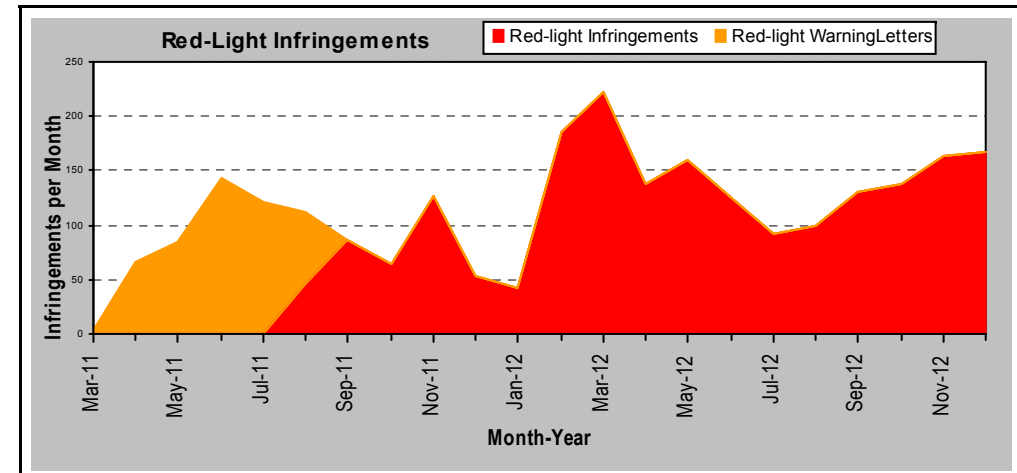
	5 years before installation <sup>1</sup>	1 year and 292 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	14	8	+59%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	19	10	+46%
<i>Adjacent Crashes</i>	5	1	44%
<i>Right Through Crashes</i>	3	2	+85%
<i>Rear End Crashes</i>	8	4	+39%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## M4 West bound off ramp / Silverwater Rd and M4 West bound on ramp / Silverwater Rd, Auburn

- There are two cameras at this intersection.
- The camera at the intersection of M4 West bound off ramp and Silverwater Rd commenced issuing warning letters in June 2011.
- The camera at the intersection of Silverwater Rd and M4 West bound on ramp commenced issuing warning letters in July 2010.
- While the results available show a decrease in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

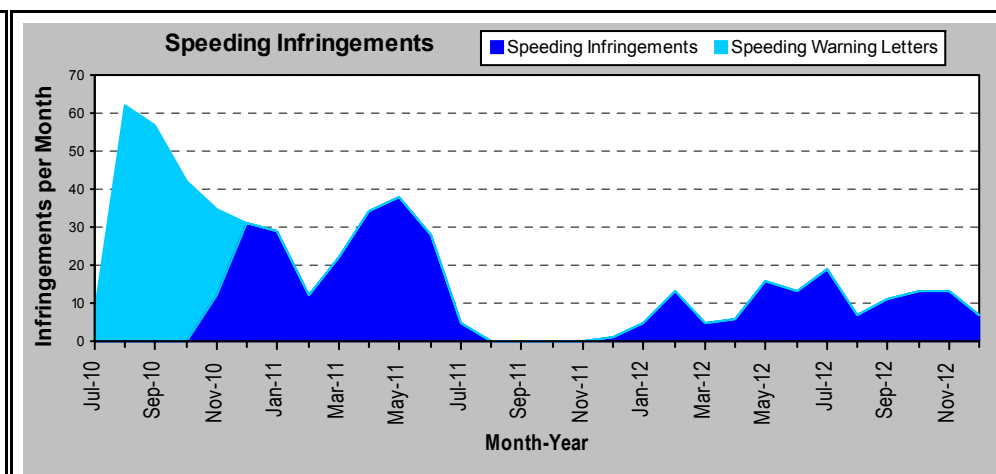
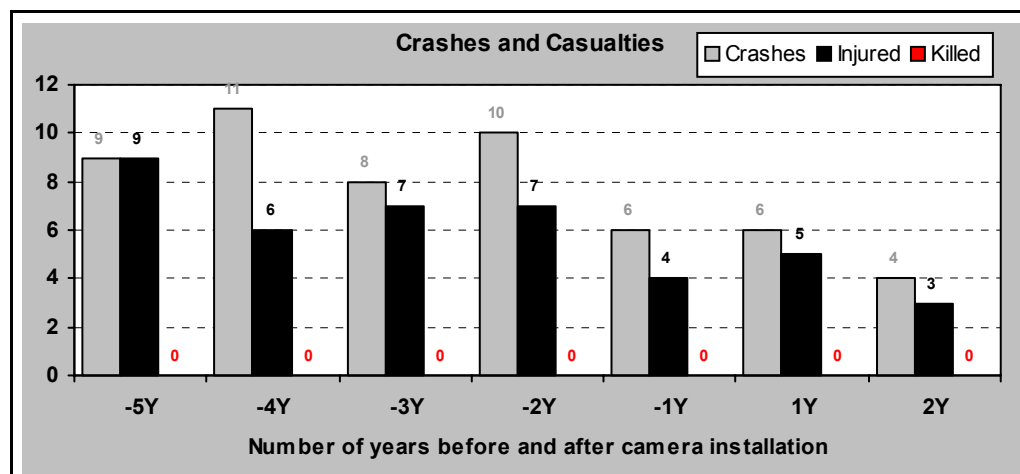
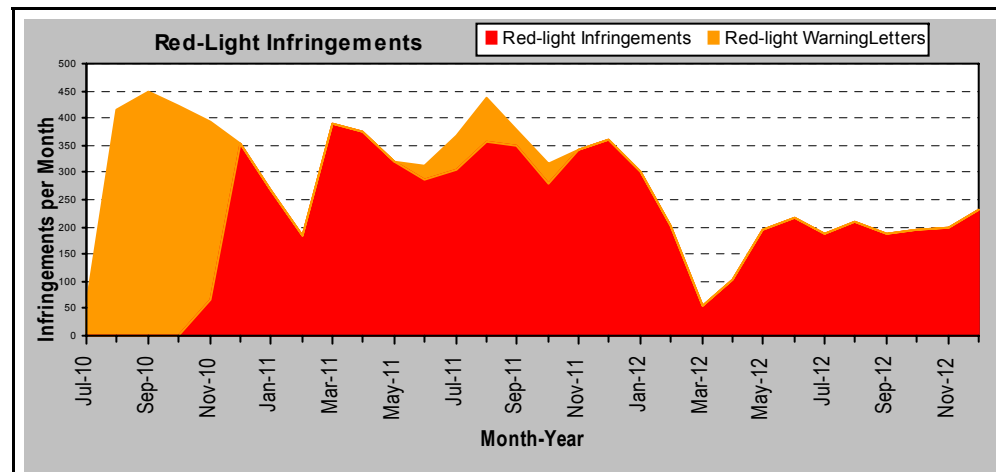
	5 years before installation <sup>1</sup>	2 years and 170 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	33	9	45%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	44	14	35%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	8	8	+103%
<i>Rear End Crashes</i>	15	2	73%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



### Meredith St and Hume Hwy, Bankstown (school zone)

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Meredith St and Hume Hwy commenced issuing warning letters in December 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued. There were no speeding infringements at this intersection up to the end of 2012.

### Crashes at enforced intersection

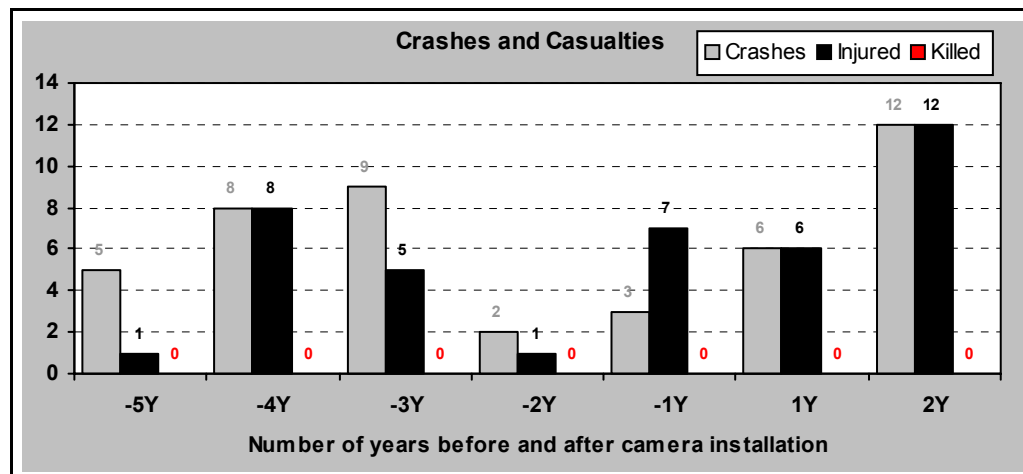
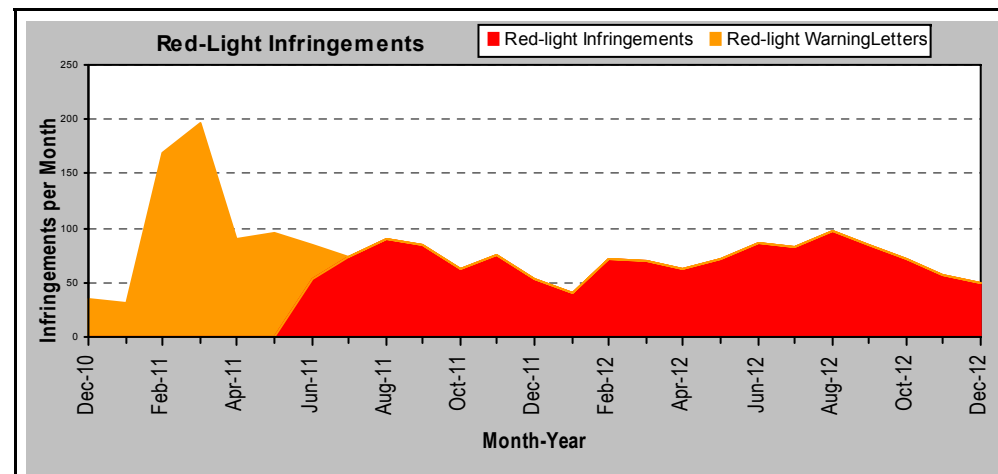
	5 years before installation <sup>1</sup>	2 years and 18 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	22	18	+100%
<i>Pedestrian Casualties</i>	2	3	+266%
<b>Crashes</b>	27	18	+63%
<i>Adjacent Crashes</i>	4	3	+83%
<i>Right Through Crashes</i>	10	10	+144%
<i>Rear End Crashes</i>	9	2	46%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Windsor Rd and Old Northern Rd / Seven Hills Rd, Baulkham Hills

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Windsor Rd and Old Northern Rd commenced issuing warning letters in September 2010.
- The camera at the intersection of Windsor Rd and Seven Hills Rd commenced issuing warning letters in September 2010.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

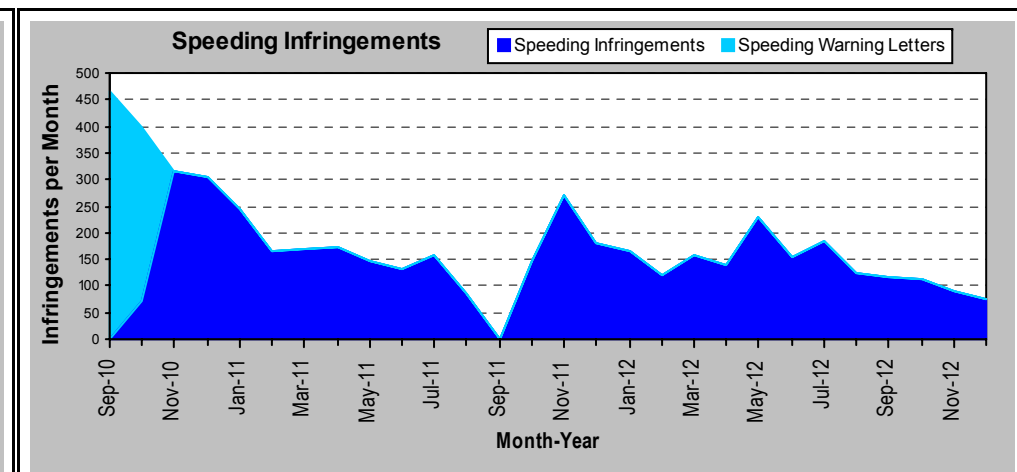
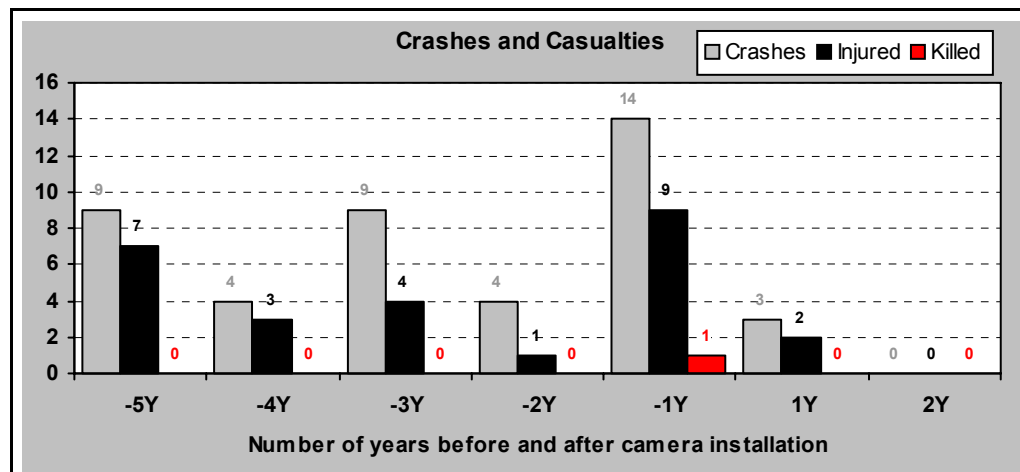
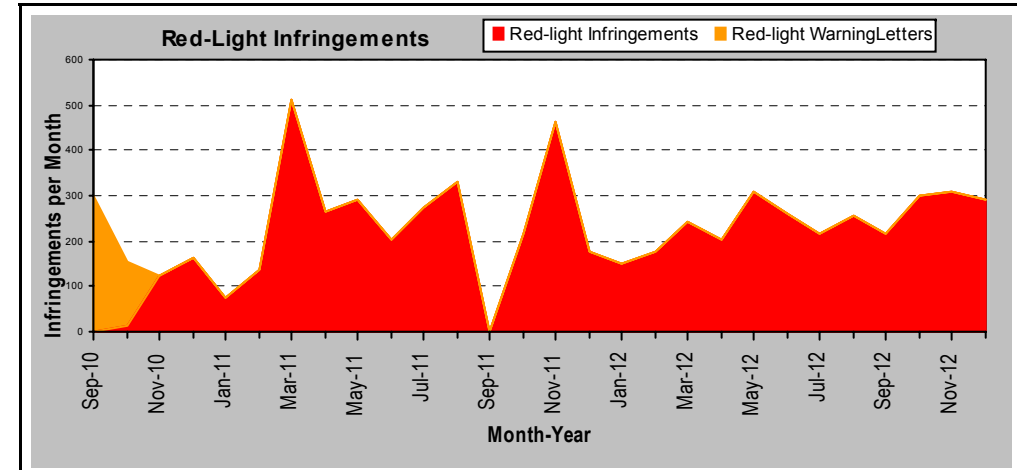
	5 years before installation <sup>1</sup>	2 years and 122 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	1	0	100%
<b>Injuries</b>	24	2	82%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	40	3	84%
<i>Adjacent Crashes</i>	6	1	64%
<i>Right Through Crashes</i>	9	1	76%
<i>Rear End Crashes</i>	13	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Forest Road and Harrow Road, Bexley

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Forest Road and Harrow Road commenced issuing warning letters in June 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

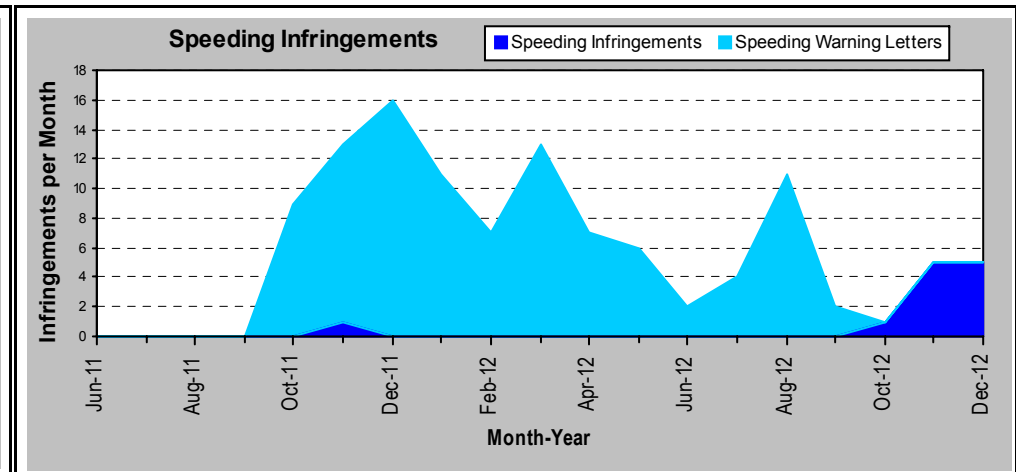
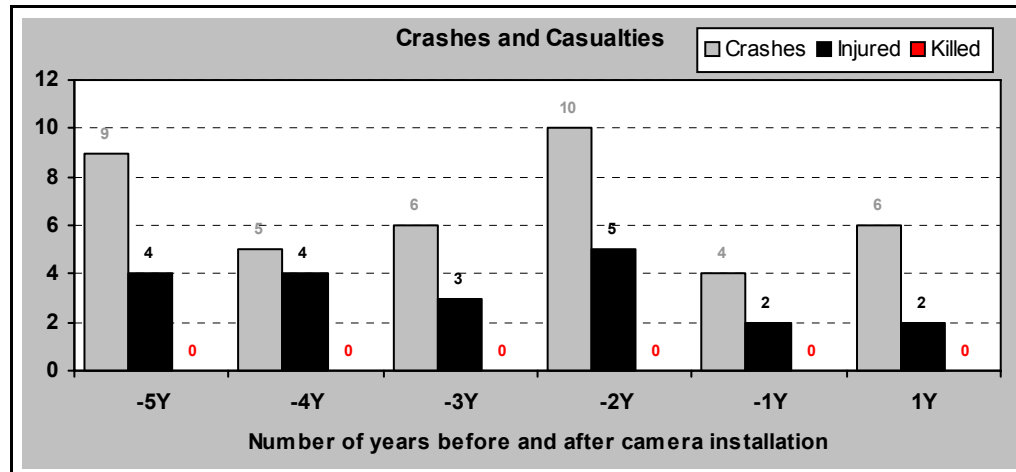
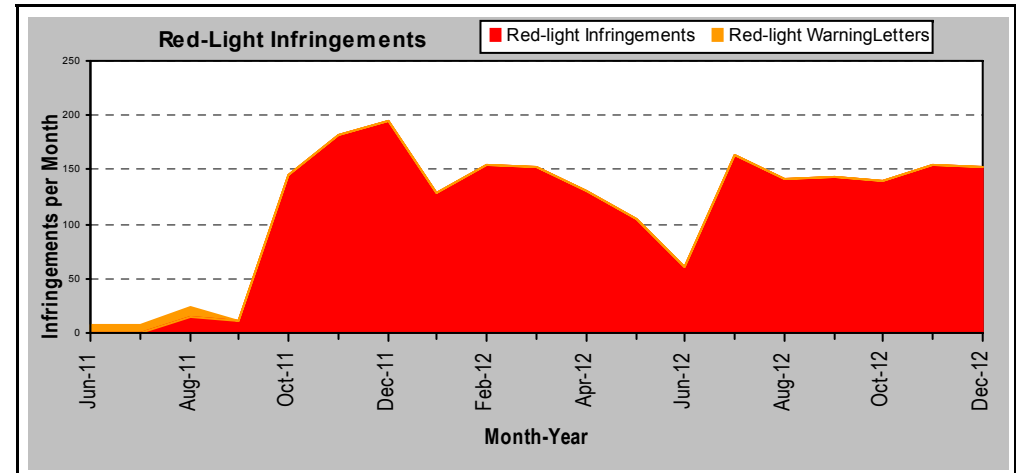
	5 years before installation <sup>1</sup>	1 year and 187 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	18	3	45%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	34	7	32%
<i>Adjacent Crashes</i>	1	0	100%
<i>Right Through Crashes</i>	10	2	34%
<i>Rear End Crashes</i>	15	2	56%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Bungarribee Rd and Reservoir Rd, Blacktown

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Bungarribee Rd and Reservoir Rd commenced issuing warning letters in September 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

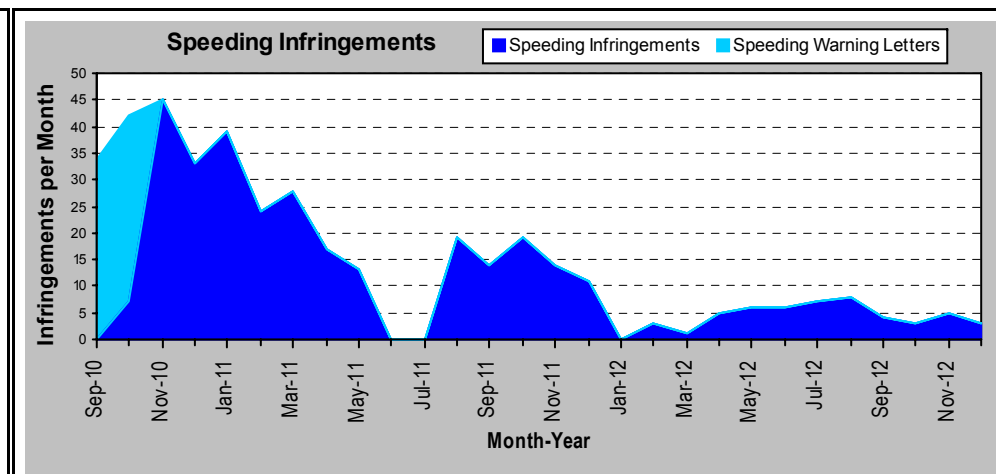
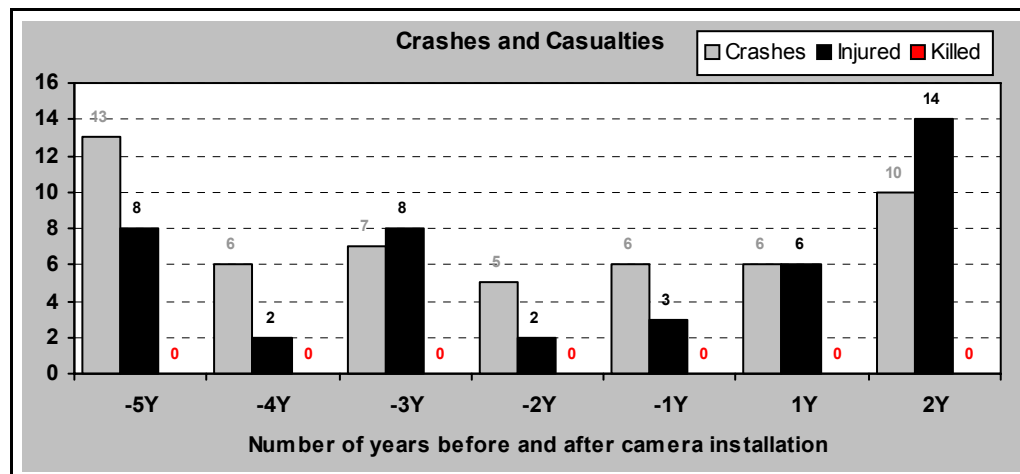
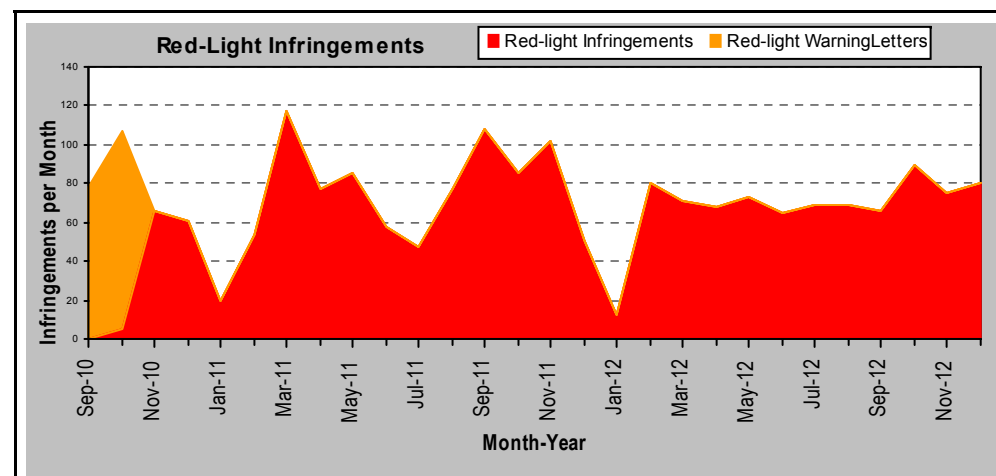
	5 years before installation <sup>1</sup>	2 years and 111 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	23	20	+89%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	37	18	+6%
<i>Adjacent Crashes</i>	7	2	38%
<i>Right Through Crashes</i>	12	7	+27%
<i>Rear End Crashes</i>	11	8	+58%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Great Western Hwy and Reservoir Rd, Blacktown

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Great Western Hwy and Reservoir Rd commenced issuing warning letters in December 2010.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

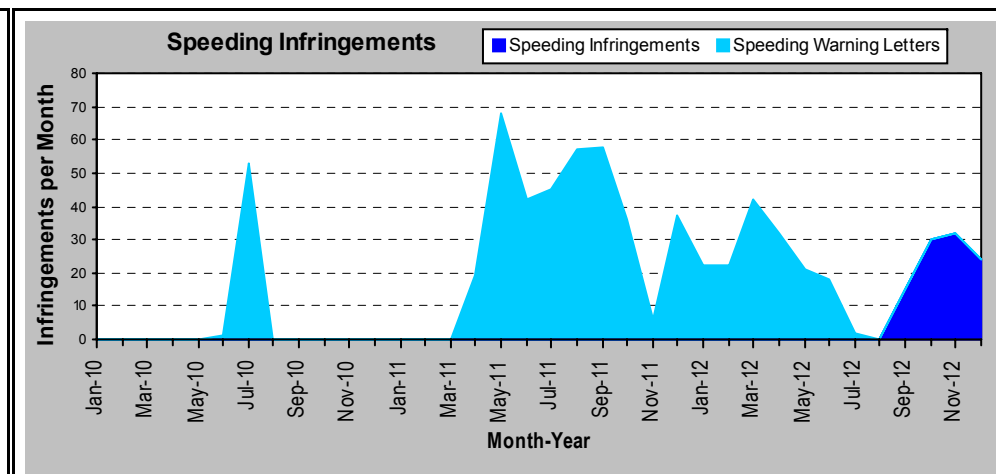
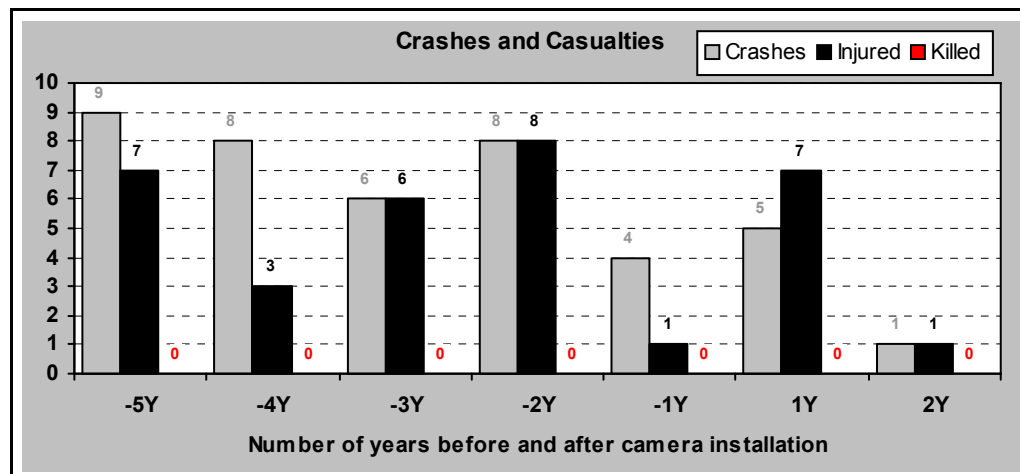
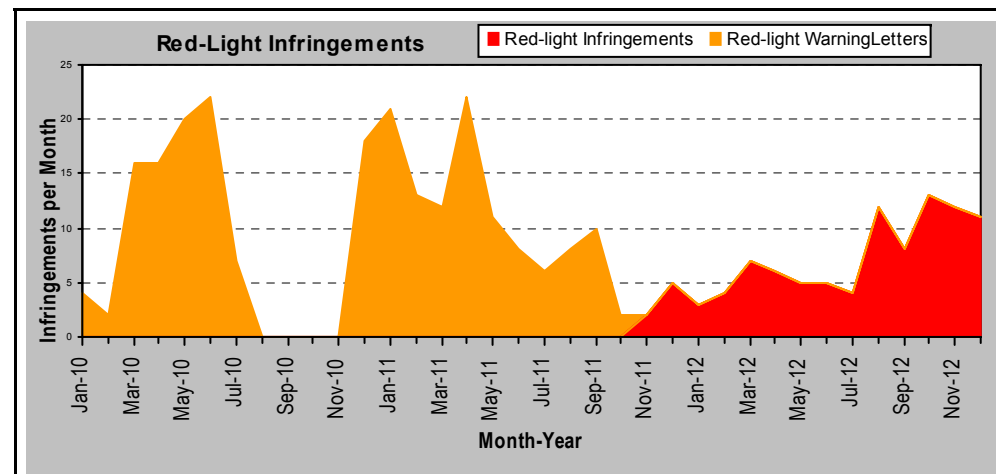
	5 years before installation <sup>1</sup>	2 years and 18 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	25	8	22%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	35	6	58%
<i>Adjacent Crashes</i>	6	1	59%
<i>Right Through Crashes</i>	7	1	65%
<i>Rear End Crashes</i>	8	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Lancaster St and Kildare Rd, Blacktown (school zone)

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Lancaster St and Kildare Rd commenced issuing warning letters in November 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

## Crashes at enforced intersection

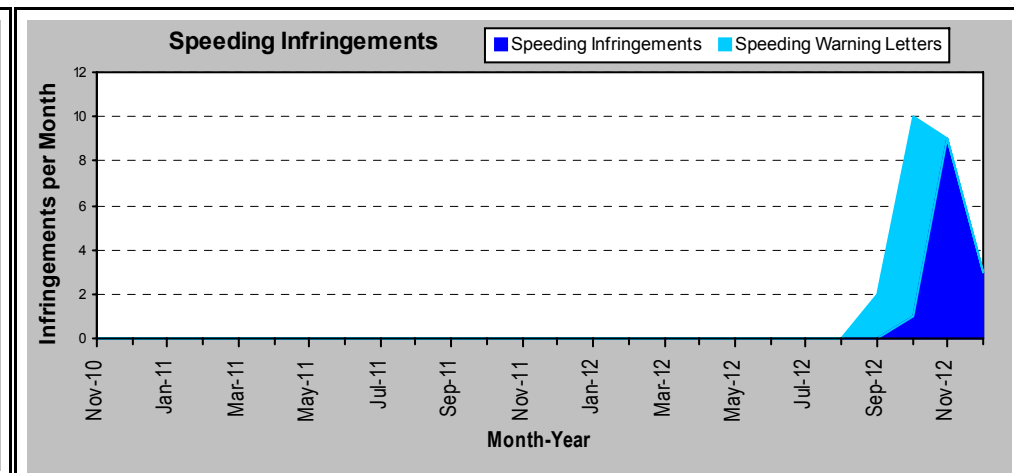
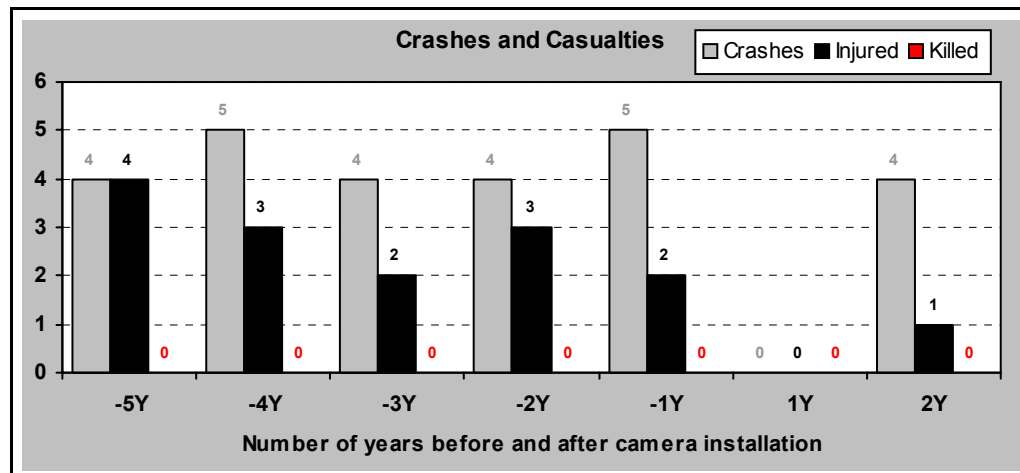
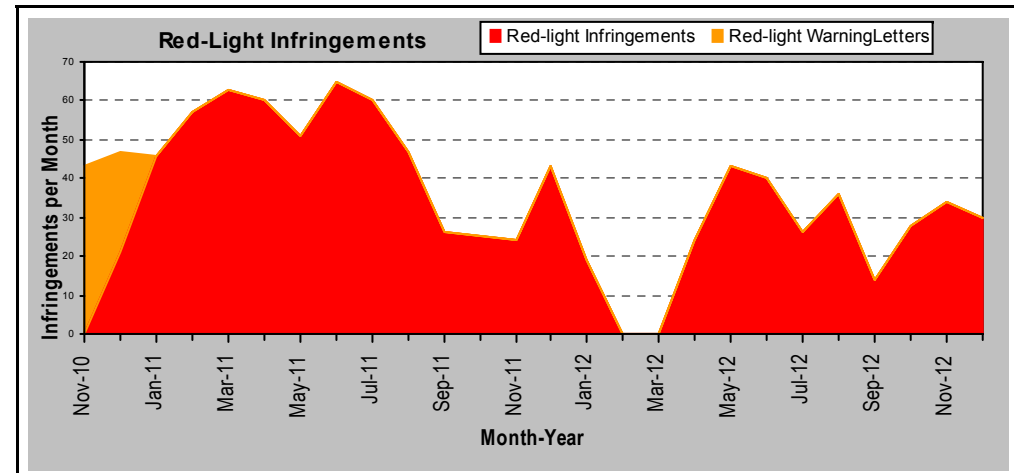
	5 years before installation <sup>1</sup>	2 years and 52 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	14	1	83%
<i>Pedestrian Casualties</i>	2	0	100%
<b>Crashes</b>	22	4	58%
<i>Adjacent Crashes</i>	7	1	67%
<i>Right Through Crashes</i>	6	2	22%
<i>Rear End Crashes</i>	4	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

## Infringements at safety camera location



## Newton Rd and Flushcombe Rd, Blacktown (school zone)

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Newton Rd and Flushcombe Rd commenced issuing warning letters in October 2010.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

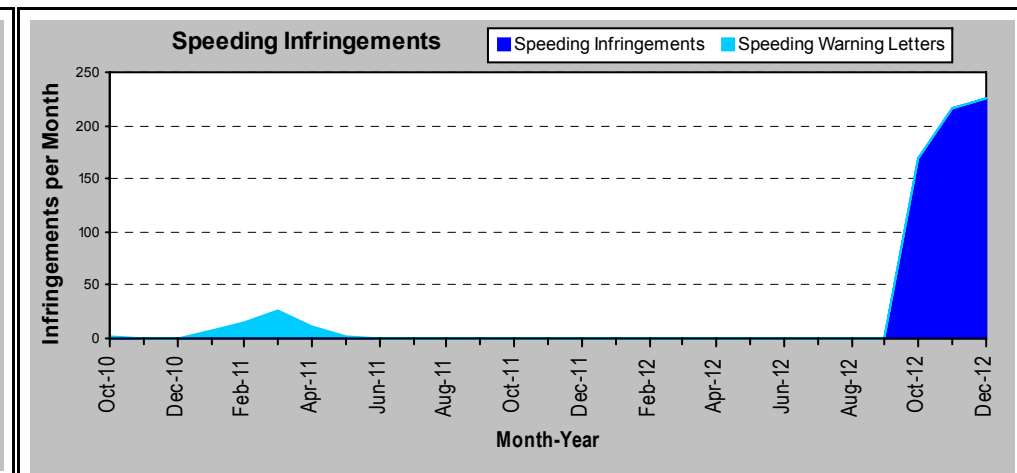
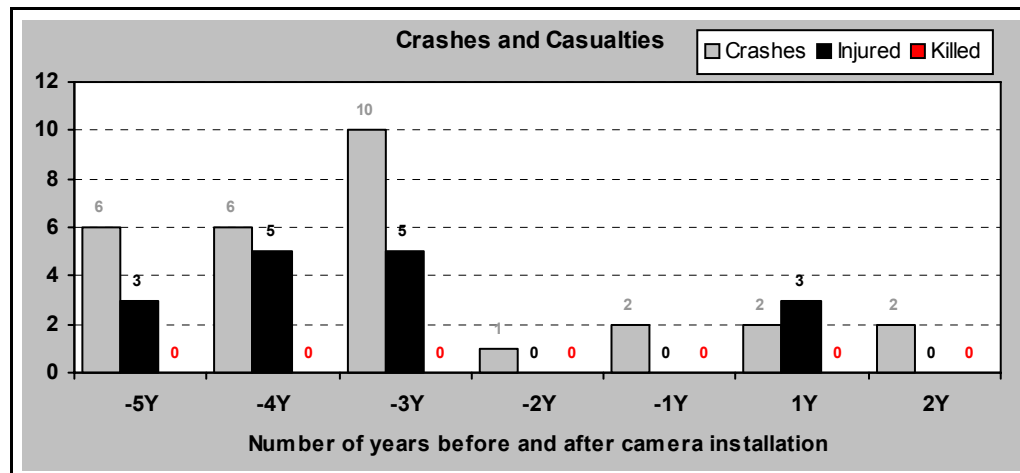
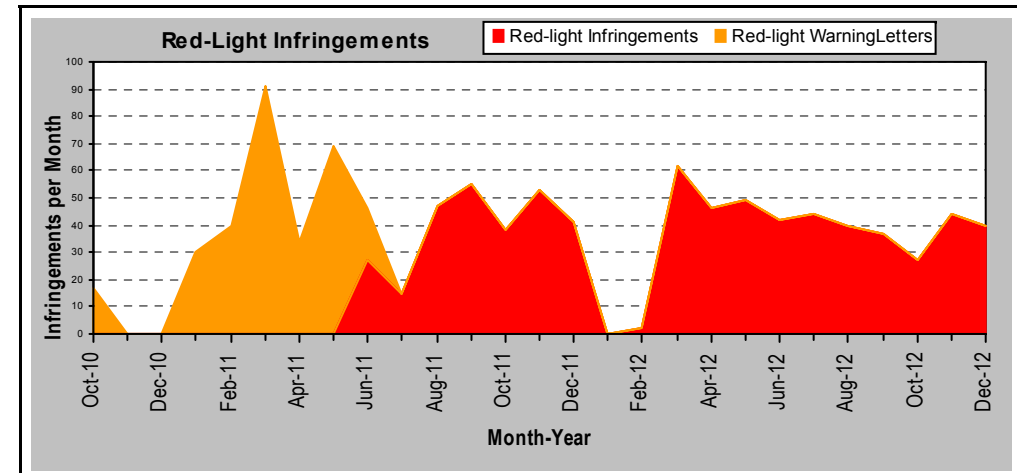
	5 years before installation <sup>1</sup>	2 years and 87 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	13	3	48%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	25	4	64%
<i>Adjacent Crashes</i>	6	3	+12%
<i>Right Through Crashes</i>	11	0	100%
<i>Rear End Crashes</i>	5	1	55%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Sunnyholt Rd and Main St, Blacktown

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Sunnyholt Rd and Main St commenced issuing warning letters in November 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

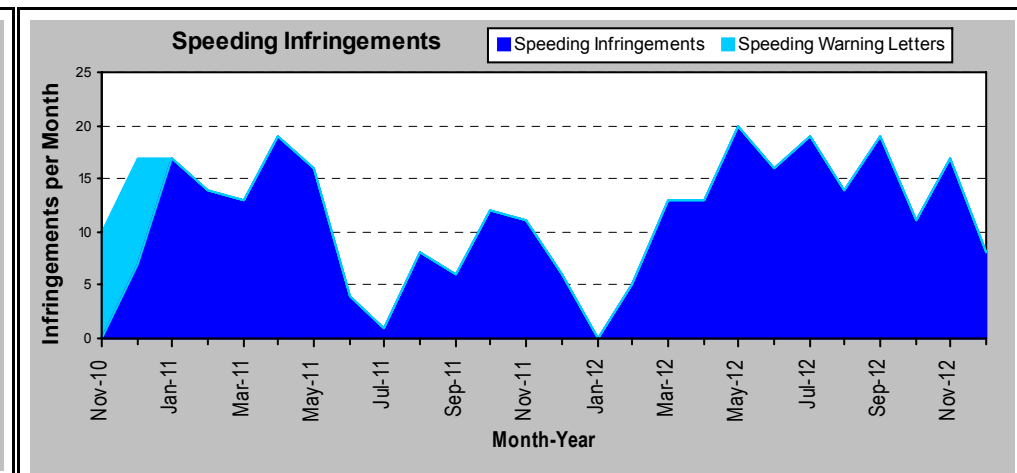
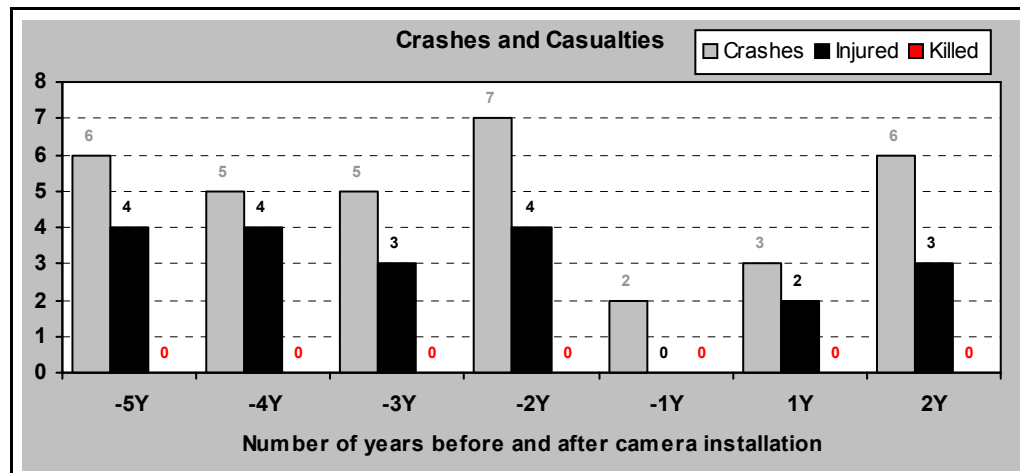
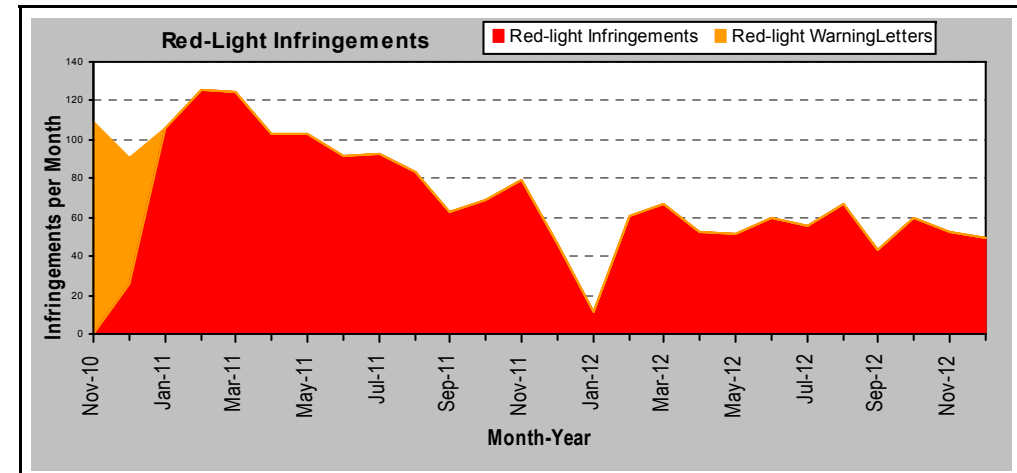
	5 years before installation <sup>1</sup>	2 years and 52 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	15	5	22%
<i>Pedestrian Casualties</i>	8	1	71%
<b>Crashes</b>	25	9	16%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	3	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Old South Head Road and Bondi Road, Bondi Junction

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Old South Head Road and Bondi Road commenced issuing warning letters in June 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

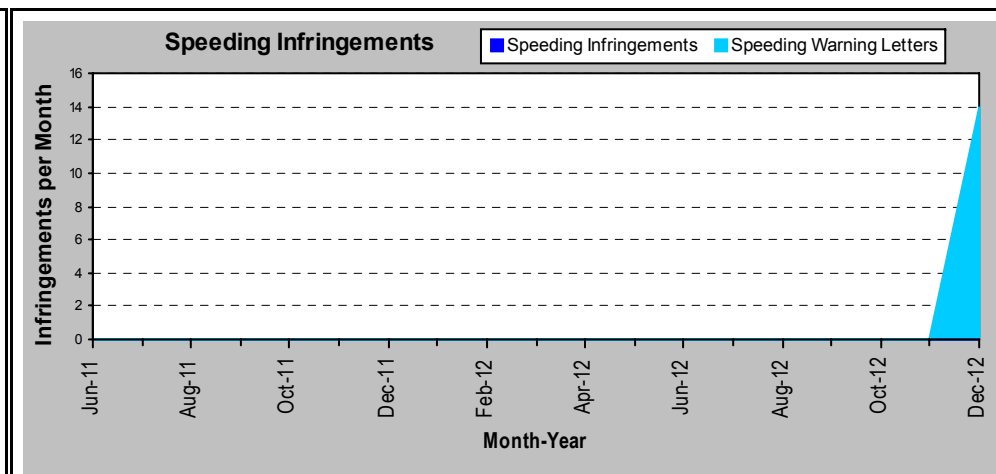
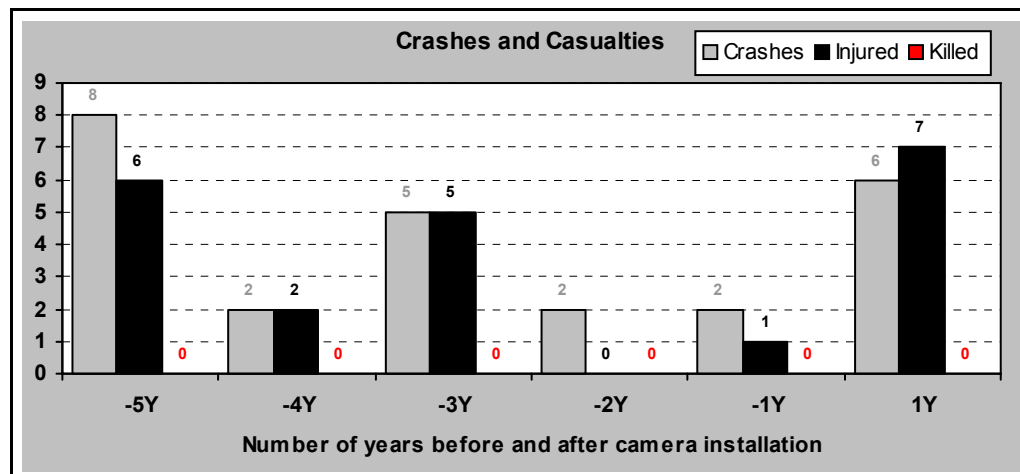
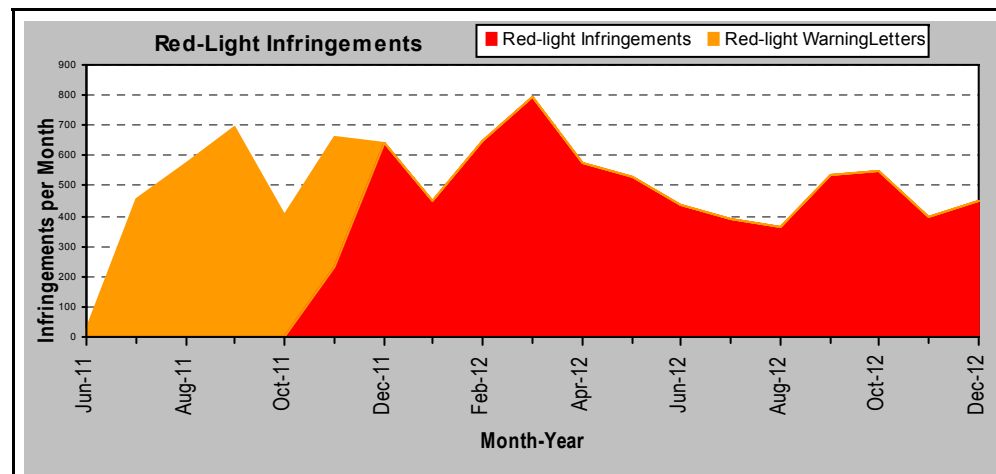
	5 years before installation <sup>1</sup>	1 year and 189 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	14	7	+65%
<i>Pedestrian Casualties</i>	2	0	100%
<b>Crashes</b>	19	7	+21%
<i>Adjacent Crashes</i>	7	2	6%
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	3	3	+230%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Parramatta Rd and Burwood Rd, Burwood / Concord

- There are two cameras at this intersection.
- The camera at the intersection of Parramatta Rd and Burwood Rd commenced issuing warning letters in September 2010.
- The camera at the intersection of Parramatta Rd and Burwood Rd commenced issuing warning letters in September 2010.
- While the results available show a decrease in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

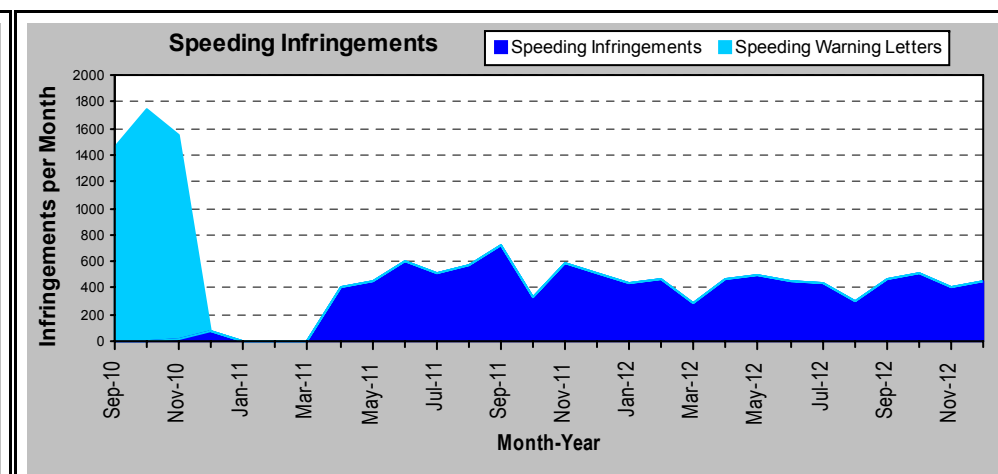
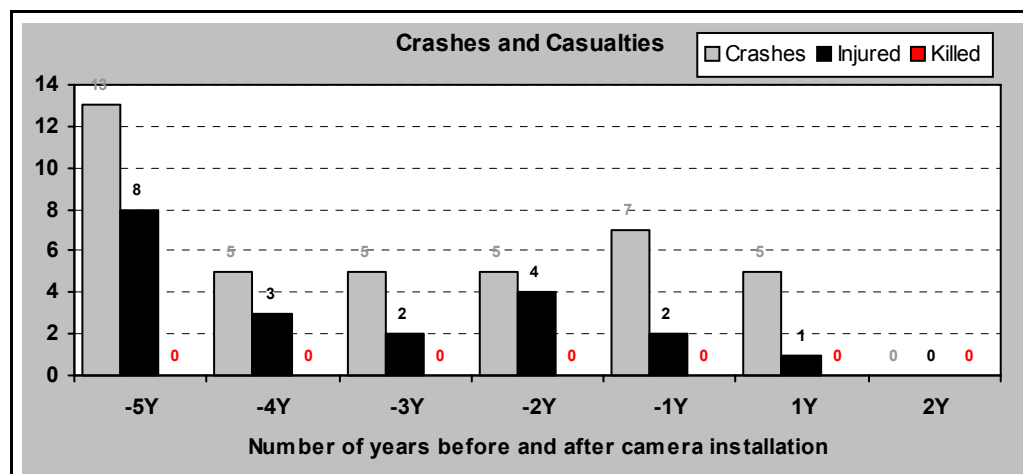
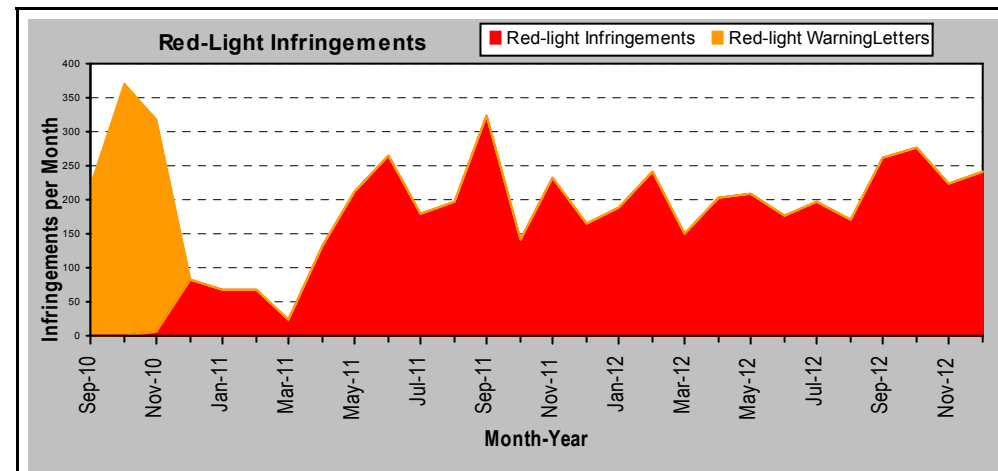
	5 years before installation <sup>1</sup>	2 years and 118 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	19	1	89%
<i>Pedestrian Casualties</i>	3	0	100%
<b>Crashes</b>	35	9	45%
<i>Adjacent Crashes</i>	9	0	100%
<i>Right Through Crashes</i>	1	0	100%
<i>Rear End Crashes</i>	15	5	28%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Cumberland Hwy and Cabramatta Rd West, Cabramatta West

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- Both cameras at the intersection of Cumberland Hwy and Cabramatta Rd West commenced issuing warning letters in June 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

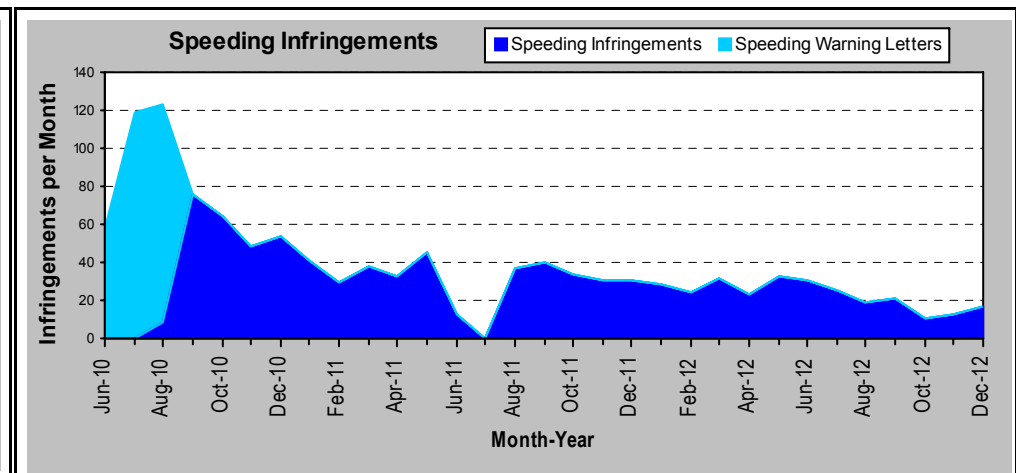
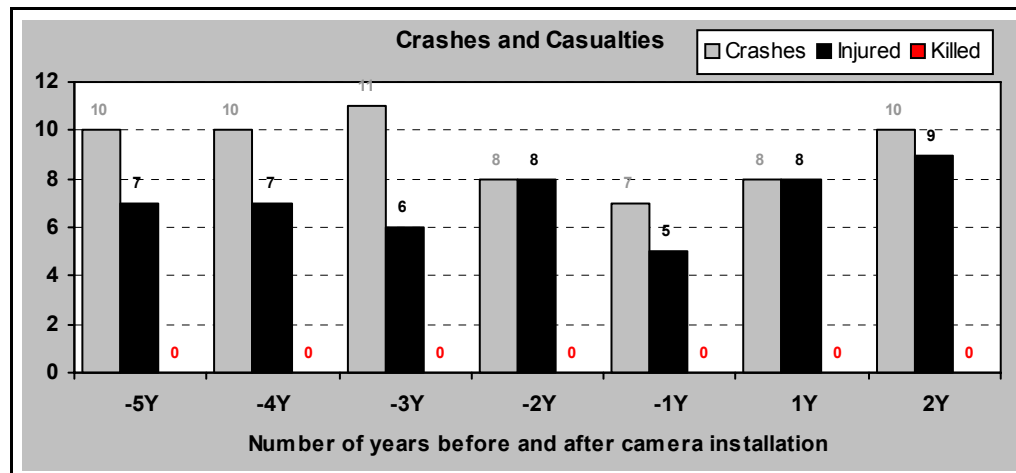
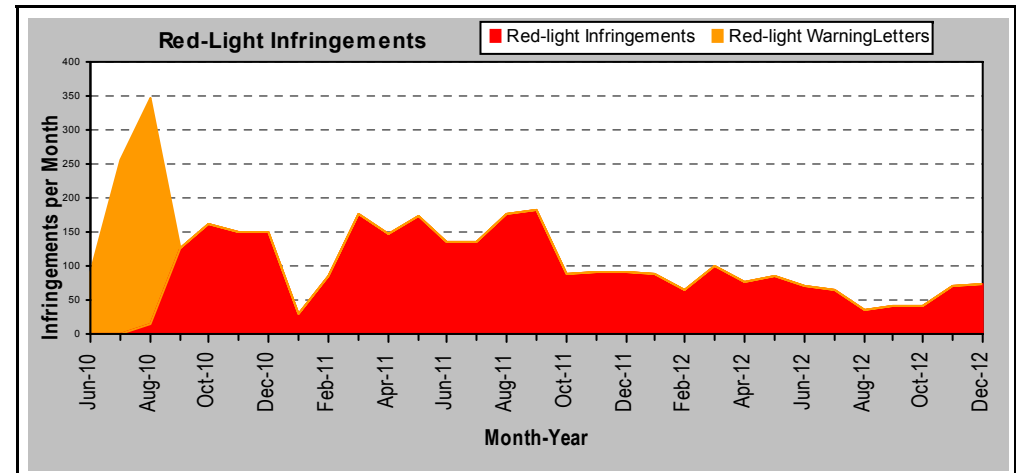
	5 years before installation <sup>1</sup>	2 years and 192 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	33	22	+32%
<i>Pedestrian Casualties</i>	2	0	100%
<b>Crashes</b>	46	24	+3%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	19	9	6%
<i>Rear End Crashes</i>	15	11	+45%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Kellicar Rd and Narellan Rd, Campbelltown

- There are two cameras at this intersection.
- Both cameras at the intersection of Kellicar Rd and Narellan Rd commenced issuing warning letters in May 2011.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

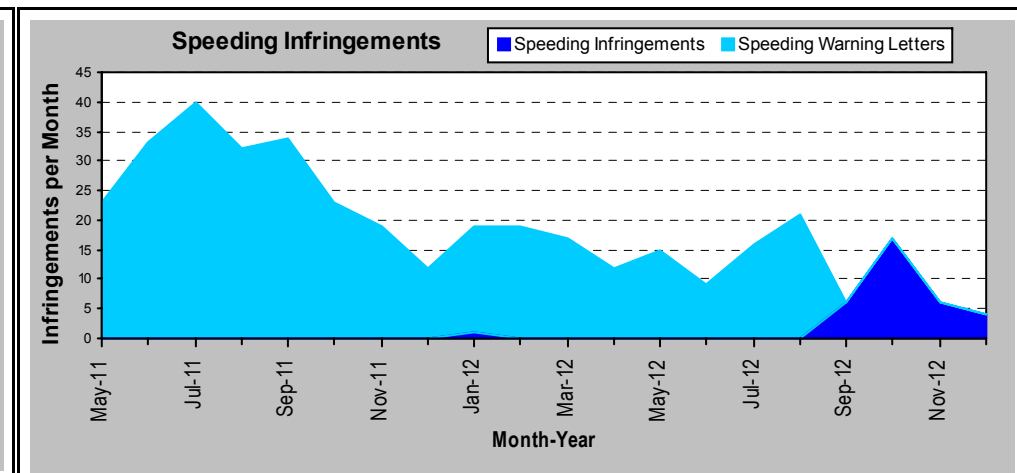
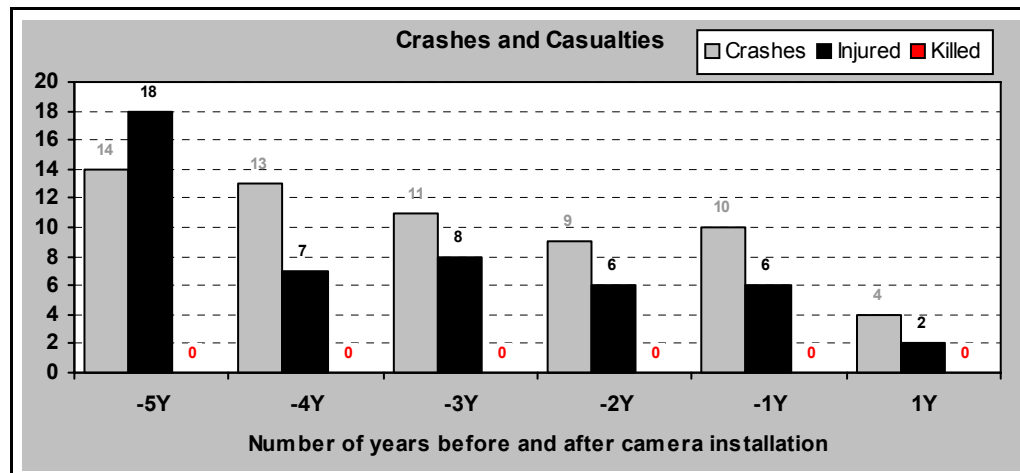
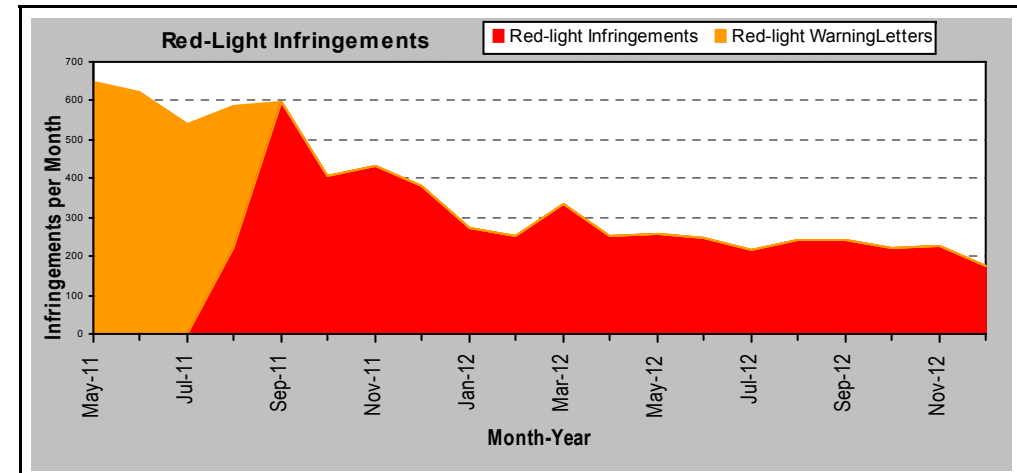
	5 years before installation <sup>1</sup>	1 year and 238 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	45	3	80%
<i>Pedestrian Casualties</i>	6	0	100%
<b>Crashes</b>	57	6	68%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	19	2	68%
<i>Rear End Crashes</i>	12	3	24%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Moore-Oxley Bypass and Broughton St, Campbelltown

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- Both cameras at the intersection of Moore-Oxley Bypass and Broughton St commenced issuing warning letters in June 2010.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

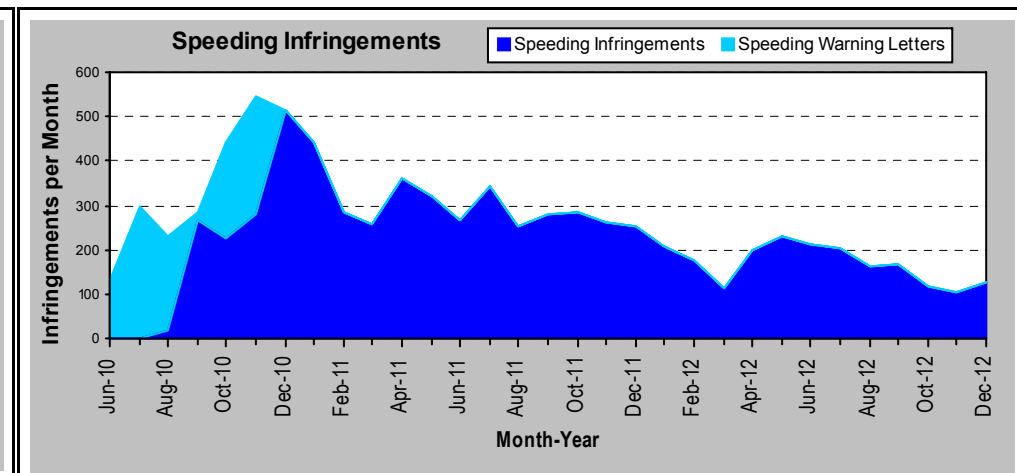
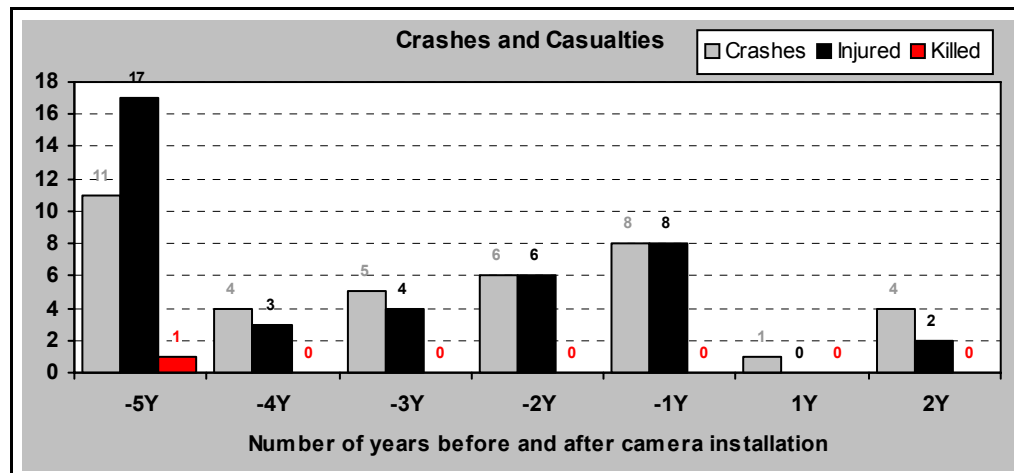
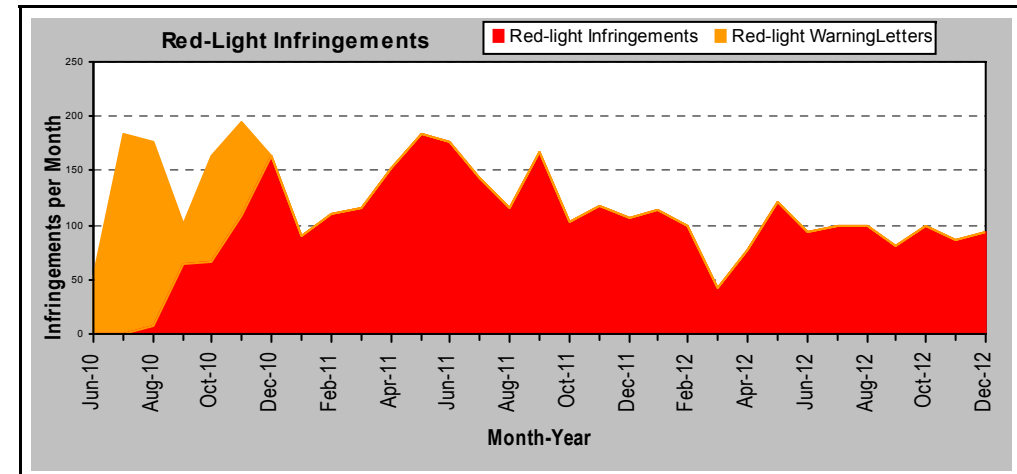
	5 years before installation <sup>1</sup>	2 years and 192 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	1	0	100%
<b>Injuries</b>	38	3	84%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	34	6	65%
<i>Adjacent Crashes</i>	8	1	75%
<i>Right Through Crashes</i>	16	3	63%
<i>Rear End Crashes</i>	9	2	56%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Canterbury Rd and Bexley Rd, Campsie

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Canterbury Rd and Bexley Rd commenced issuing warning letters in October 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

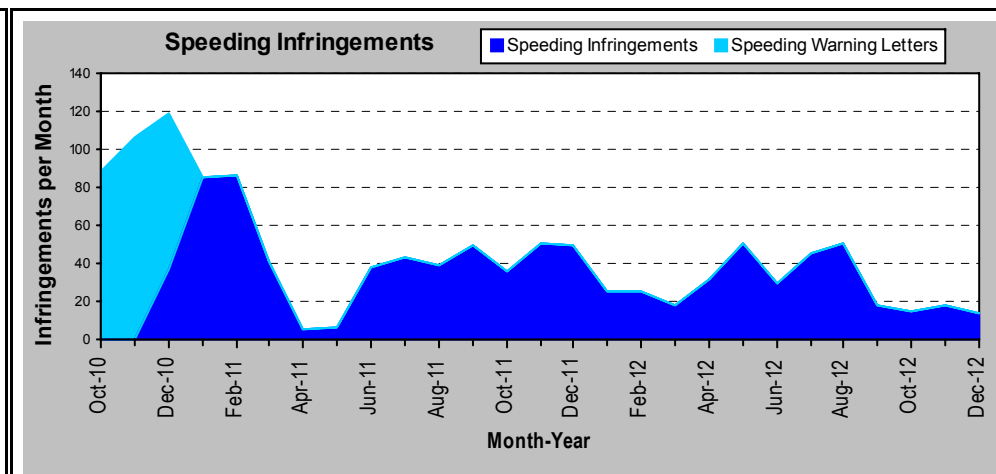
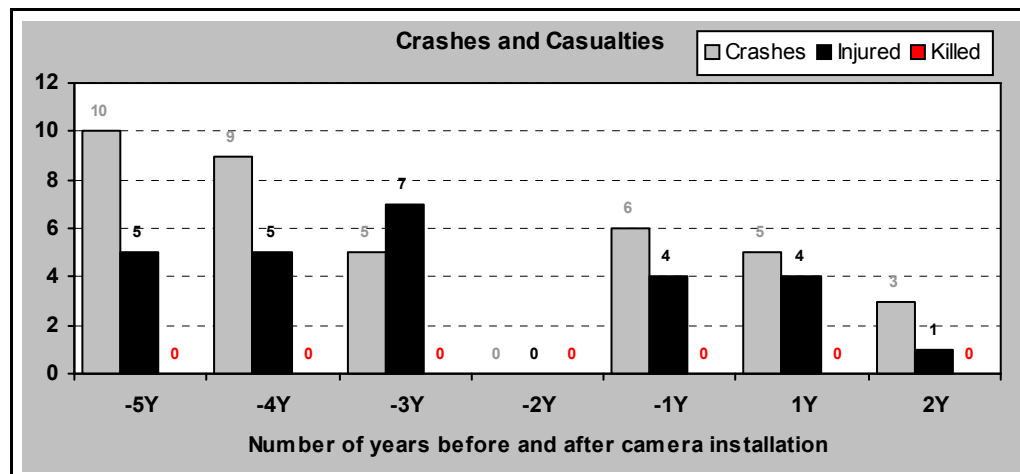
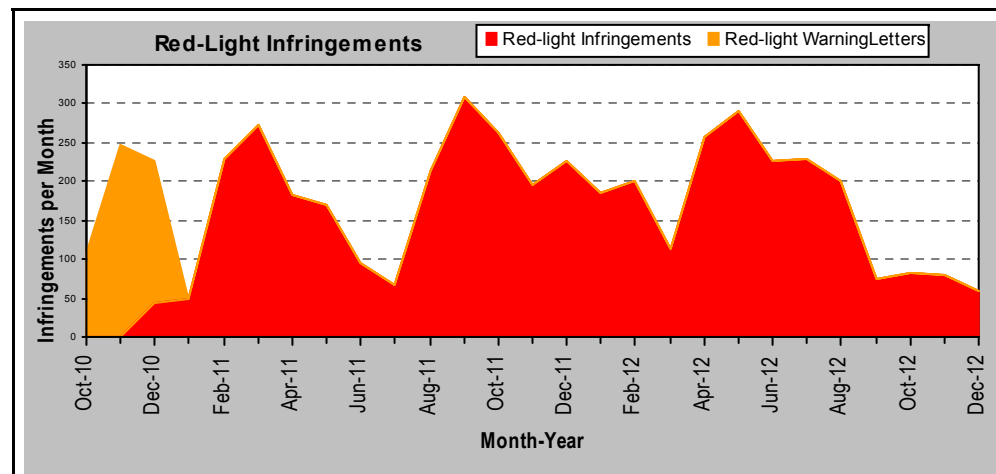
	5 years before installation <sup>1</sup>	2 years and 79 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	21	5	46%
<i>Pedestrian Casualties</i>	1	2	+351%
<b>Crashes</b>	30	8	40%
<i>Adjacent Crashes</i>	4	1	44%
<i>Right Through Crashes</i>	9	4	0%
<i>Rear End Crashes</i>	6	1	62%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Cumberland Hwy and St Johns Rd, Canley Heights

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Cumberland Hwy and St Johns Rd commenced issuing warning letters in December 2009.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

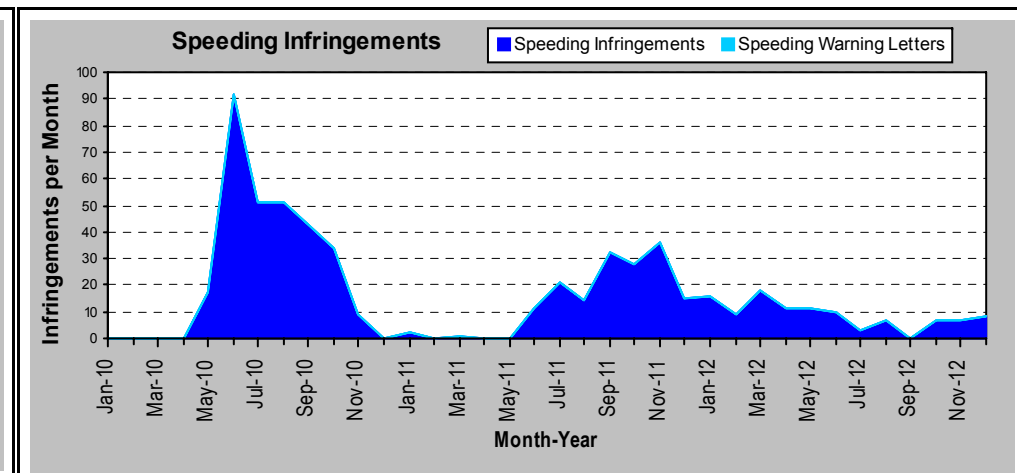
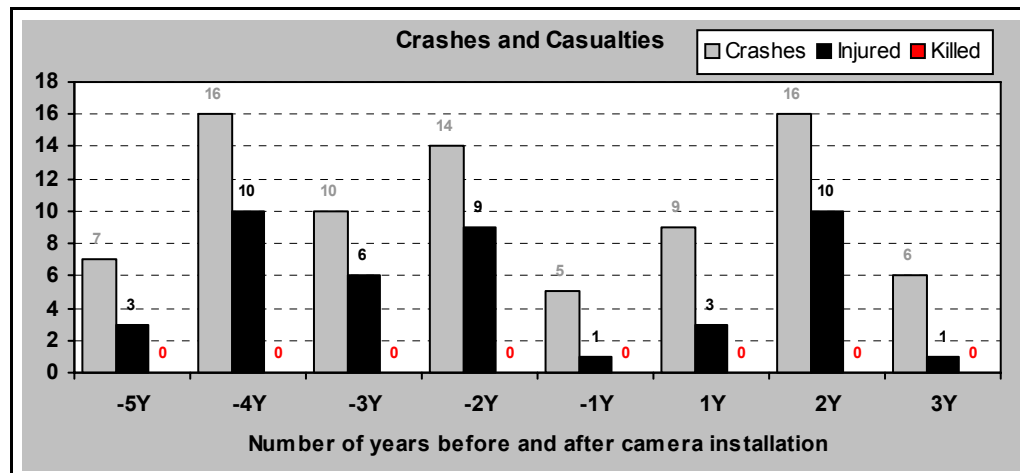
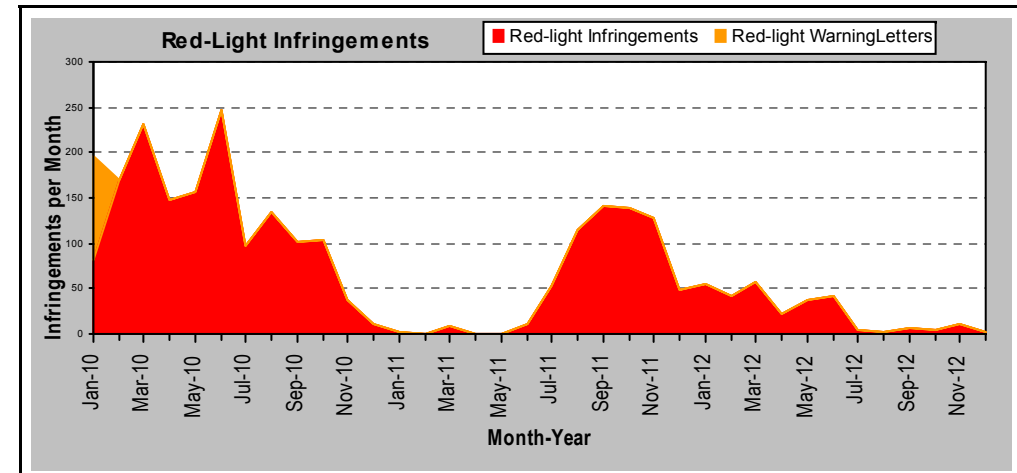
	5 years before installation <sup>1</sup>	3 years and 15 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	29	14	21%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	52	31	2%
<i>Adjacent Crashes</i>	4	2	18%
<i>Right Through Crashes</i>	19	6	48%
<i>Rear End Crashes</i>	20	18	+48%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Sackville Street and Canley Vale Road, Canley Vale

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Sackville Street and Canley Vale Road commenced issuing warning letters in April 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

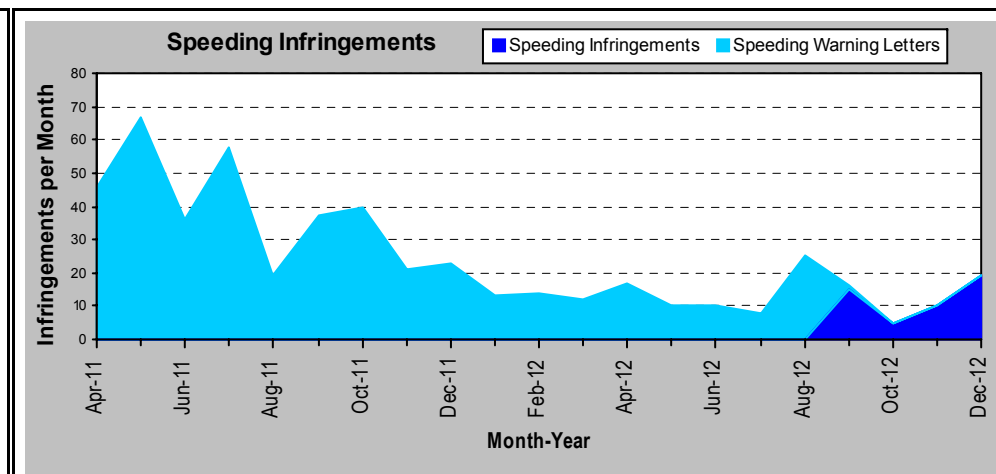
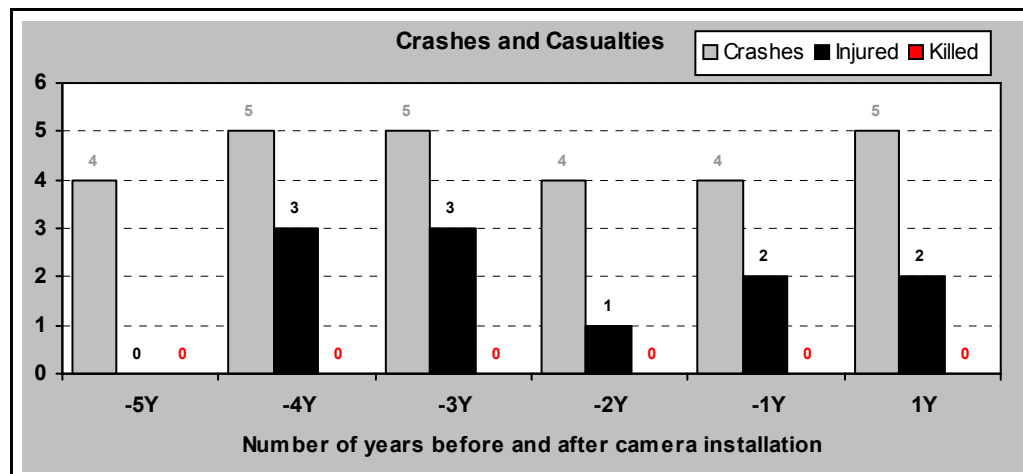
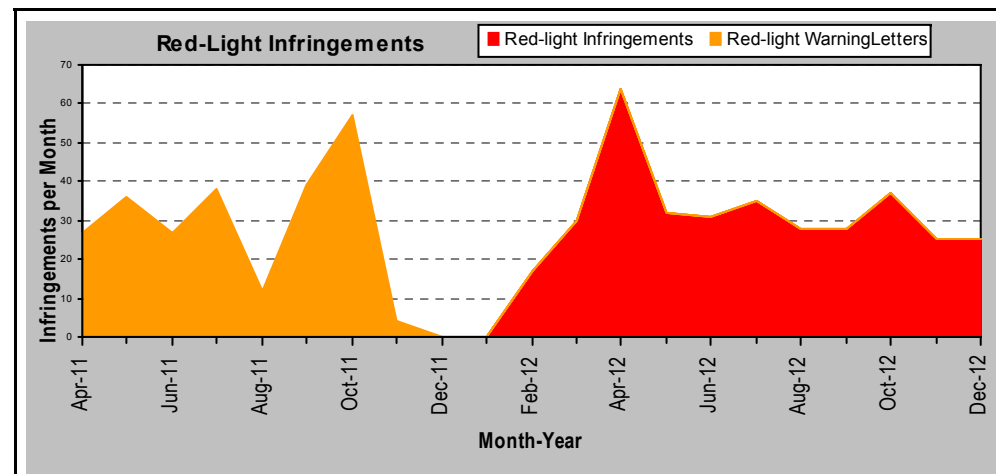
	5 years before installation <sup>1</sup>	1 year and 269 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	9	6	+92%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	22	8	+5%
<i>Adjacent Crashes</i>	7	2	18%
<i>Right Through Crashes</i>	8	3	+8%
<i>Rear End Crashes</i>	4	2	+44%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Kingsway and Gannons Rd, Caringbah

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Kingsway and Gannons Rd commenced issuing warning letters in September 2010.
- While the results available show a decrease in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

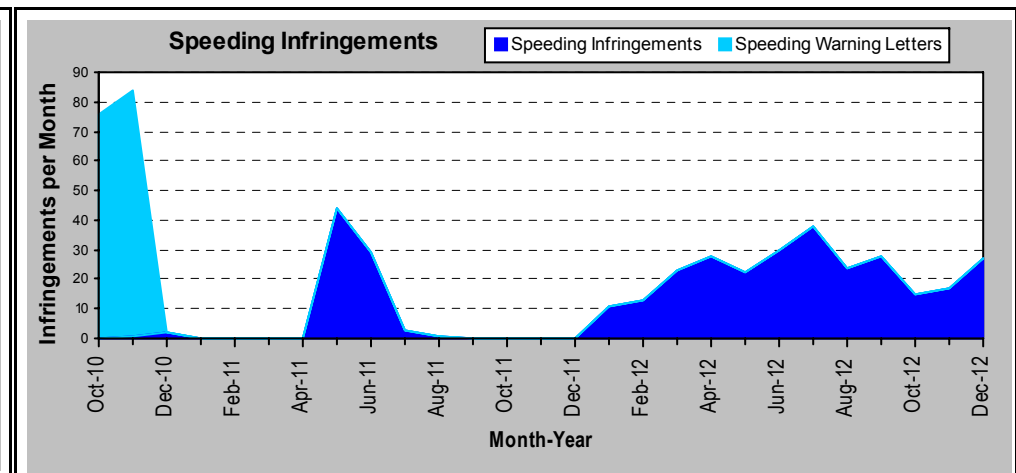
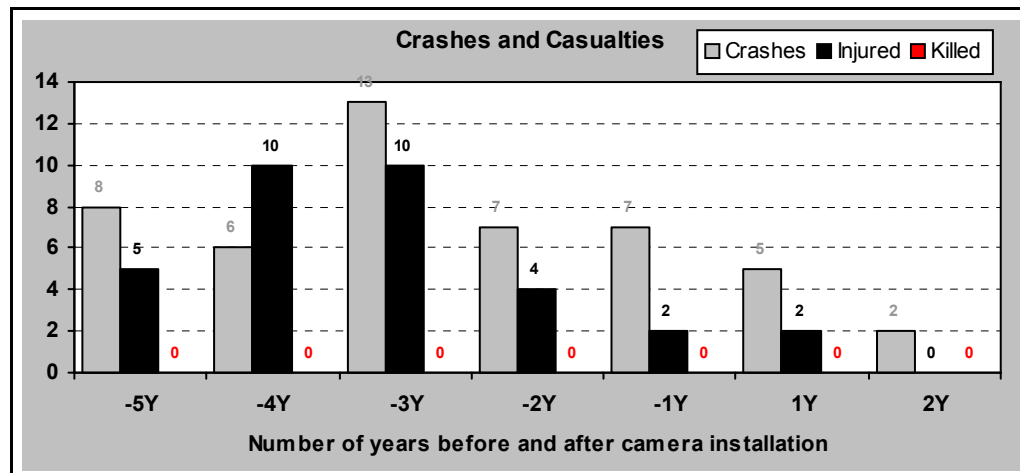
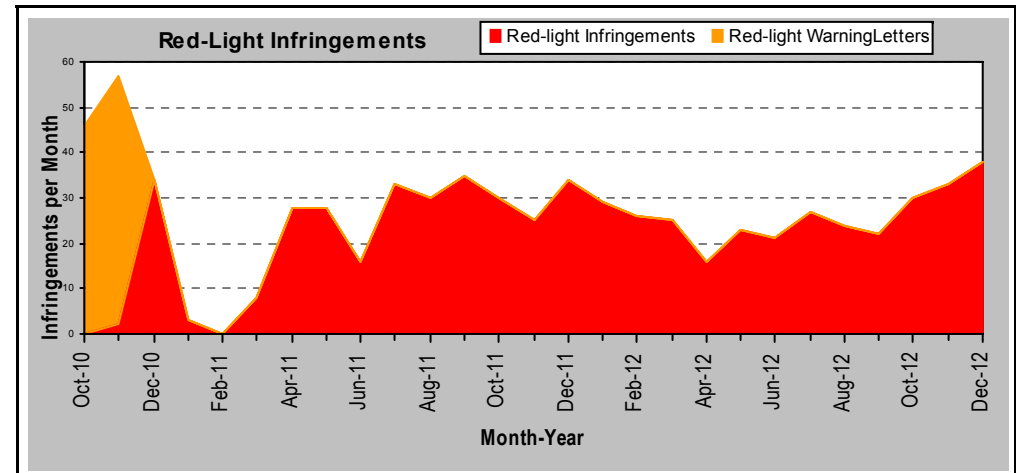
	5 years before installation <sup>1</sup>	2 years and 95 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	31	2	86%
<i>Pedestrian Casualties</i>	3	0	100%
<b>Crashes</b>	41	8	57%
<i>Adjacent Crashes</i>	10	0	100%
<i>Right Through Crashes</i>	18	4	51%
<i>Rear End Crashes</i>	7	2	37%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Showground Rd and Victoria Av, Castle Hill

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Showground Rd and Victoria Av commenced issuing warning letters in February 2010.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

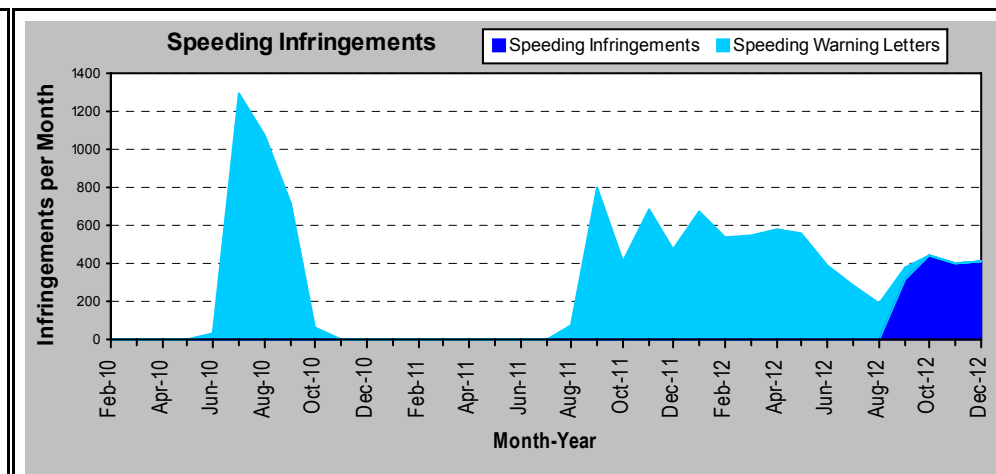
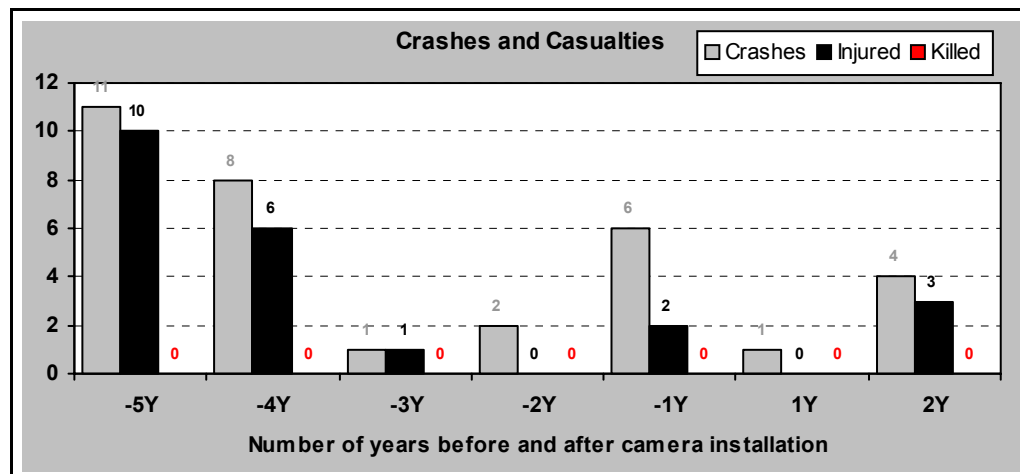
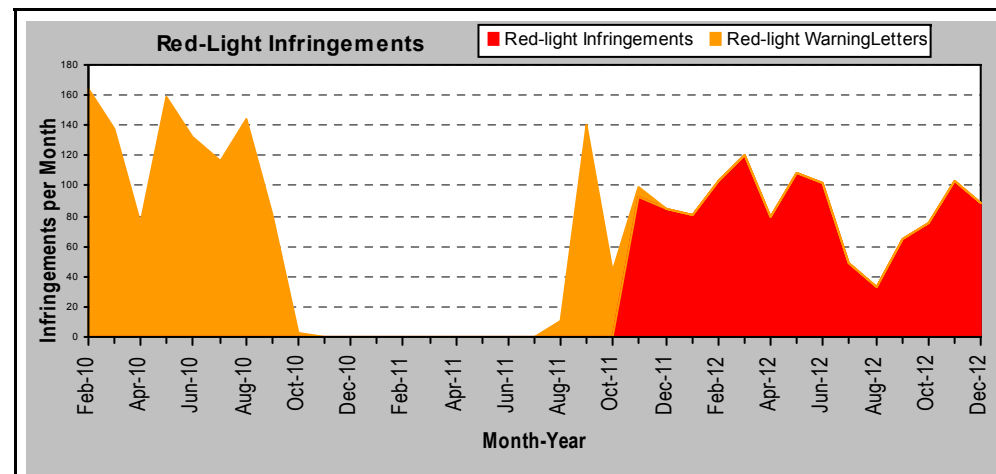
	5 years before installation <sup>1</sup>	2 years and 335 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	19	3	73%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	28	5	69%
<i>Adjacent Crashes</i>	1	1	+71%
<i>Right Through Crashes</i>	10	1	83%
<i>Rear End Crashes</i>	11	2	69%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Waldron Rd and Hector St, Chester Hill / Sefton

- There are two cameras at this intersection.
- The camera at the intersection of Waldron Rd and Hector St commenced issuing warning letters in July 2010.
- The camera at the intersection of Waldron Rd and Hector St commenced issuing warning letters in August 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

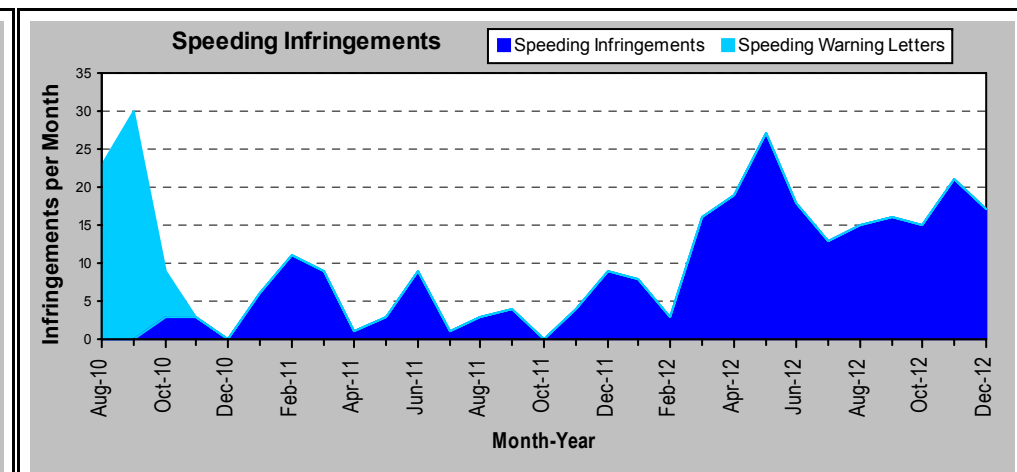
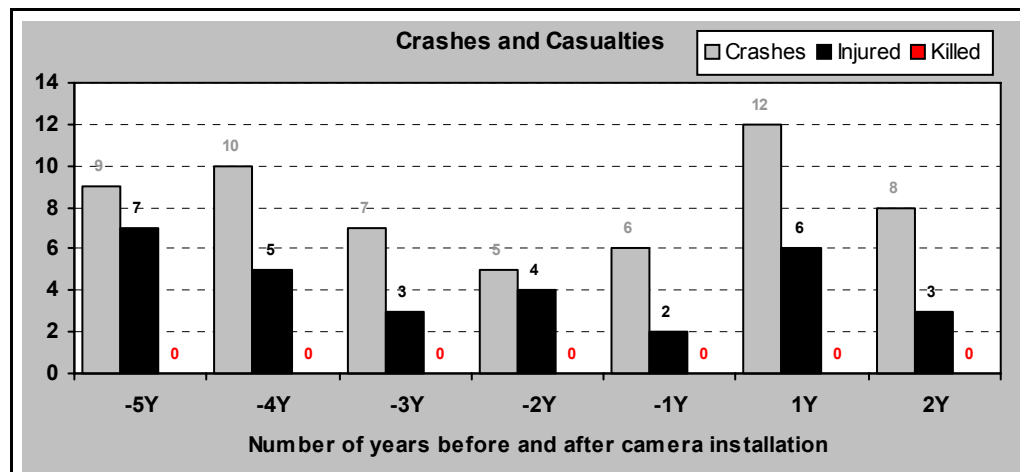
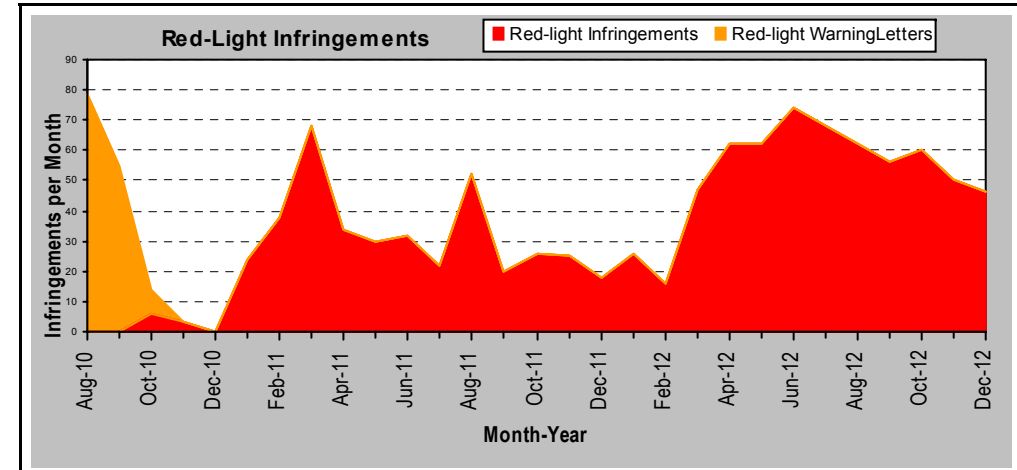
	5 years before installation <sup>1</sup>	2 years and 163 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	21	9	12%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	37	20	+11%
<i>Adjacent Crashes</i>	7	4	+17%
<i>Right Through Crashes</i>	23	13	+16%
<i>Rear End Crashes</i>	3	1	32%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Pacific Highway and Hume Street, Crows Nest

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Pacific Highway and Hume Street commenced issuing warning letters in April 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

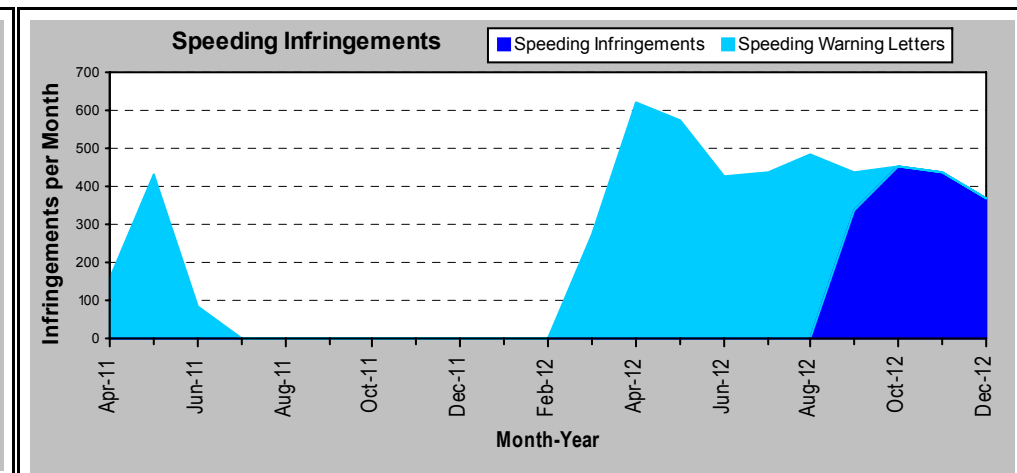
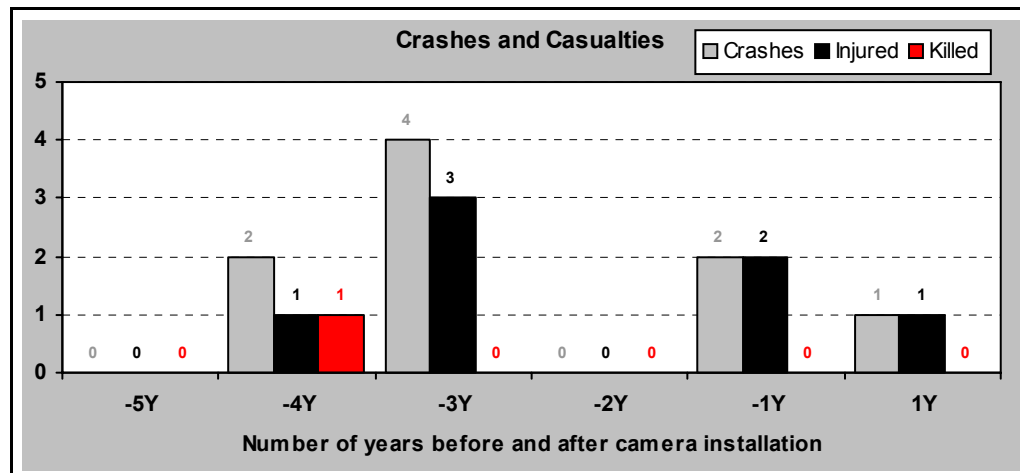
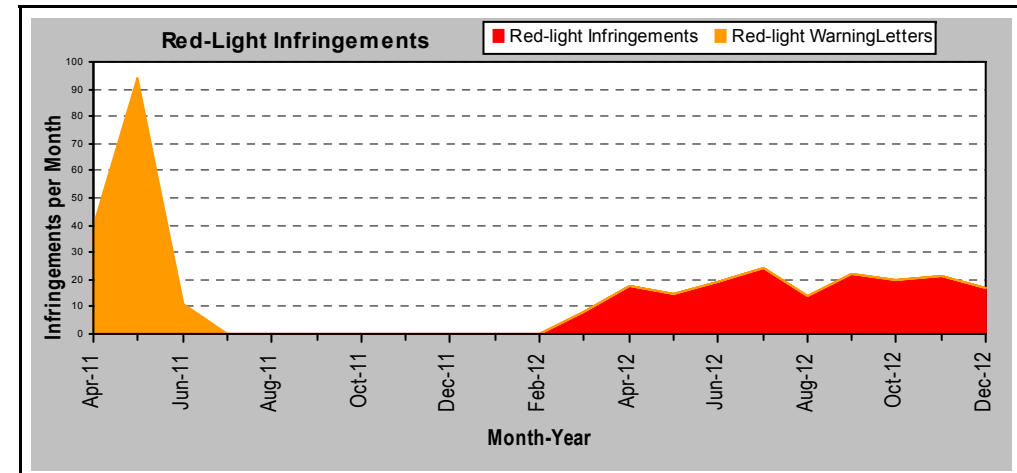
	5 years before installation <sup>1</sup>	1 year and 259 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	1	0	100%
<b>Injuries</b>	6	2	2%
<i>Pedestrian Casualties</i>	3	1	2%
<b>Crashes</b>	8	3	+10%
<i>Adjacent Crashes</i>	2	2	+193%
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	2	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Craigend St and McLachlan Av, Darlinghurst

- There is one camera at this intersection.
- The camera at the intersection of Craigend St and McLachlan Av commenced issuing warning letters in August 2010.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued. This location was impacted by major civil works between June and November 2011.

### Crashes at enforced intersection

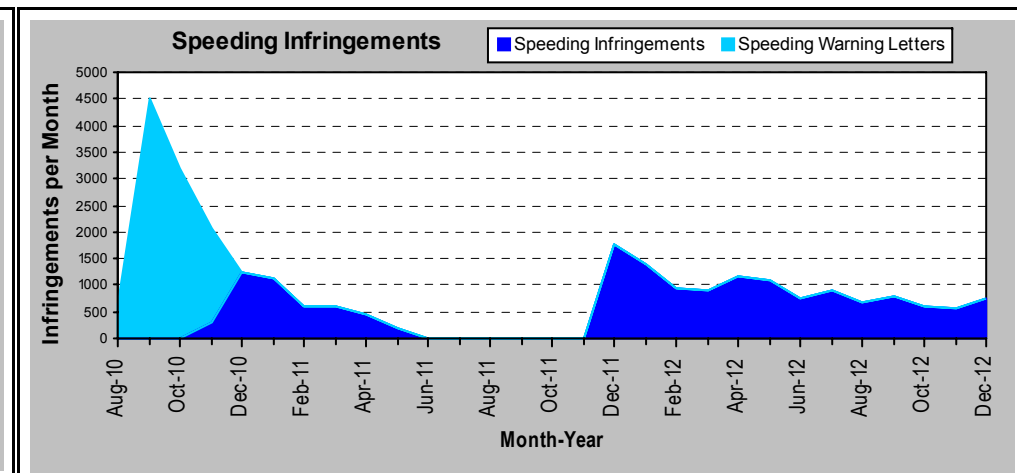
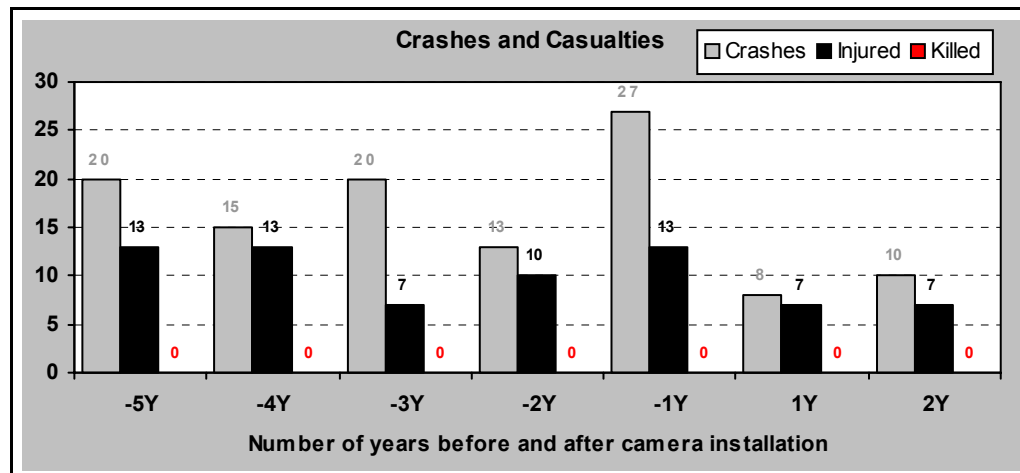
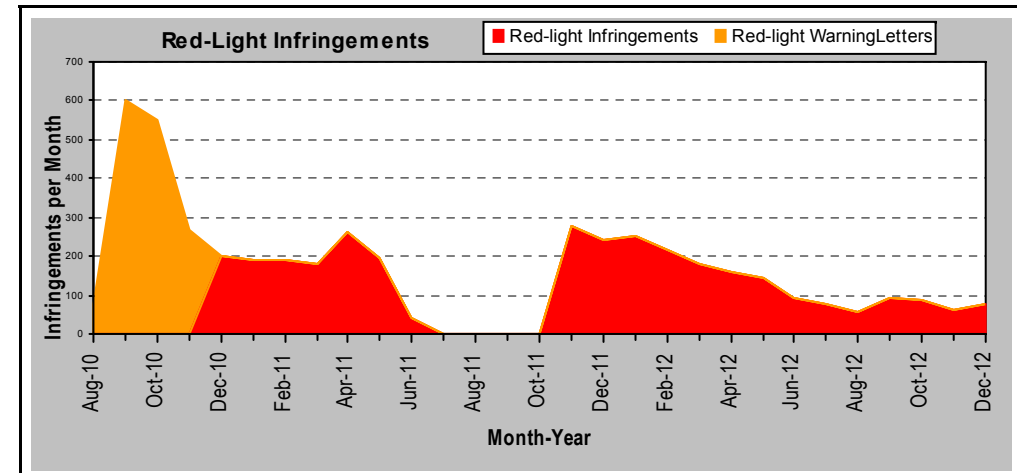
	5 years before installation <sup>1</sup>	2 years and 128 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	56	16	39%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	95	20	55%
<i>Adjacent Crashes</i>	74	11	68%
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	7	1	70%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Pittwater Road and Harbord Road, Dee Why

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Pittwater Road and Harbord Road commenced issuing warning letters in June 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

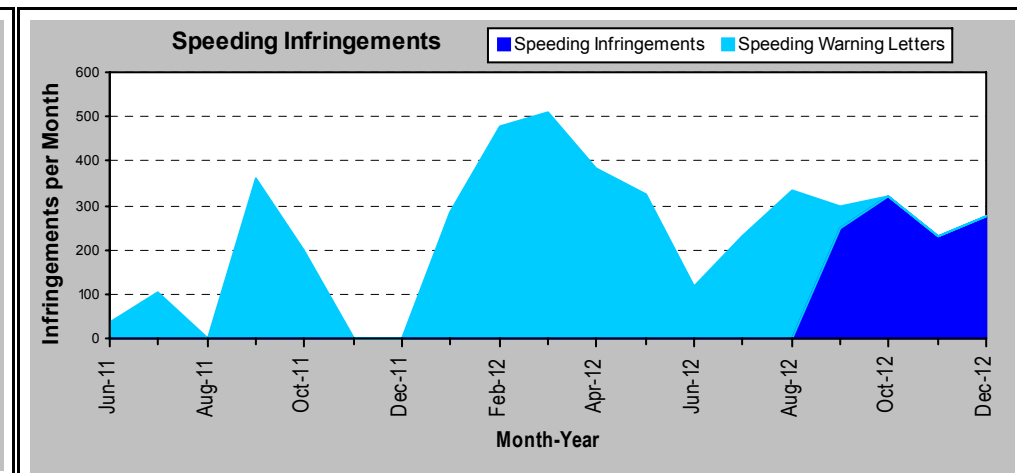
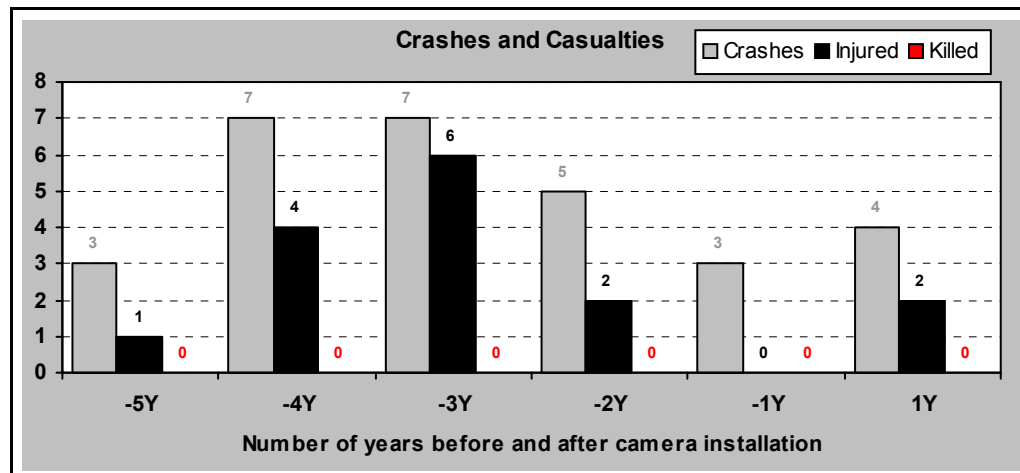
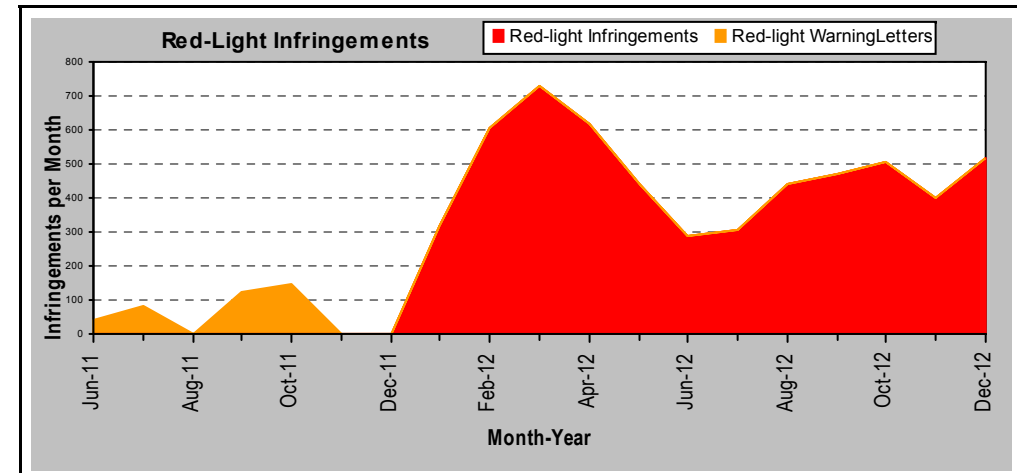
	5 years before installation <sup>1</sup>	1 year and 189 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	13	3	24%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	25	5	34%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	0	1	-
<i>Rear End Crashes</i>	15	3	34%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Blaxland Road and May Street, Eastwood

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Blaxland Road and May Street commenced issuing warning letters in April 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

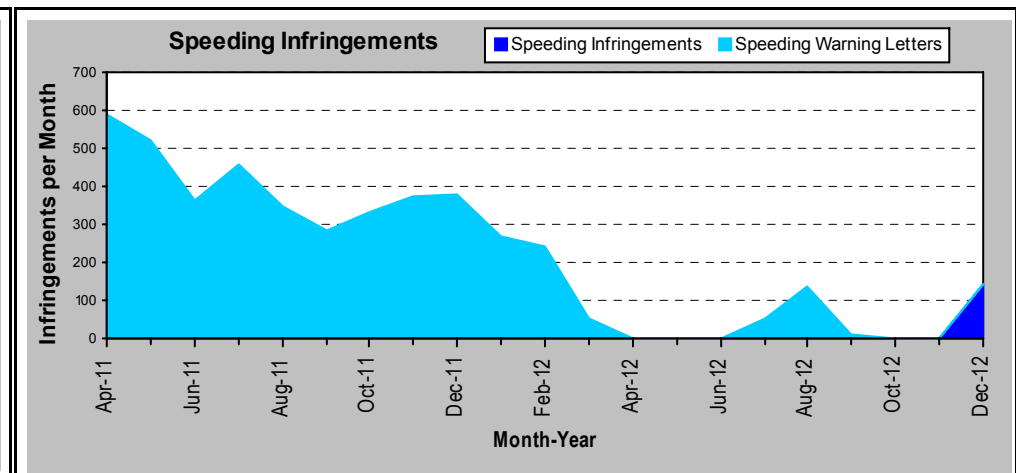
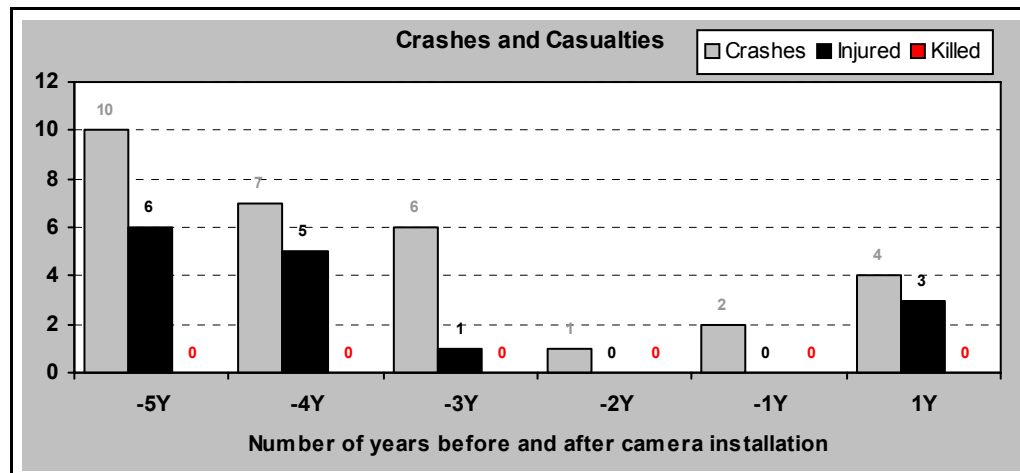
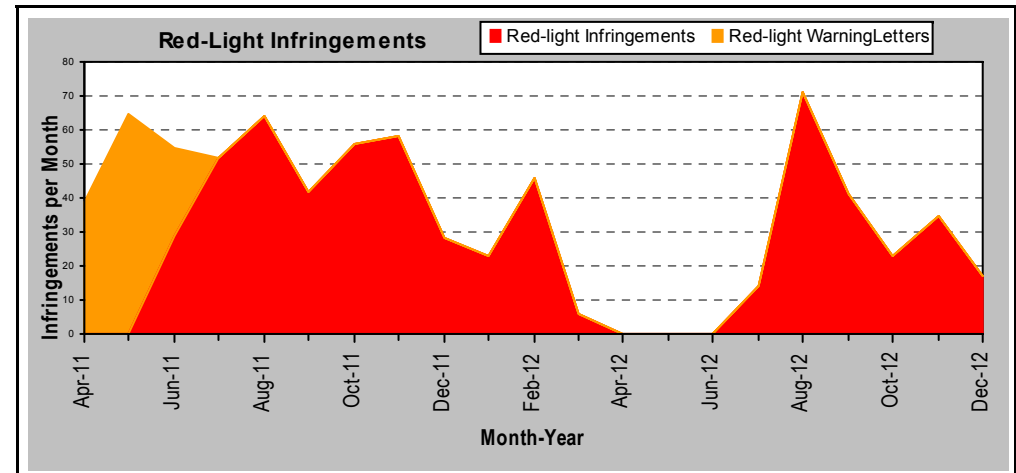
	5 years before installation <sup>1</sup>	1 year and 269 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	12	4	4%
<i>Pedestrian Casualties</i>	2	0	100%
<b>Crashes</b>	26	5	45%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	11	1	74%
<i>Rear End Crashes</i>	8	2	28%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Hamilton Rd and The Boulevarde, Fairfield

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Hamilton Rd and The Boulevarde commenced issuing warning letters in October 2010.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

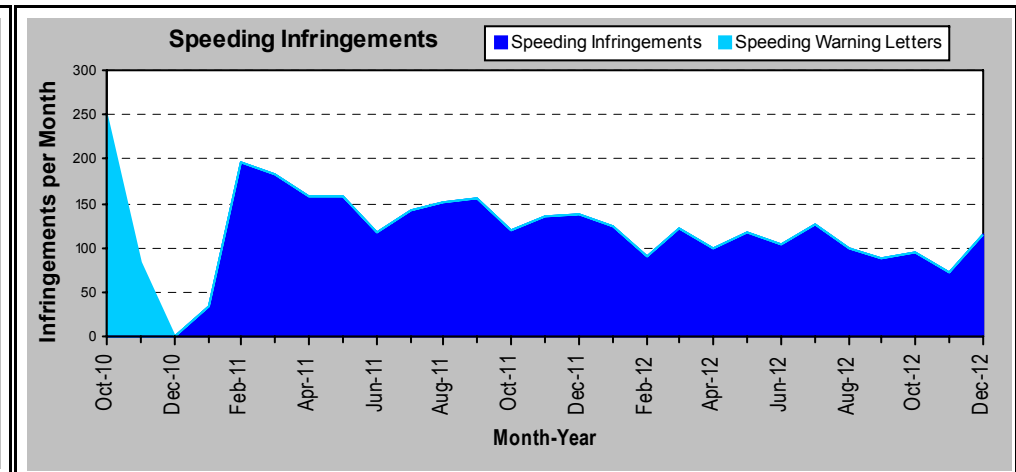
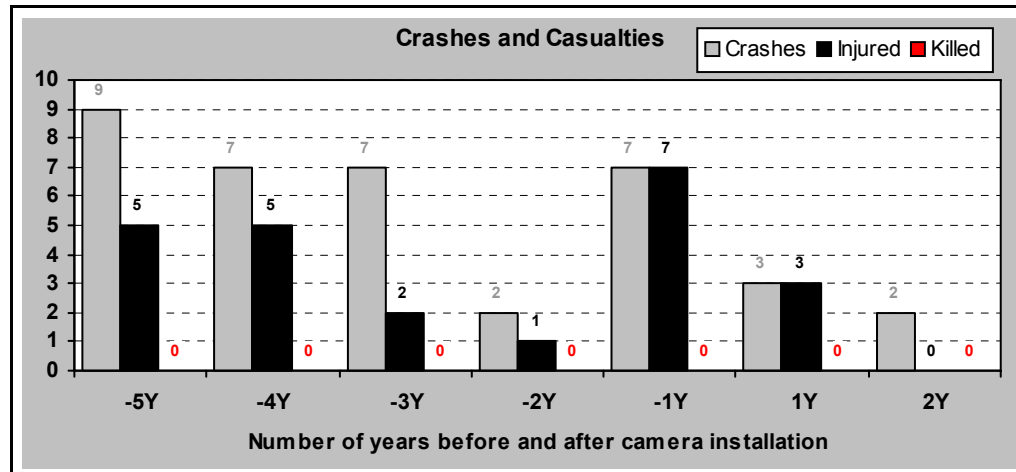
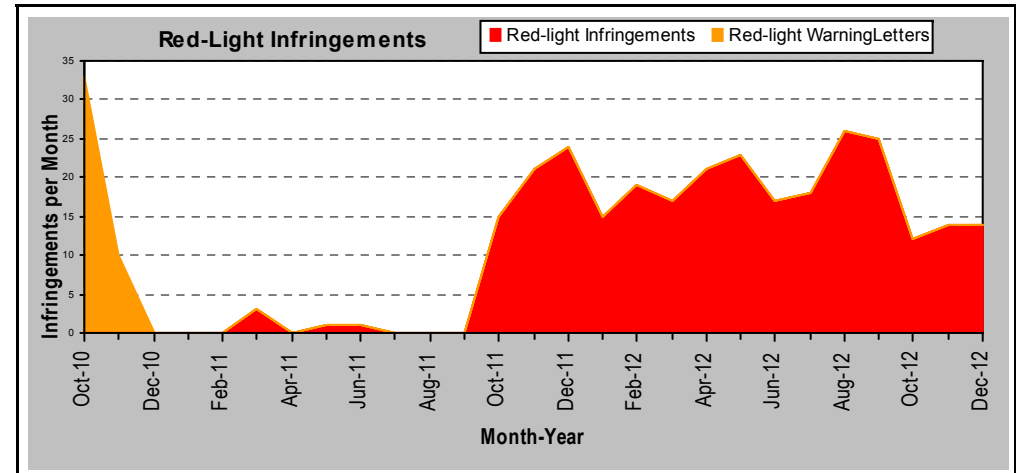
	5 years before installation <sup>1</sup>	2 years and 83 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	20	5	44%
<i>Pedestrian Casualties</i>	1	1	+125%
<b>Crashes</b>	32	7	51%
<i>Adjacent Crashes</i>	5	0	100%
<i>Right Through Crashes</i>	21	3	68%
<i>Rear End Crashes</i>	1	2	+349%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Princes Highway and O'Briens Road, Figtree

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Princes Highway and O'Briens Road commenced issuing warning letters in April 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

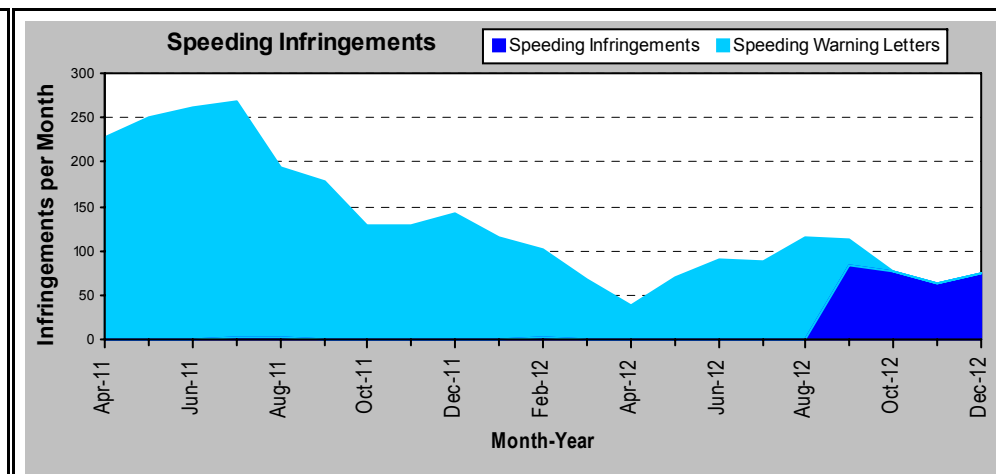
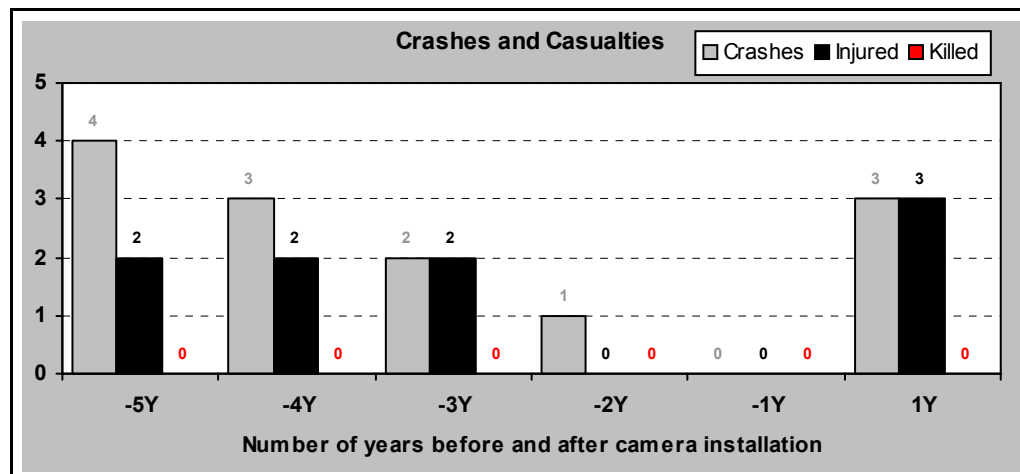
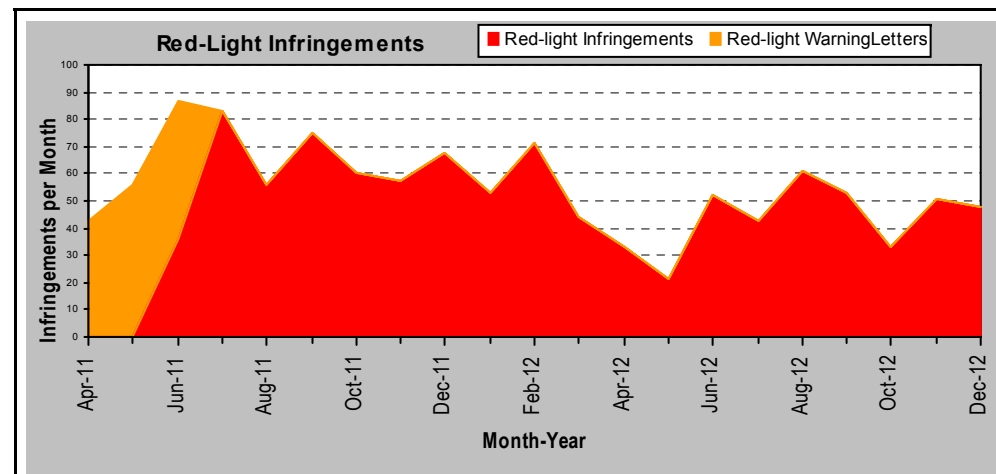
	5 years before installation <sup>1</sup>	1 year and 259 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	6	4	+95%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	10	4	+17%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	4	4	+193%
<i>Rear End Crashes</i>	2	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Fairlight St and Ramsay Rd, Five Dock

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Fairlight St and Ramsay Rd commenced issuing warning letters in November 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

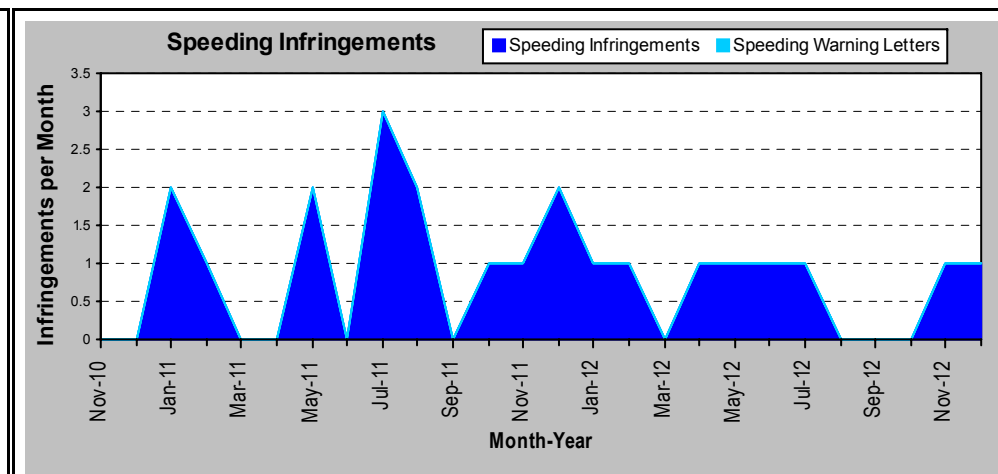
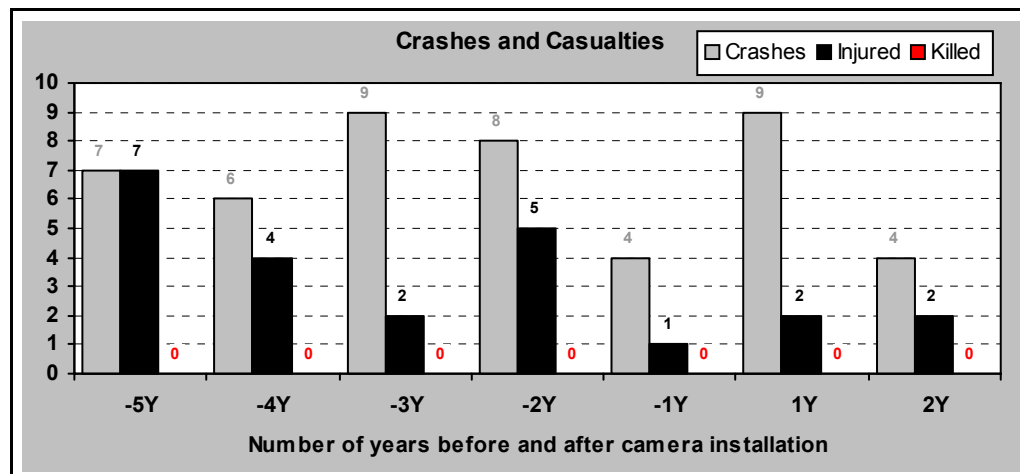
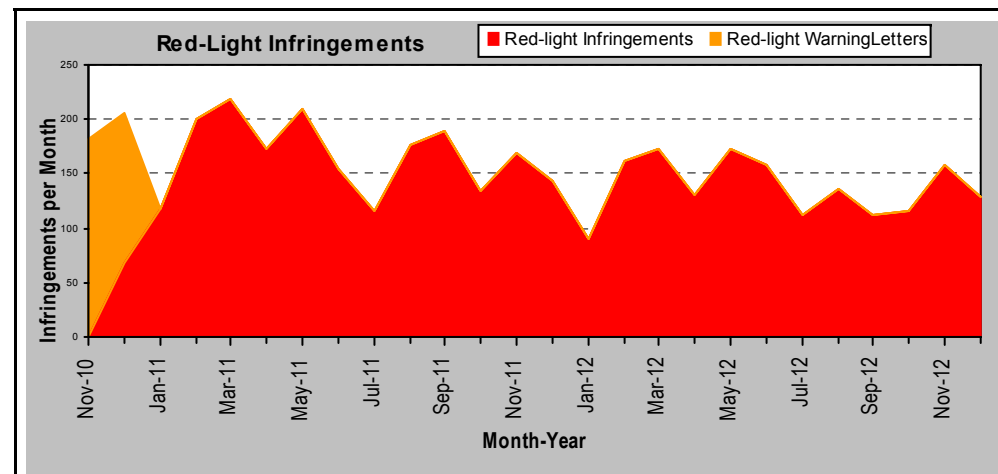
	5 years before installation <sup>1</sup>	2 years and 52 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	19	4	51%
<i>Pedestrian Casualties</i>	2	0	100%
<b>Crashes</b>	34	13	11%
<i>Adjacent Crashes</i>	16	5	27%
<i>Right Through Crashes</i>	2	1	+17%
<i>Rear End Crashes</i>	1	1	+134%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Woodville Rd and M4 on ramp, Granville

- There is one camera at this intersection.
- The camera at the intersection of Woodville Rd and M4 on ramp commenced issuing warning letters in September 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

## Crashes at enforced intersection

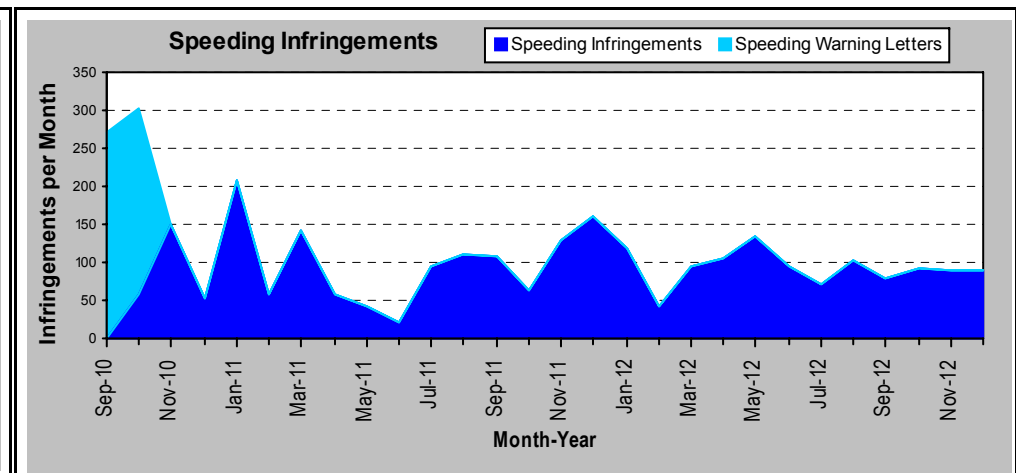
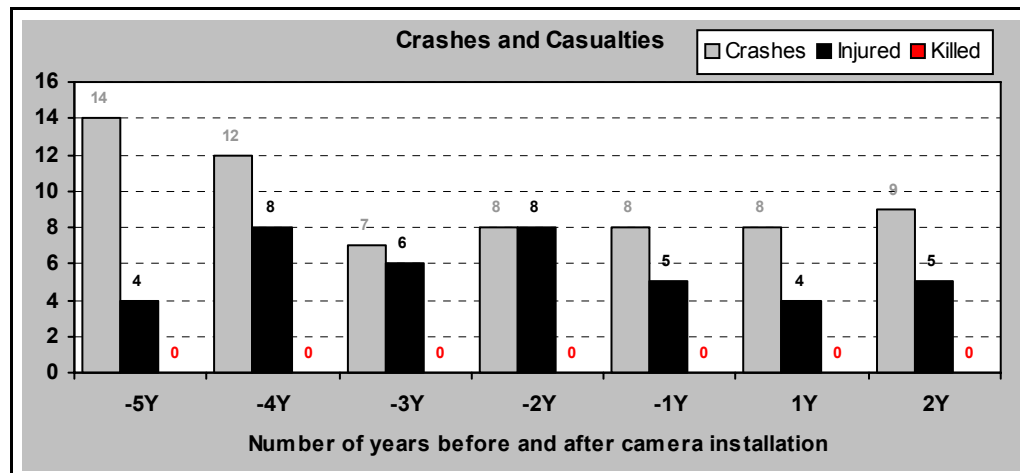
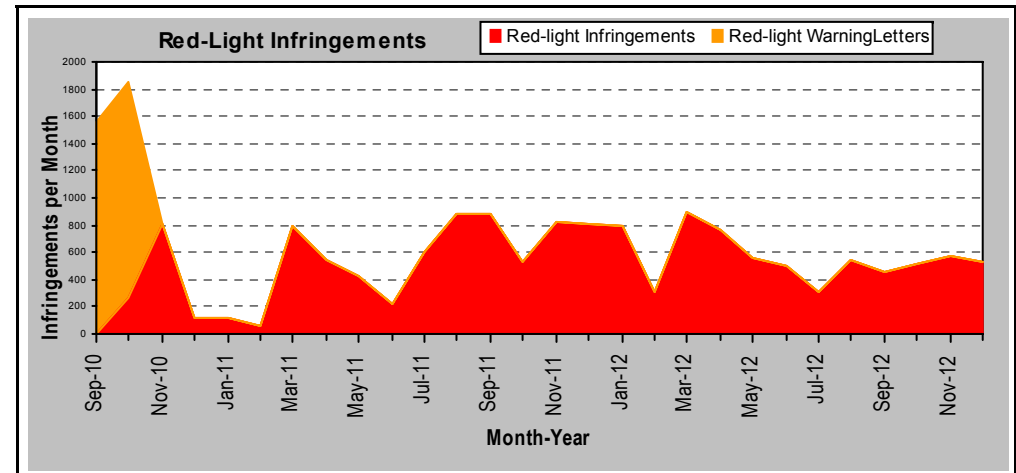
	5 years before installation <sup>1</sup>	2 years and 115 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	31	10	30%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	49	20	12%
<i>Adjacent Crashes</i>	11	3	41%
<i>Right Through Crashes</i>	12	4	28%
<i>Rear End Crashes</i>	9	4	4%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

## Infringements at safety camera location



## Woodville Rd and Guildford Rd, Guildford

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Woodville Rd and Guildford Rd commenced issuing warning letters in November 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

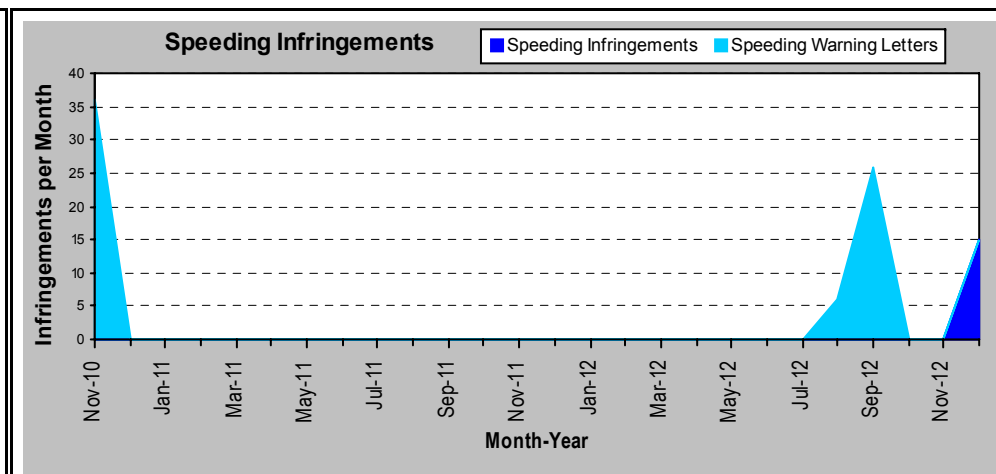
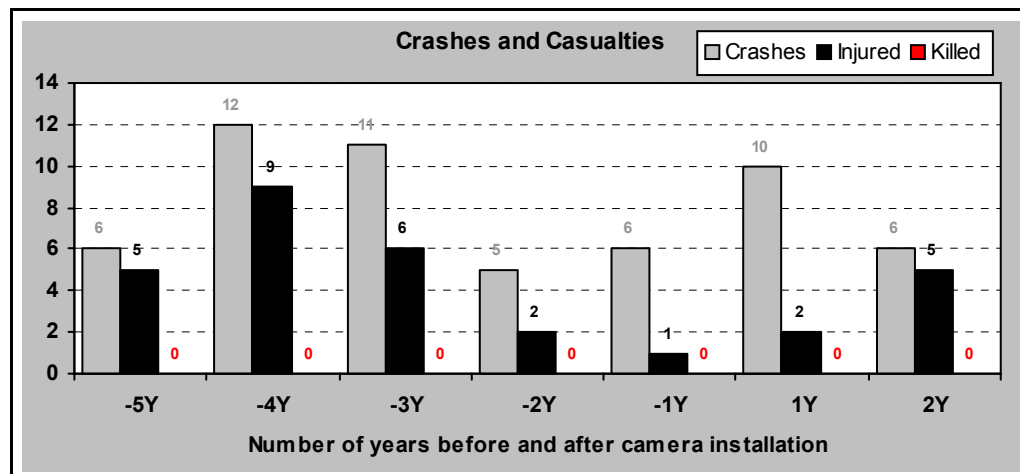
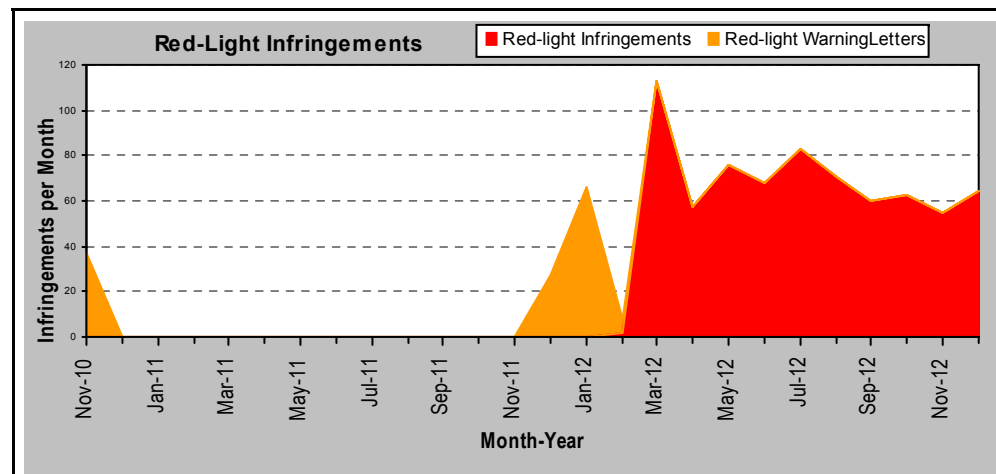
	5 years before installation <sup>1</sup>	2 years and 52 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	23	7	29%
<i>Pedestrian Casualties</i>	2	1	+17%
<b>Crashes</b>	40	16	7%
<i>Adjacent Crashes</i>	9	5	+30%
<i>Right Through Crashes</i>	5	5	+134%
<i>Rear End Crashes</i>	19	4	51%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Dobroyd Pde and Mortley Drive, Haberfield

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Dobroyd Pde and Mortley Drive commenced issuing warning letters in June 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

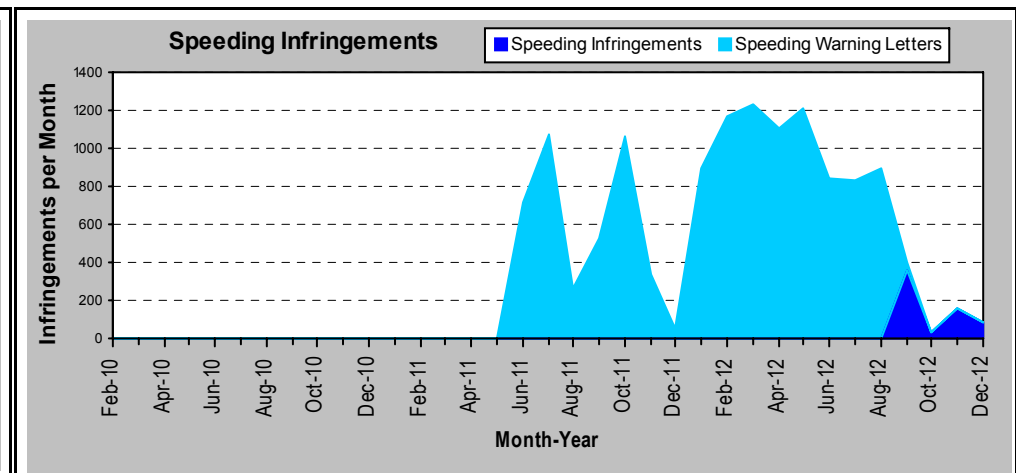
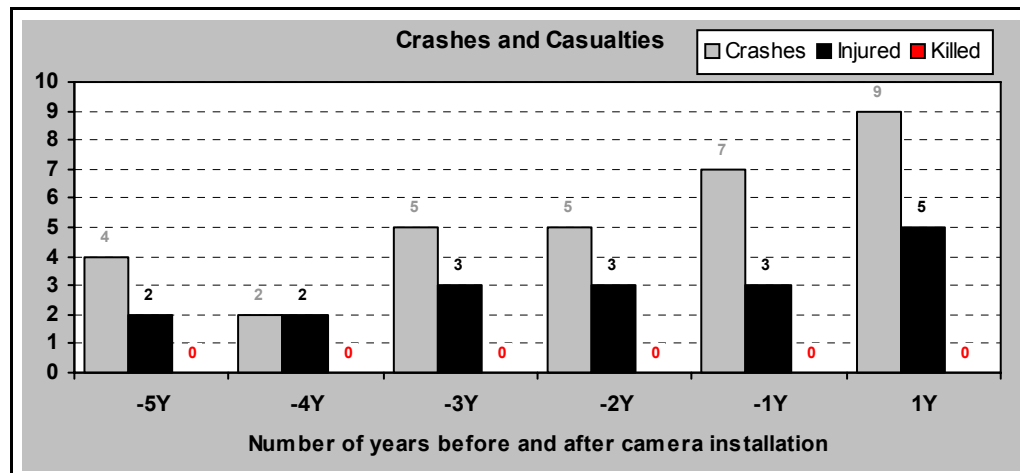
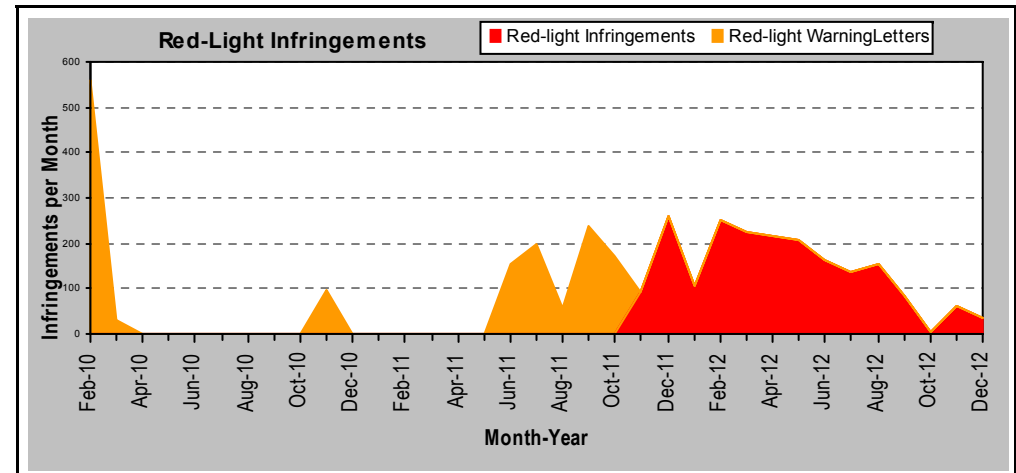
	5 years before installation <sup>1</sup>	1 year and 201 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	13	5	+24%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	23	11	+54%
<i>Adjacent Crashes</i>	0	2	-
<i>Right Through Crashes</i>	5	2	+29%
<i>Rear End Crashes</i>	16	6	+21%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Parramatta Road and Sloane Street, Haberfield

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Parramatta Road and Sloane Street commenced issuing warning letters in June 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

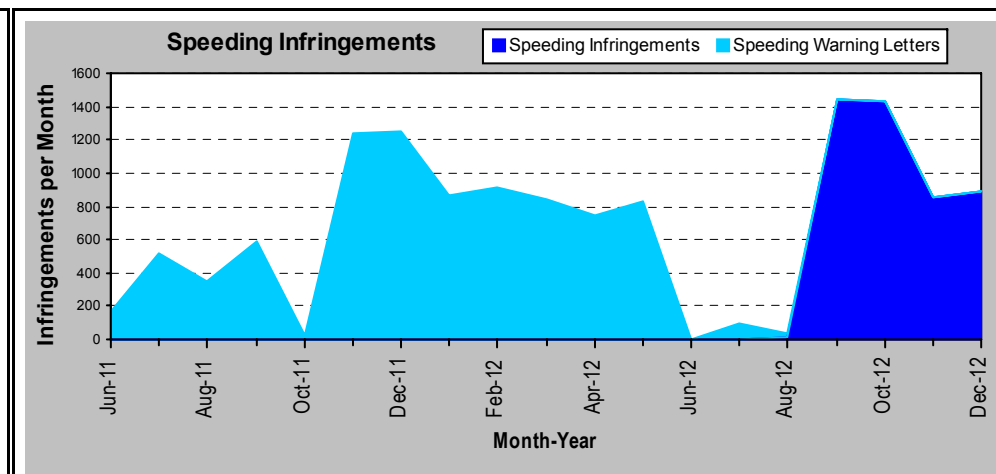
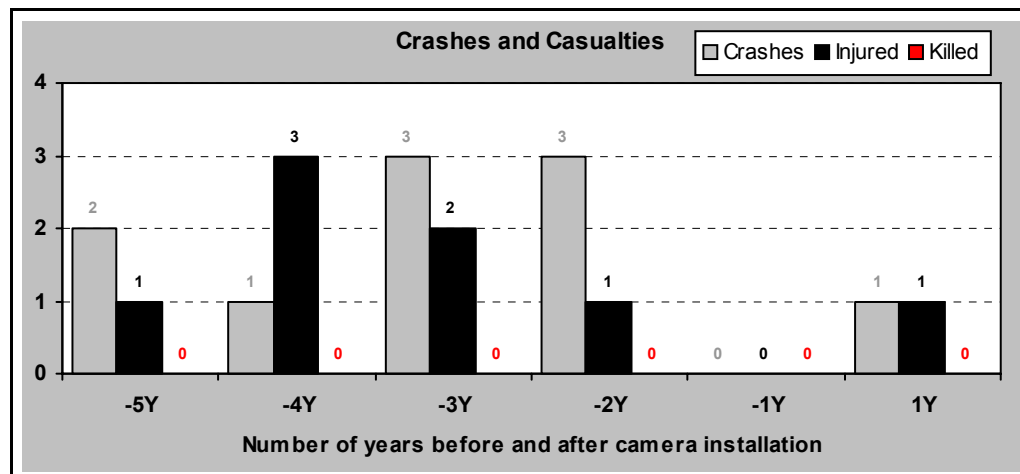
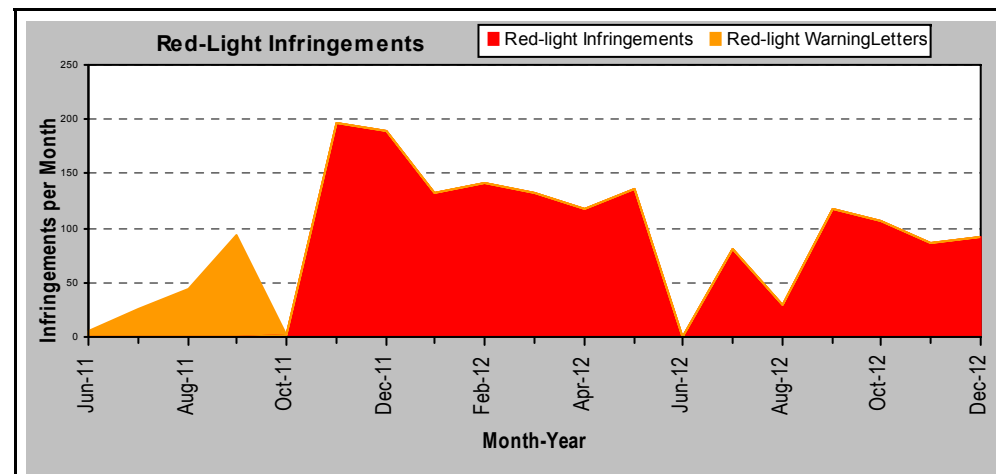
	5 years before installation <sup>1</sup>	1 year and 189 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	7	2	6%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	9	2	27%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	5	2	+32%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Tudor Street and Beaumont Street, Hamilton

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Tudor Street and Beaumont Street commenced issuing warning letters in June 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

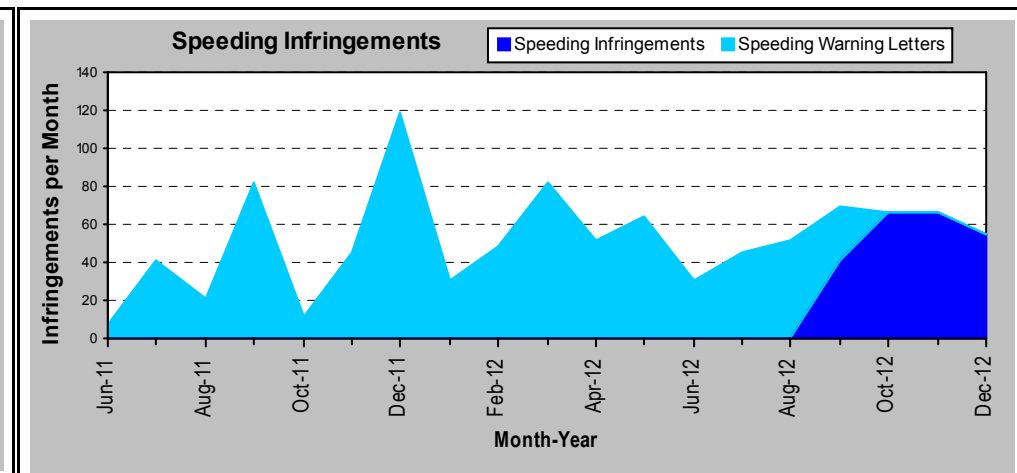
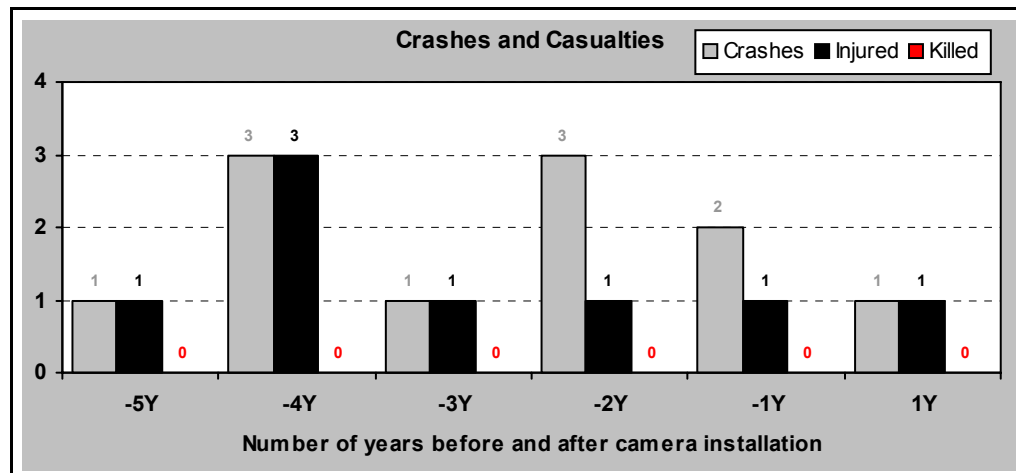
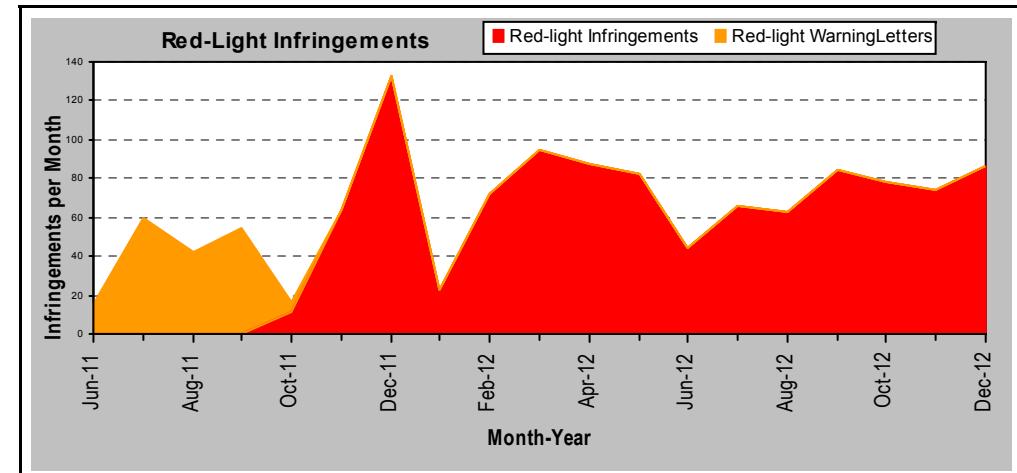
	5 years before installation <sup>1</sup>	1 year and 189 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	7	2	6%
<i>Pedestrian Casualties</i>	1	2	+559%
<b>Crashes</b>	10	2	34%
<i>Adjacent Crashes</i>	1	0	100%
<i>Right Through Crashes</i>	2	0	100%
<i>Rear End Crashes</i>	3	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Pacific Highway and Parry Street, Hamilton East

- There is one camera at this intersection.
- The camera at the intersection of Pacific Highway and Parry Street commenced issuing warning letters in June 2011.
- While early results indicate a slight increase in casualties, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

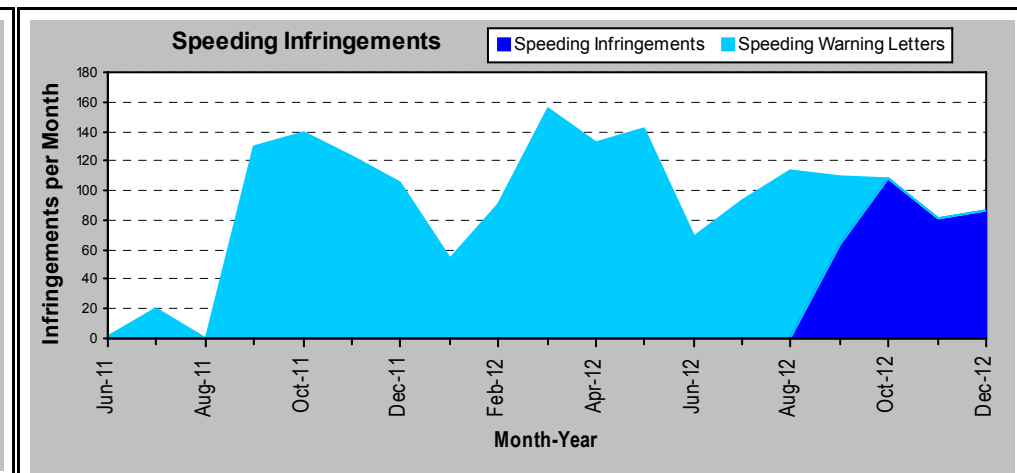
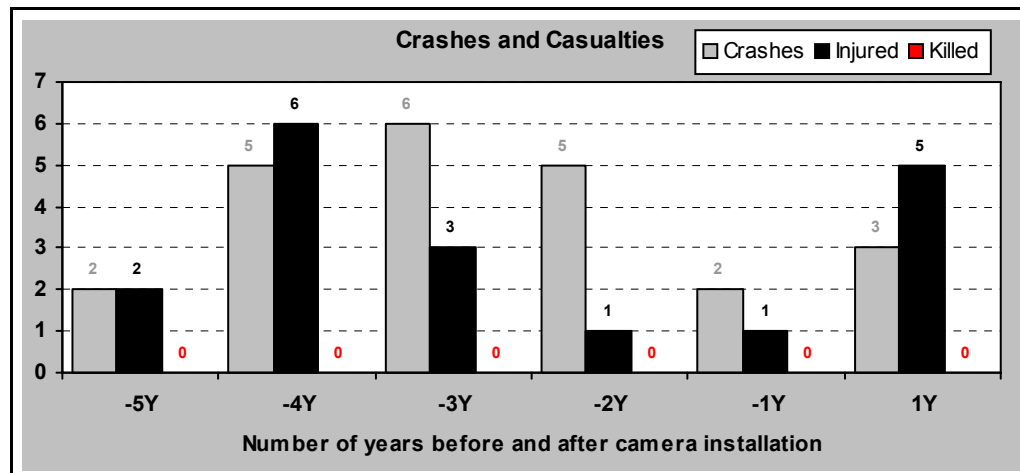
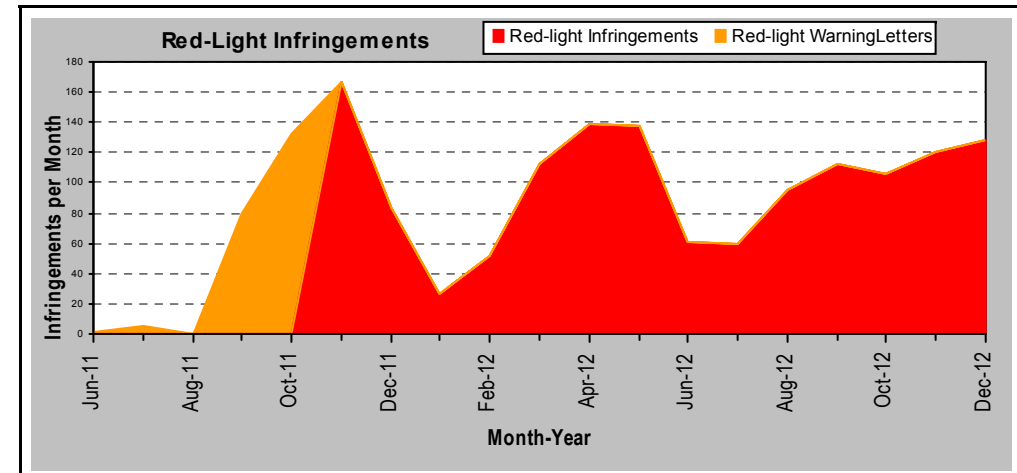
	5 years before installation <sup>1</sup>	1 year and 187 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	13	5	+27%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	20	4	34%
<i>Adjacent Crashes</i>	6	3	+65%
<i>Right Through Crashes</i>	2	1	+65%
<i>Rear End Crashes</i>	5	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Arthur St and Centenary Dr, Homebush West

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Arthur St and Centenary Dr commenced issuing warning letters in October 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

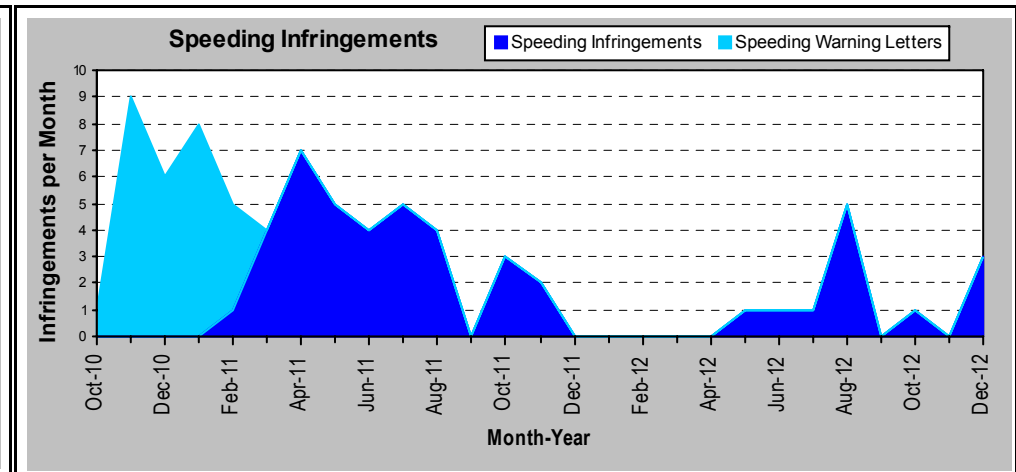
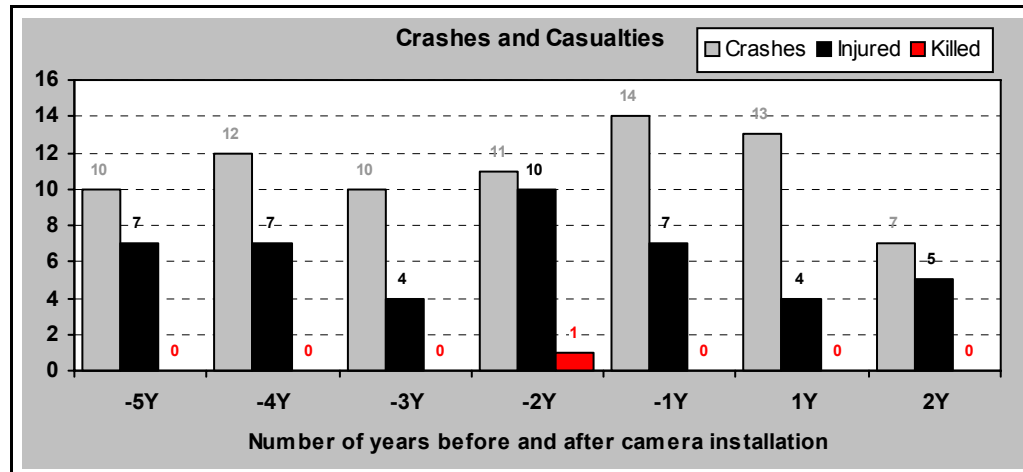
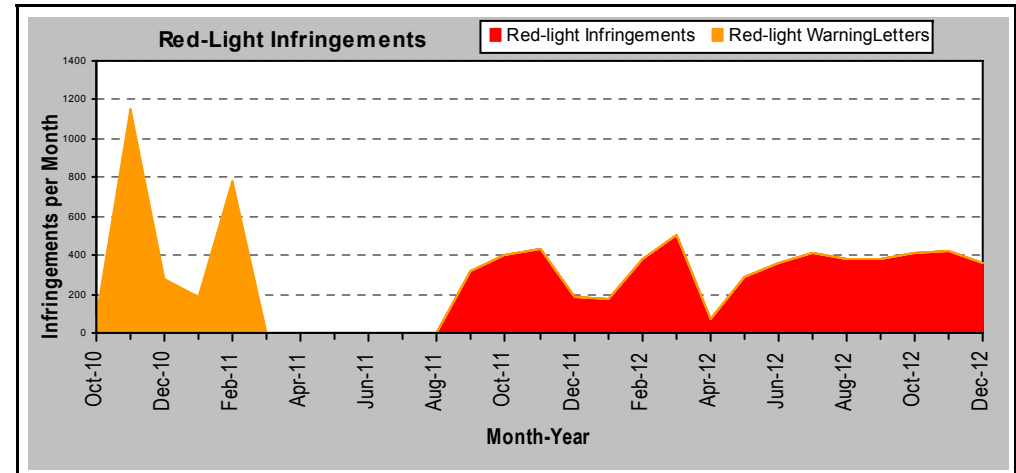
	5 years before installation <sup>1</sup>	2 years and 67 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	1	0	100%
<b>Injuries</b>	35	10	35%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	57	22	12%
<i>Adjacent Crashes</i>	18	1	87%
<i>Right Through Crashes</i>	9	3	24%
<i>Rear End Crashes</i>	20	9	+3%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Ryde Road and Pittwater Road, Hunters Hill

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Ryde Road and Pittwater Road commenced issuing warning letters in March 2011.
- While early results indicate a slight increase in casualties, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

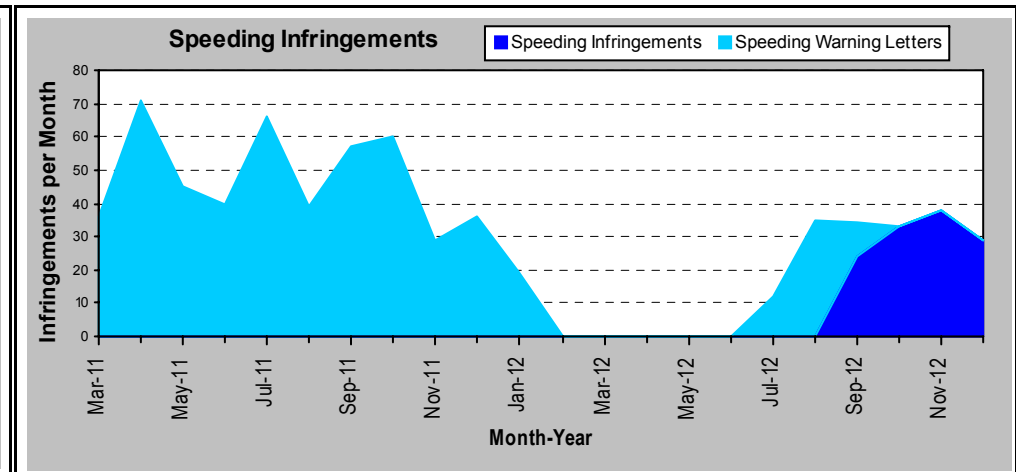
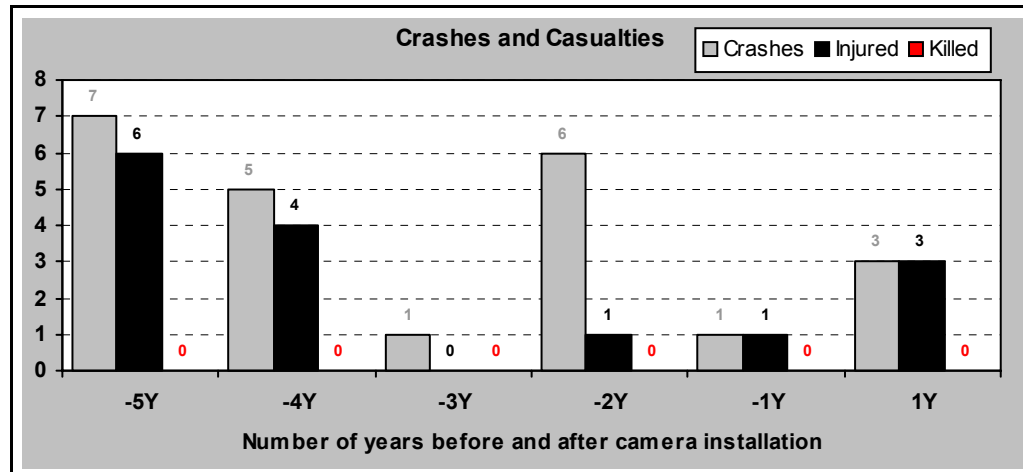
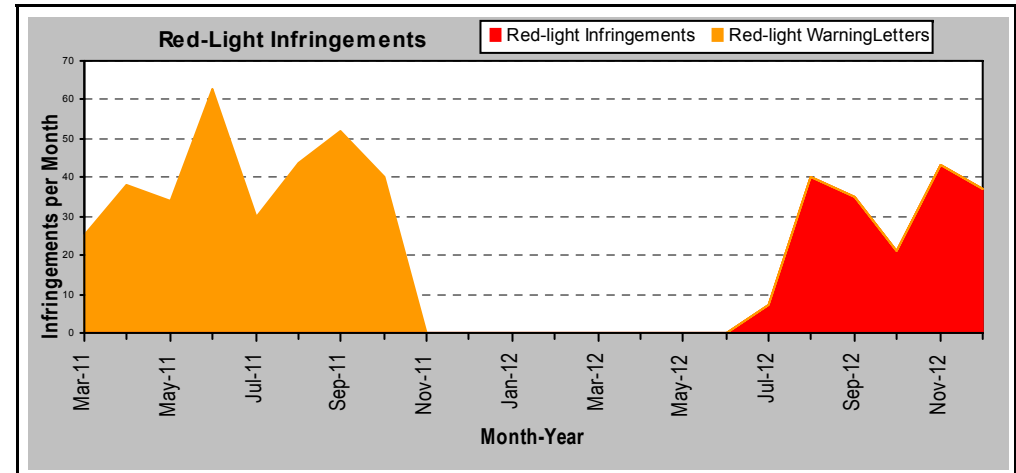
	5 years before installation <sup>1</sup>	1 year and 290 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	12	5	+16%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	20	6	16%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	14	5	0%
<i>Rear End Crashes</i>	4	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Anzac Parade and Todman Avenue, Kensington

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Anzac Parade and Todman Avenue commenced issuing warning letters in June 2011.
- While early results indicate a slight increase in casualties, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

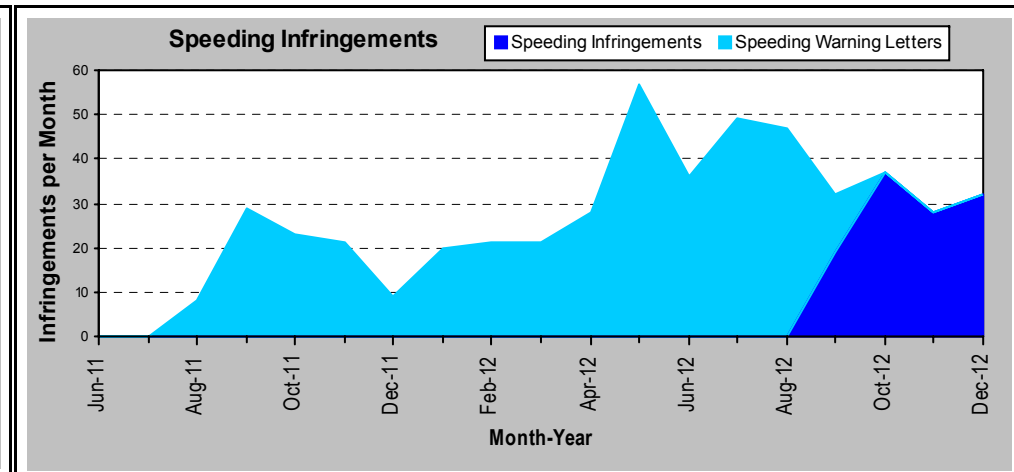
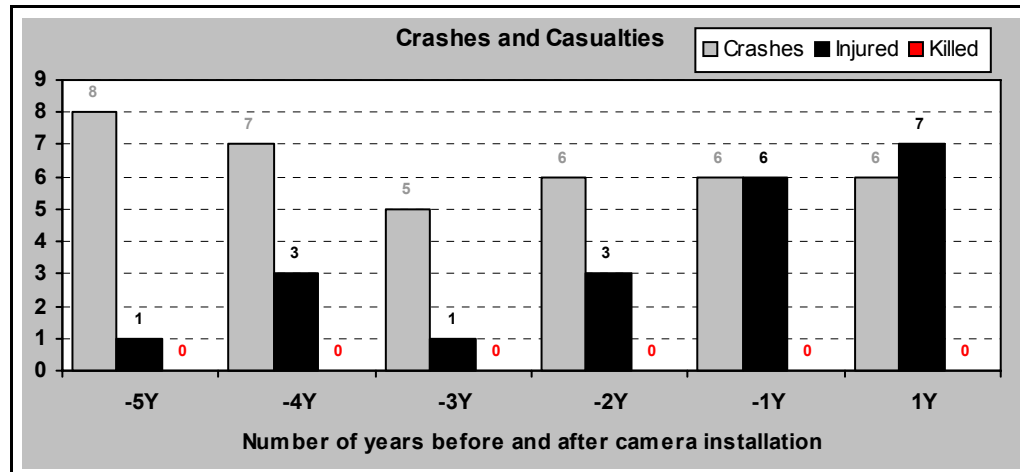
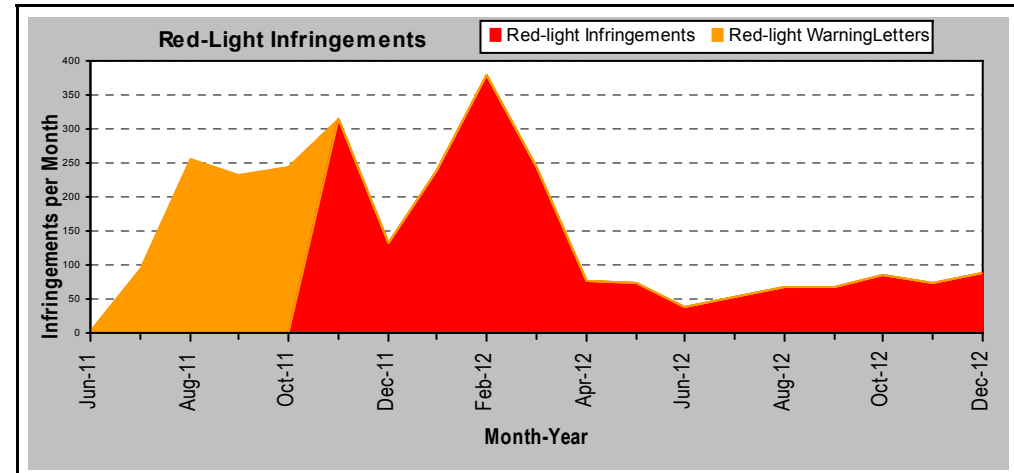
	5 years before installation <sup>1</sup>	1 year and 187 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	14	7	+65%
<i>Pedestrian Casualties</i>	4	1	17%
<b>Crashes</b>	32	7	28%
<i>Adjacent Crashes</i>	10	2	34%
<i>Right Through Crashes</i>	7	3	+42%
<i>Rear End Crashes</i>	6	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Bexley Road and William Street, Kingsgrove

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Bexley Road and William Street commenced issuing warning letters in April 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

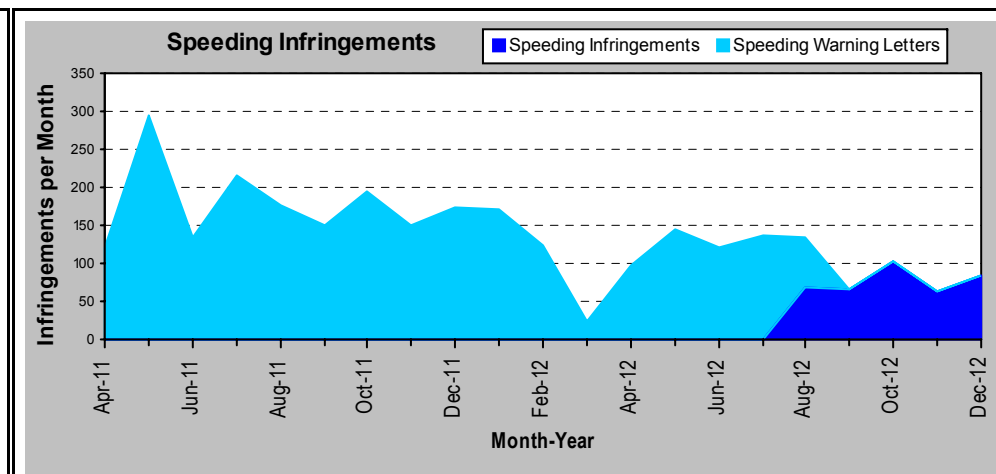
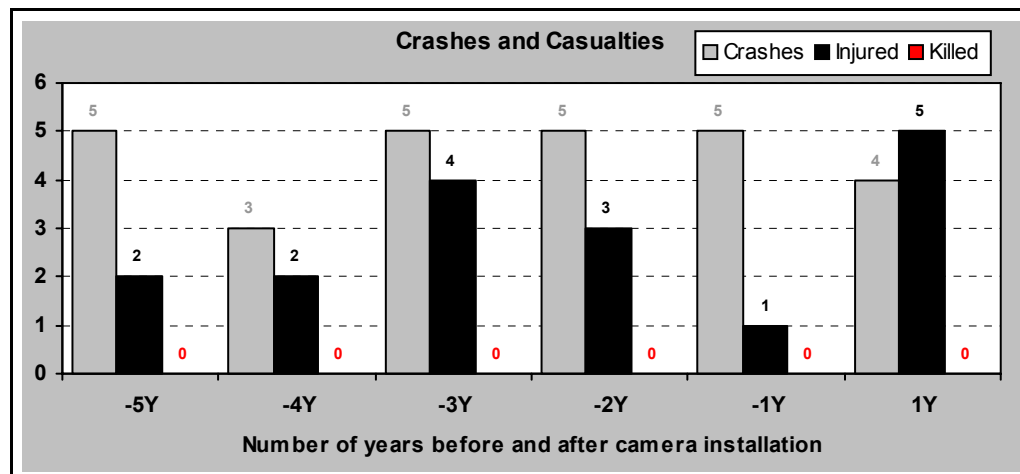
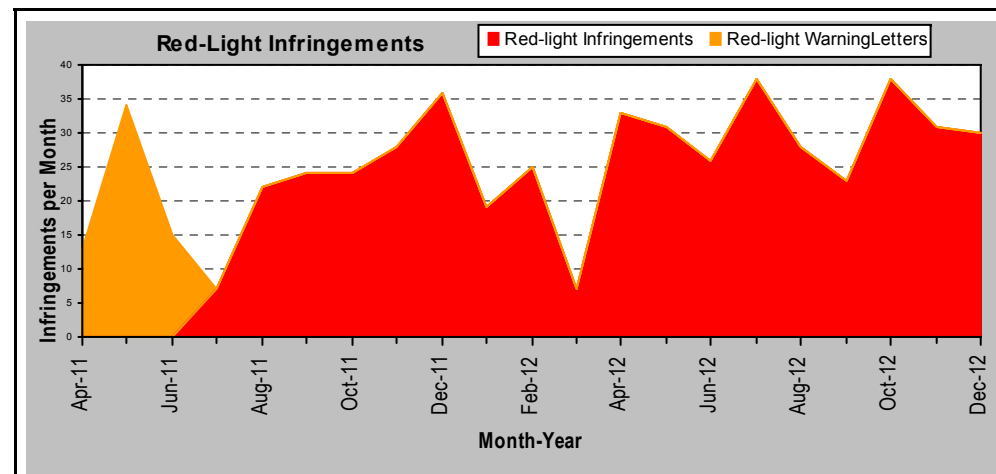
	5 years before installation <sup>1</sup>	1 year and 266 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	12	8	+93%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	23	9	+13%
<i>Adjacent Crashes</i>	1	1	+189%
<i>Right Through Crashes</i>	14	7	+45%
<i>Rear End Crashes</i>	5	1	42%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Acacia Road and President Avenue, Kirrawee

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Acacia Road and President Avenue commenced issuing warning letters in June 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

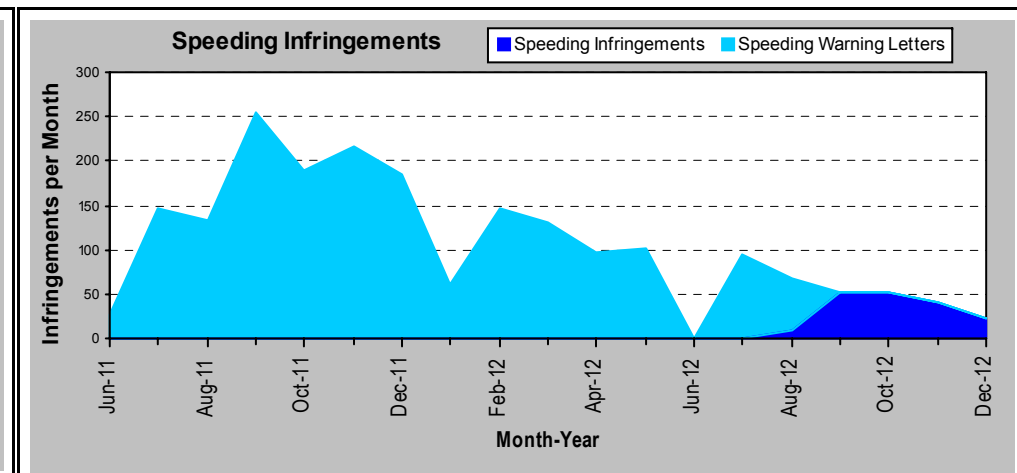
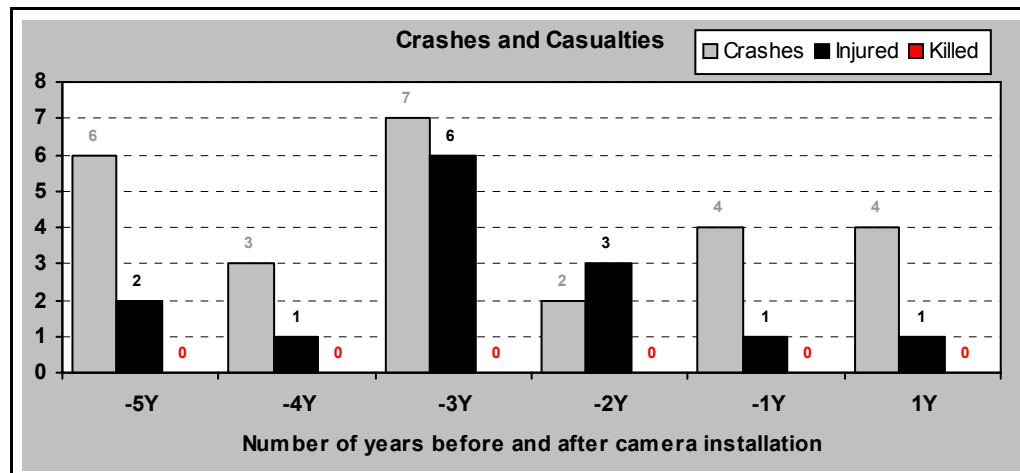
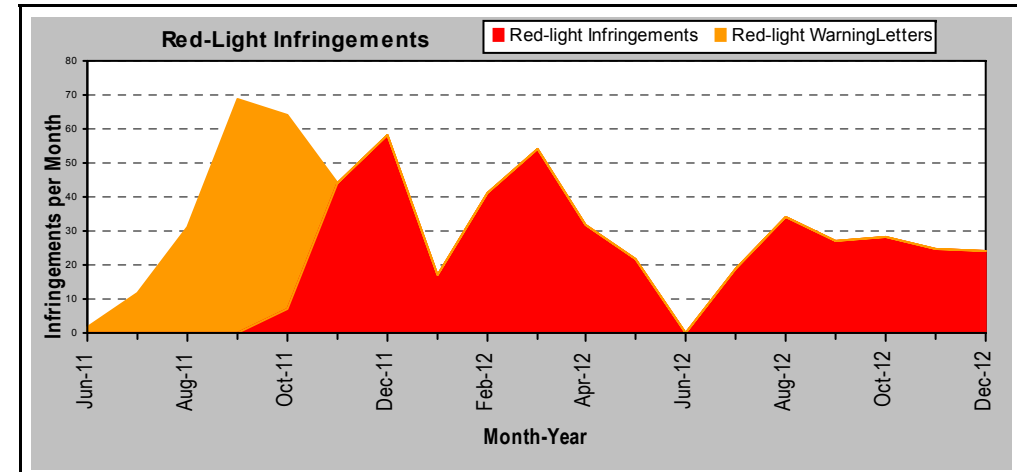
	5 years before installation <sup>1</sup>	1 year and 189 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	13	1	75%
<i>Pedestrian Casualties</i>	2	0	100%
<b>Crashes</b>	22	5	25%
<i>Adjacent Crashes</i>	4	2	+65%
<i>Right Through Crashes</i>	7	2	6%
<i>Rear End Crashes</i>	7	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Park Road and Princes Highway, Kogarah Bay

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Park Road and Princes Highway commenced issuing warning letters in June 2011.
- While early results indicate a slight increase in casualties, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

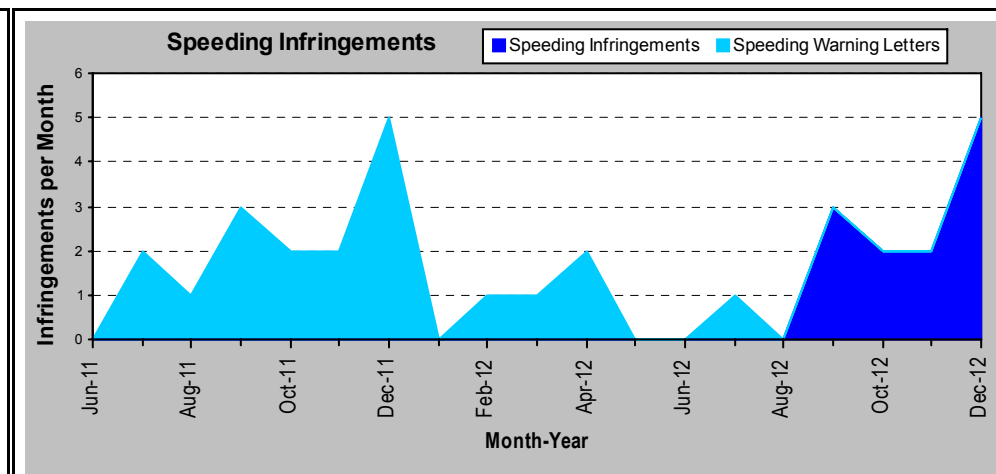
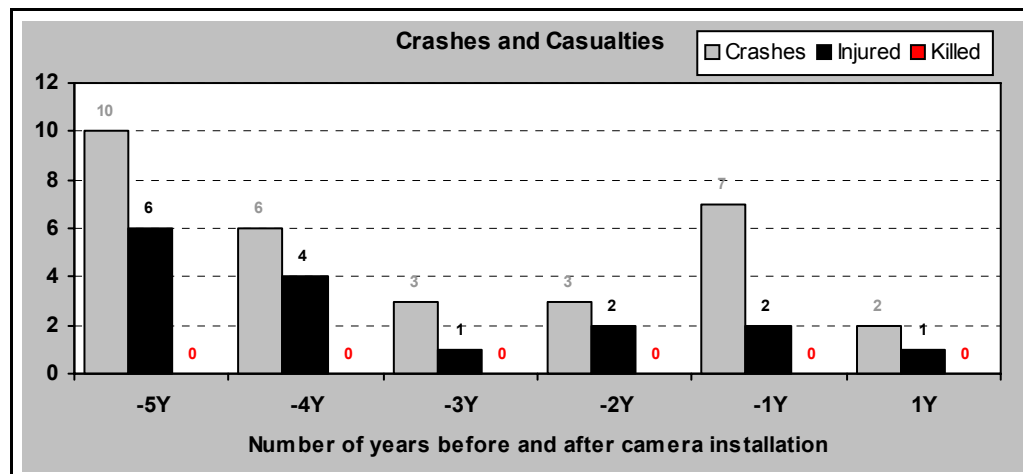
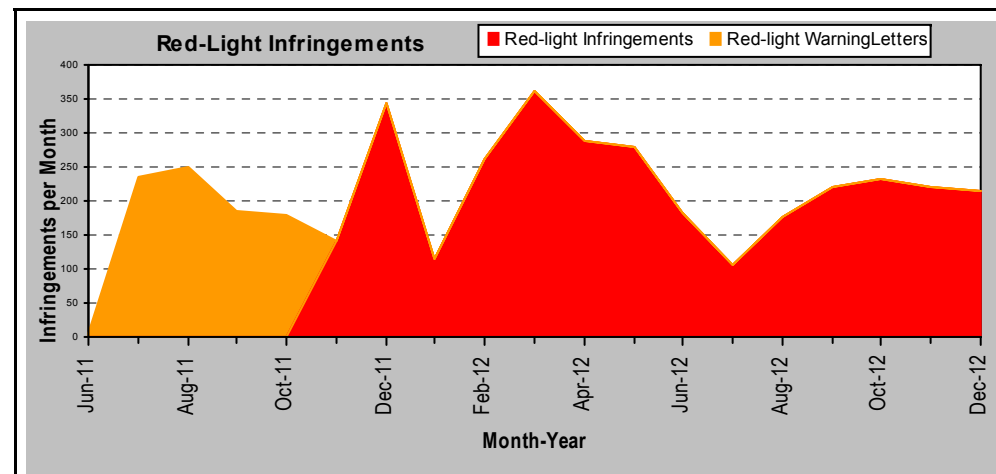
	5 years before installation <sup>1</sup>	1 year and 201 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	15	7	+51%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	29	6	33%
<i>Adjacent Crashes</i>	6	3	+61%
<i>Right Through Crashes</i>	12	3	19%
<i>Rear End Crashes</i>	7	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Griffiths Road and Turton Road, Lambton

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Griffiths Road and Turton Road commenced issuing warning letters in June 2011.
- While early results indicate a slight increase in casualties, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

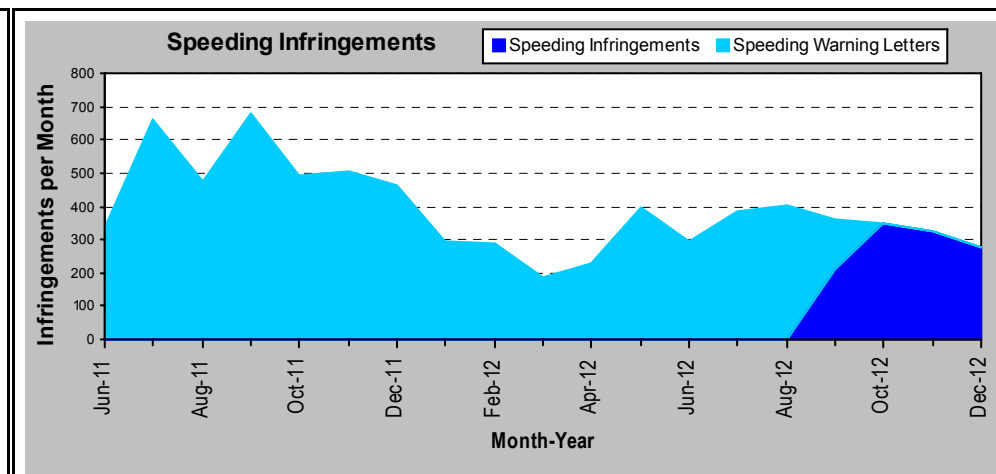
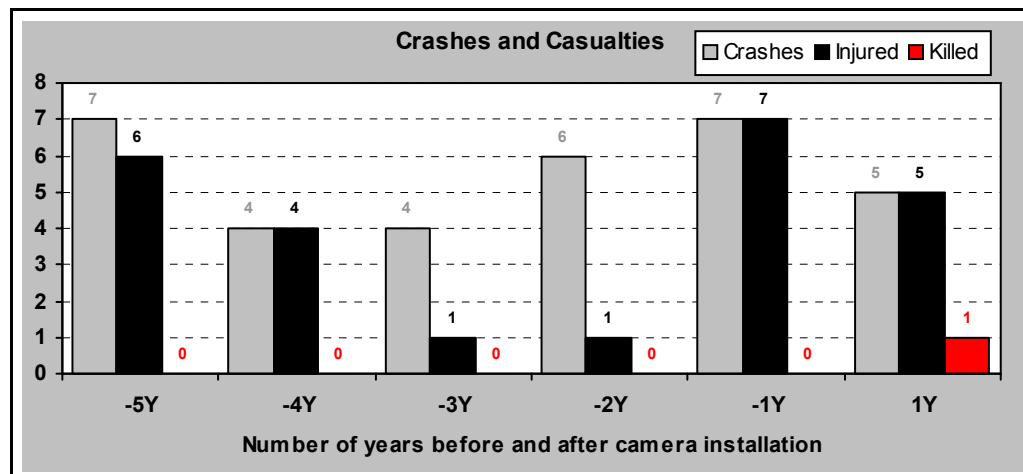
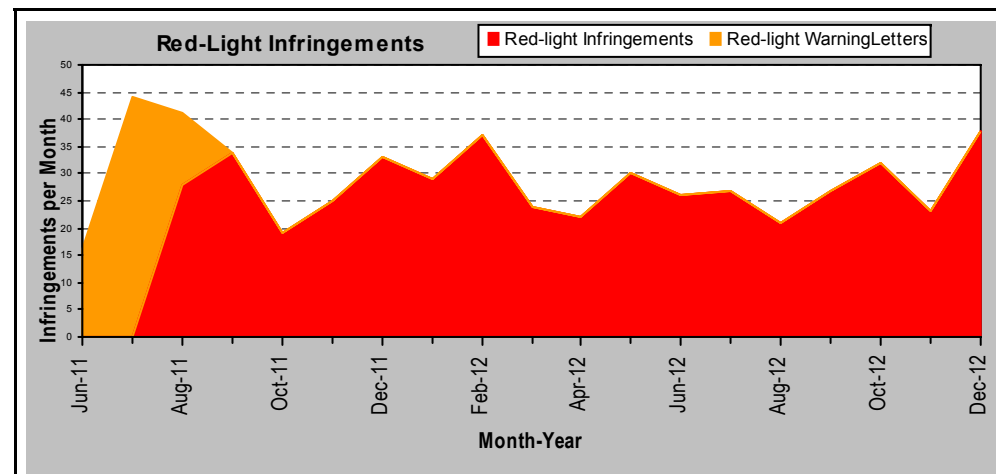
	5 years before installation <sup>1</sup>	1 year and 214 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	1	-
<b>Injuries</b>	19	6	0%
<i>Pedestrian Casualties</i>	1	1	+215%
<b>Crashes</b>	28	6	32%
<i>Adjacent Crashes</i>	7	1	55%
<i>Right Through Crashes</i>	4	1	21%
<i>Rear End Crashes</i>	11	2	43%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Henry Lawsons Drive / Woodville Rd and Hume Hwy, Lansdowne / Villawood

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Henry Lawsons Drive and Hume Hwy commenced issuing warning letters in August 2010.
- The camera at the intersection of Woodville Rd and Hume Hwy commenced issuing warning letters in August 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

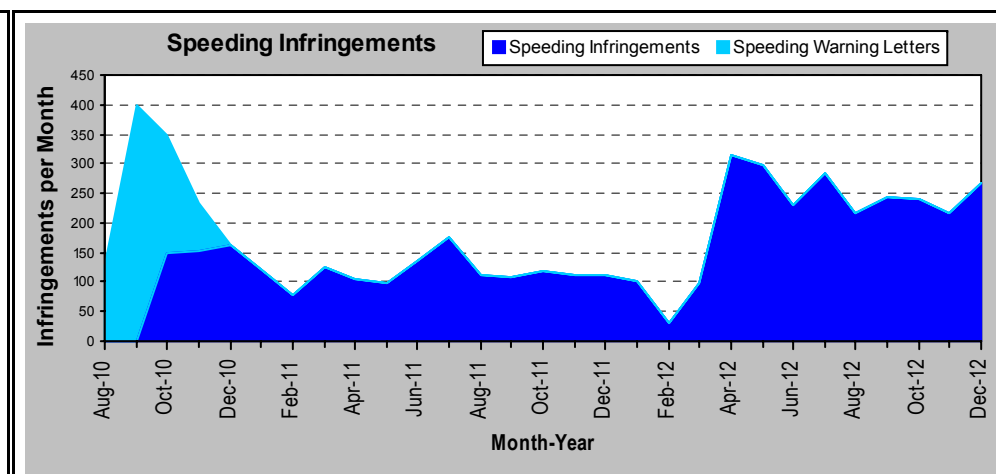
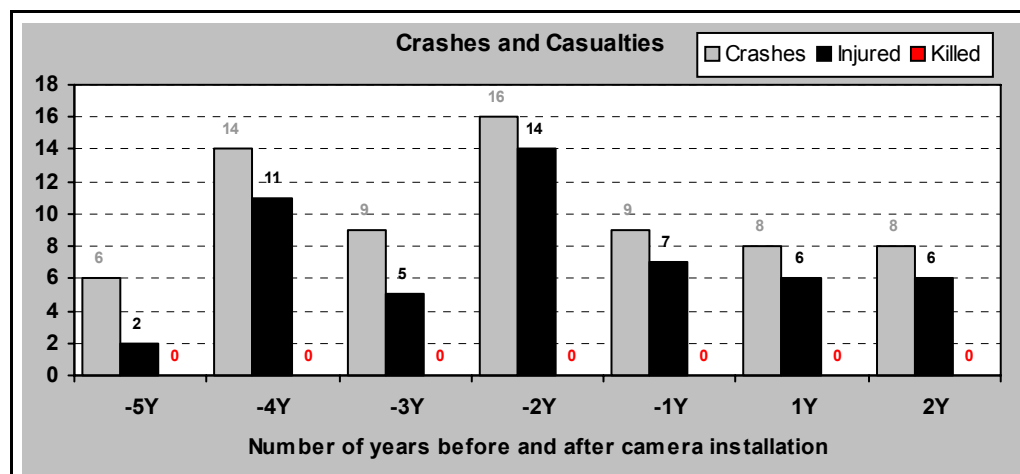
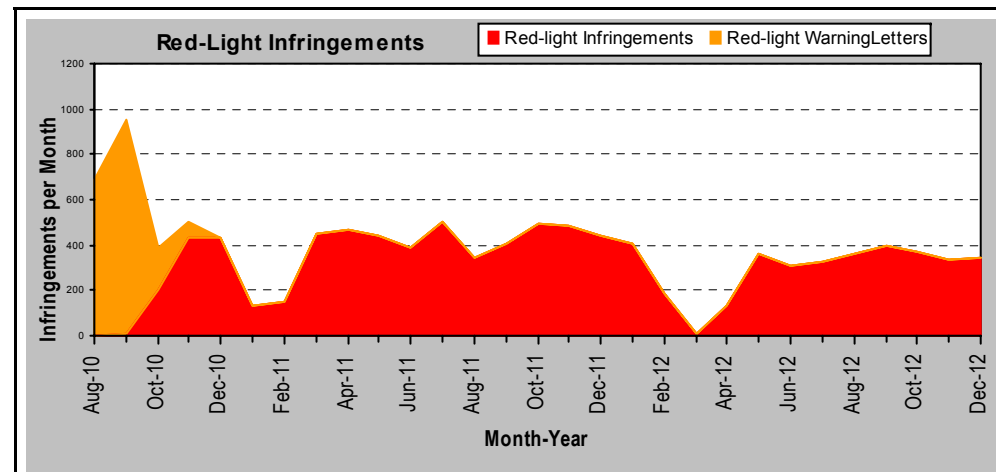
	5 years before installation <sup>1</sup>	2 years and 142 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	39	14	25%
<i>Pedestrian Casualties</i>	2	1	+5%
<b>Crashes</b>	54	19	26%
<i>Adjacent Crashes</i>	2	1	+5%
<i>Right Through Crashes</i>	13	8	+29%
<i>Rear End Crashes</i>	18	5	42%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Parramatta Rd and West St, Leichhardt

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Parramatta Rd and West St commenced issuing warning letters in September 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

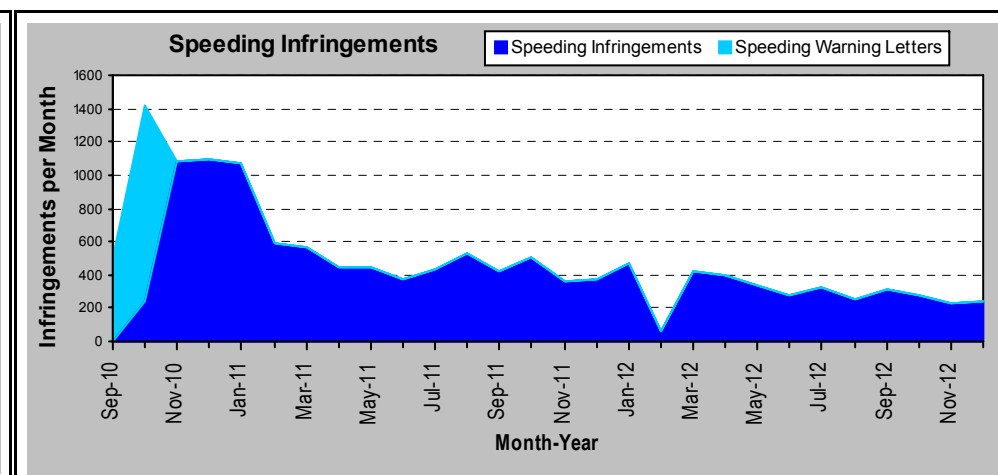
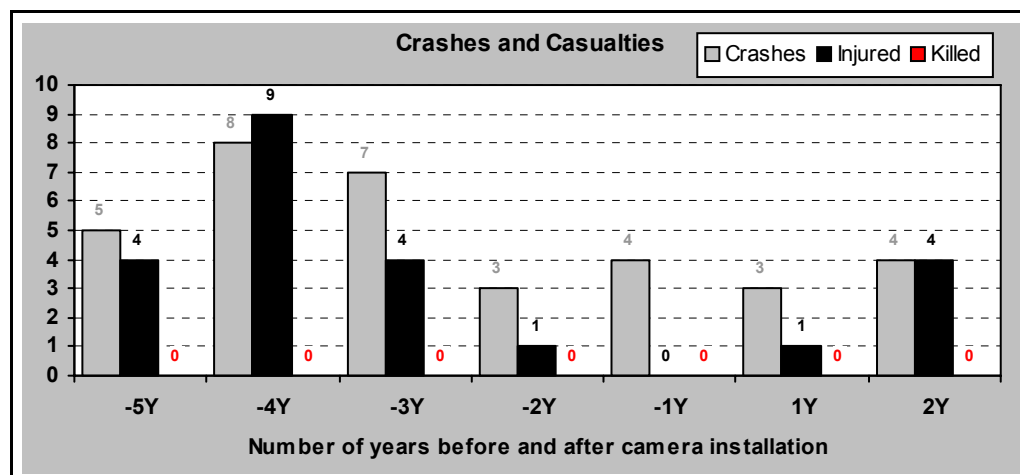
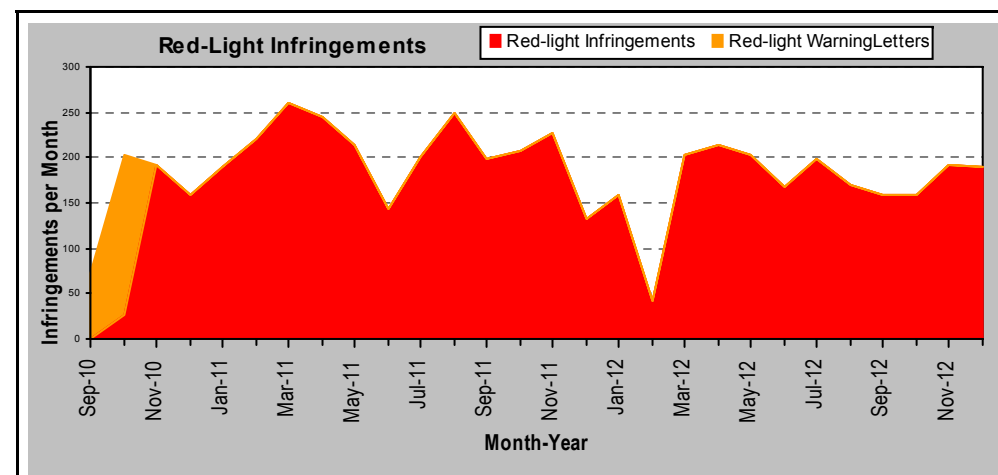
	5 years before installation <sup>1</sup>	2 years and 101 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	18	8	2%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	27	9	27%
<i>Adjacent Crashes</i>	4	1	45%
<i>Right Through Crashes</i>	9	5	+22%
<i>Rear End Crashes</i>	10	1	78%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Olympic Dr and Vaughan St, Lidcombe

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Olympic Dr and Vaughan St commenced issuing warning letters in September 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

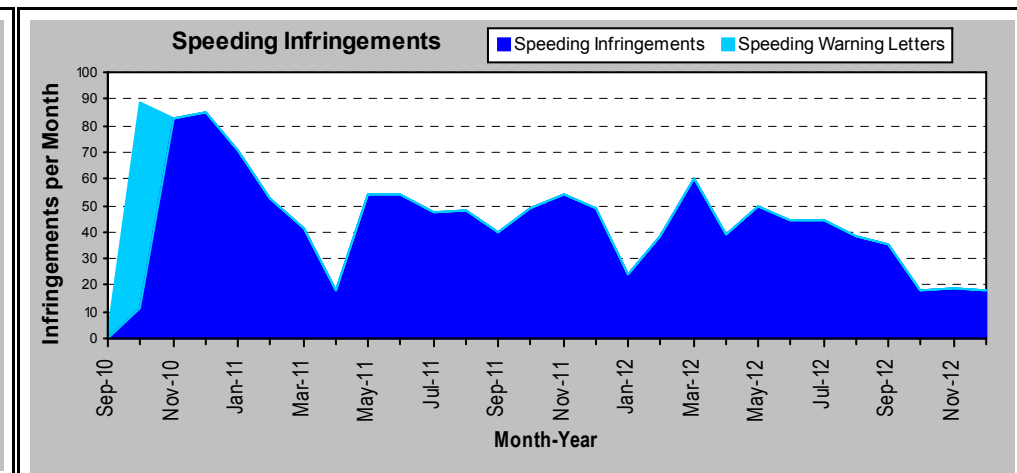
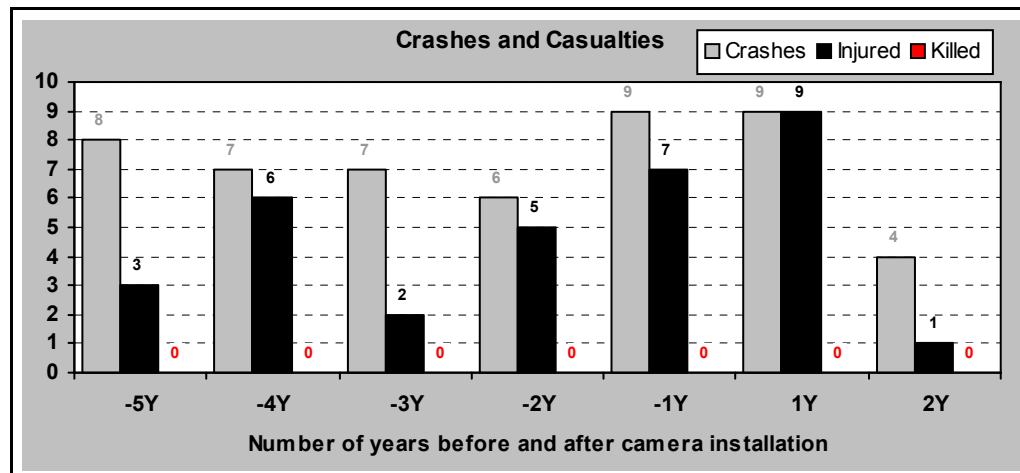
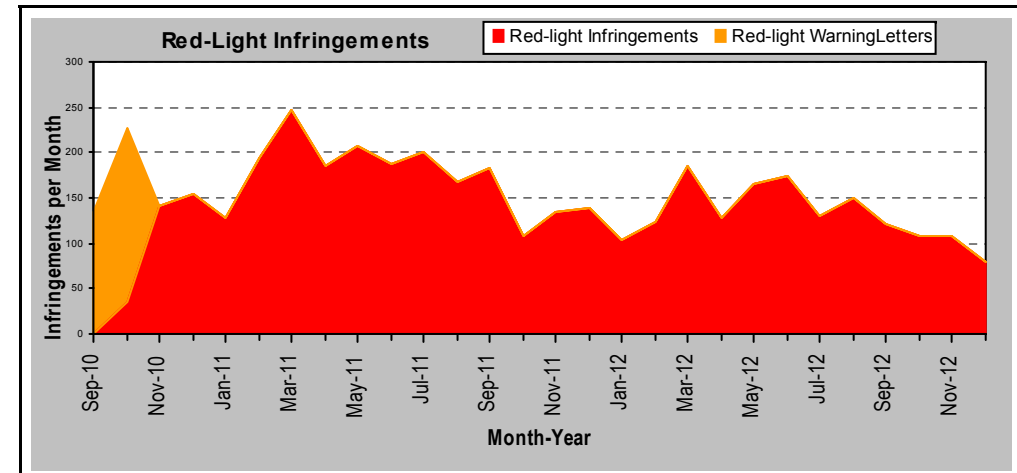
	5 years before installation <sup>1</sup>	2 years and 111 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	23	10	6%
<i>Pedestrian Casualties</i>	2	1	+9%
<b>Crashes</b>	37	15	12%
<i>Adjacent Crashes</i>	4	2	+9%
<i>Right Through Crashes</i>	11	3	41%
<i>Rear End Crashes</i>	16	6	19%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Copeland St and Elizabeth Dr, Liverpool

- There is one camera at this intersection.
- The camera at the intersection of Copeland St and Elizabeth Dr commenced issuing warning letters in October 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

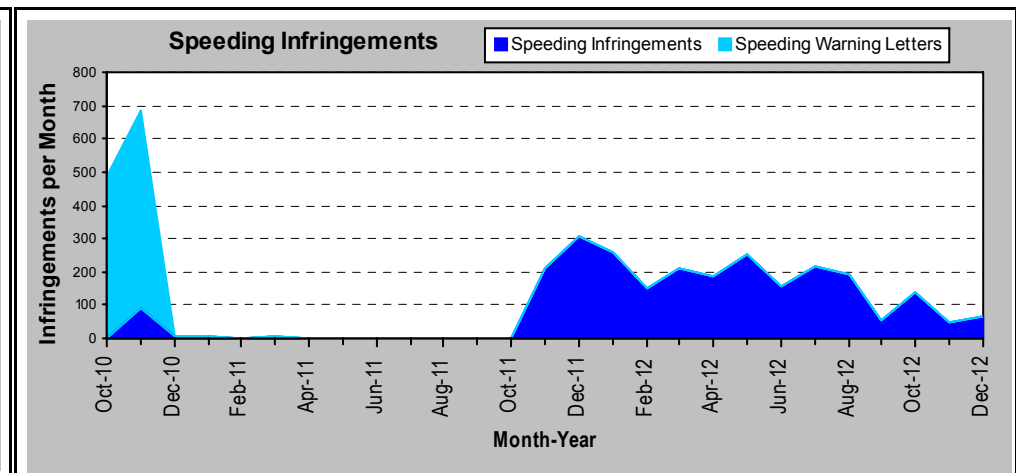
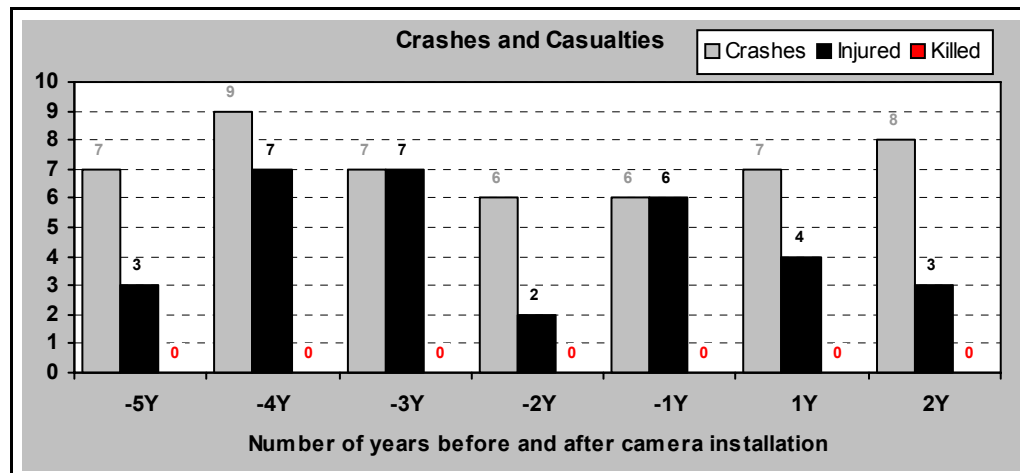
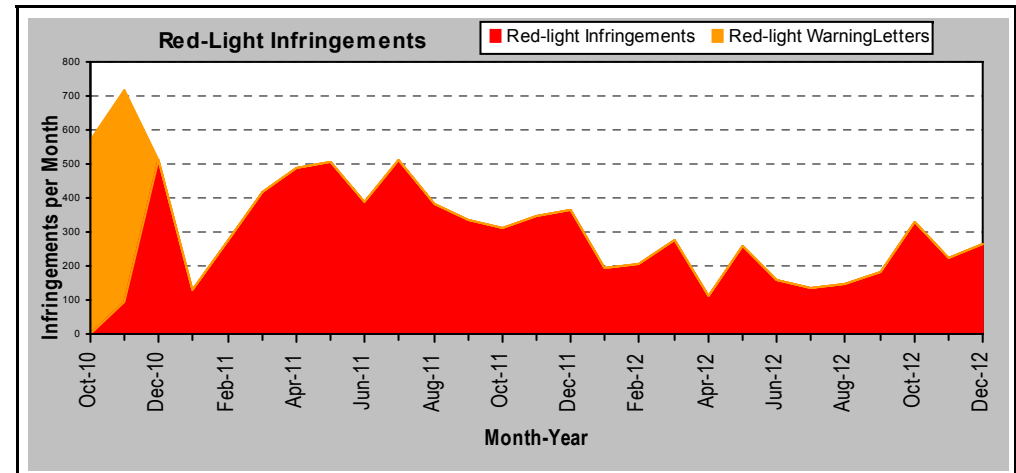
	5 years before installation <sup>1</sup>	2 years and 80 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	25	7	37%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	35	15	3%
<i>Adjacent Crashes</i>	2	2	+125%
<i>Right Through Crashes</i>	5	3	+35%
<i>Rear End Crashes</i>	13	6	+4%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Sydenham Road and Victoria Road, Marrickville

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Sydenham Road and Victoria Road commenced issuing warning letters in June 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

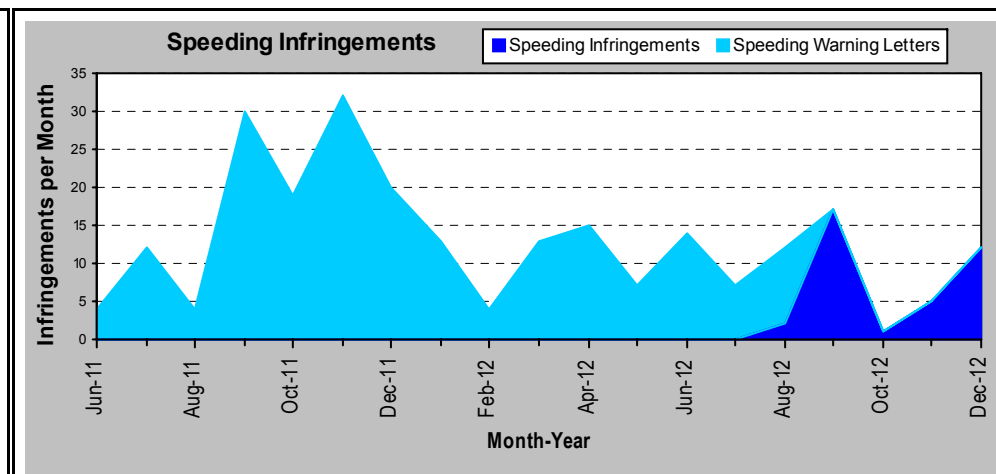
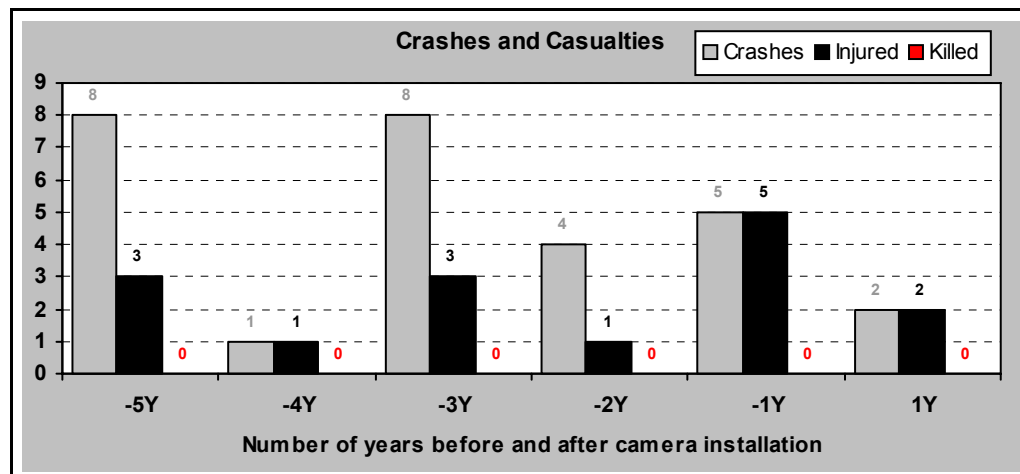
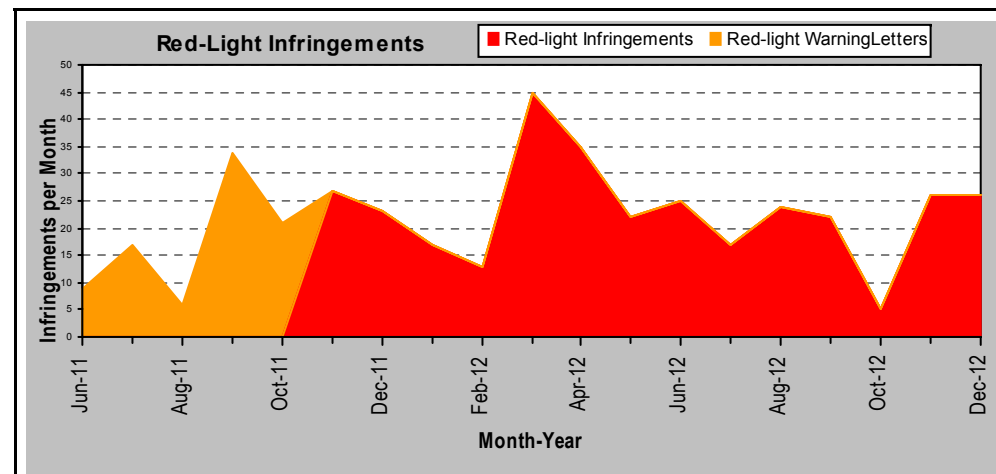
	5 years before installation <sup>1</sup>	1 year and 201 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	13	4	1%
<i>Pedestrian Casualties</i>	2	0	100%
<b>Crashes</b>	26	5	38%
<i>Adjacent Crashes</i>	5	0	100%
<i>Right Through Crashes</i>	11	2	41%
<i>Rear End Crashes</i>	3	2	+115%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## O'Riordan St and Gardeners Rd, Mascot

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of O'Riordan St and Gardeners Rd commenced issuing warning letters in October 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

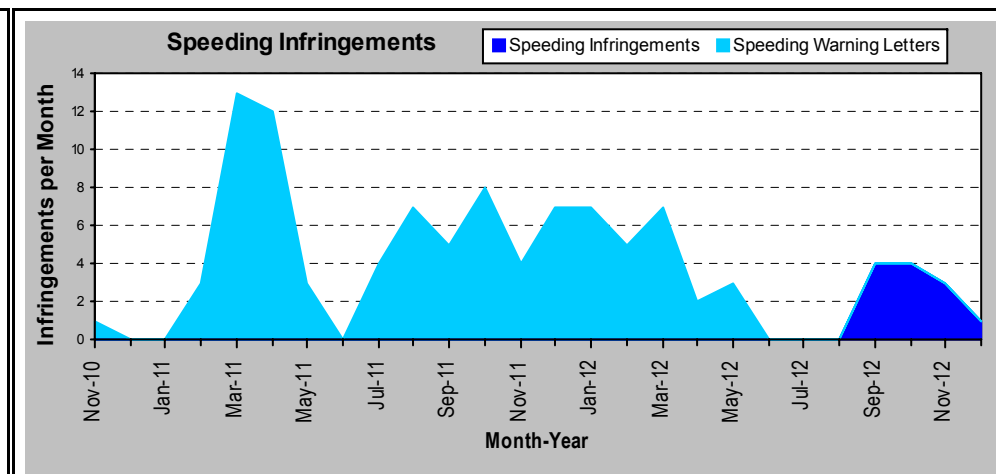
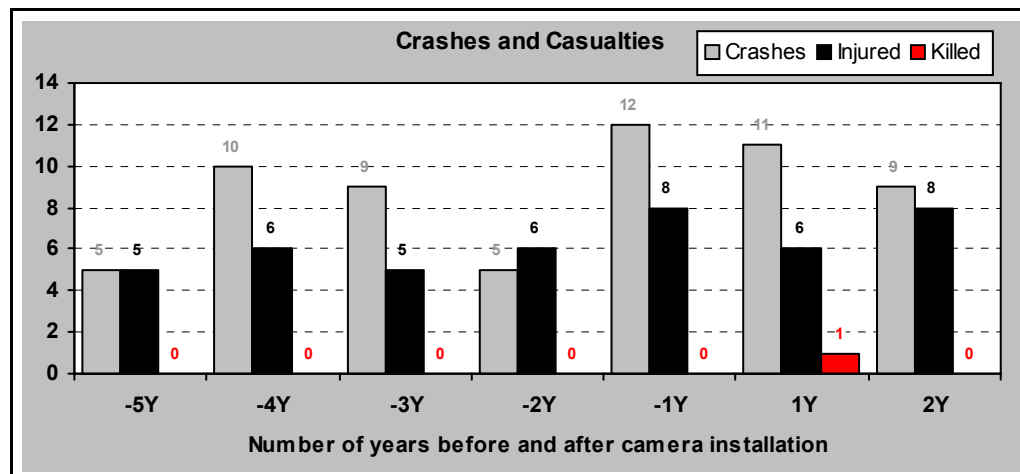
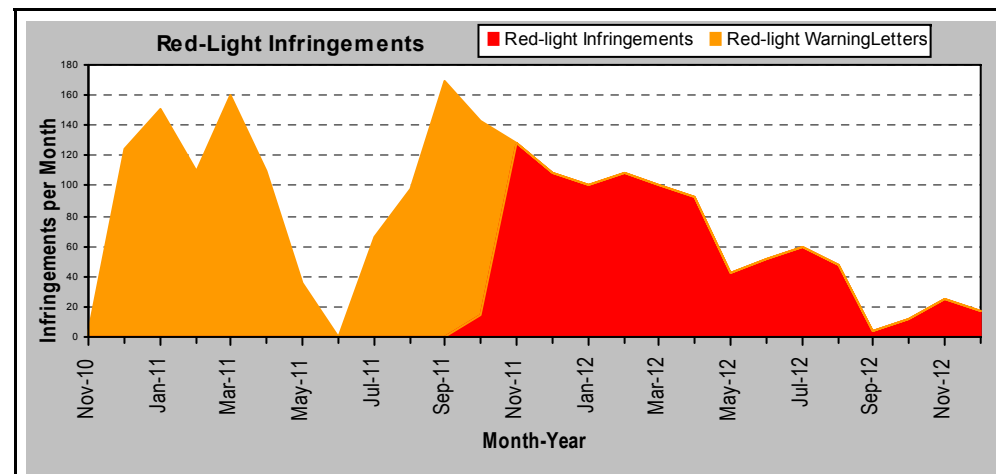
	5 years before installation <sup>1</sup>	2 years and 66 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	1	-
<b>Injuries</b>	30	14	+7%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	41	21	+17%
<i>Adjacent Crashes</i>	5	1	54%
<i>Right Through Crashes</i>	23	12	+20%
<i>Rear End Crashes</i>	4	4	+129%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## O'Riordan Street and Coward Street, Mascot

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of O'Riordan Street and Coward Street commenced issuing warning letters in April 2011.
- While the results available show a decrease in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

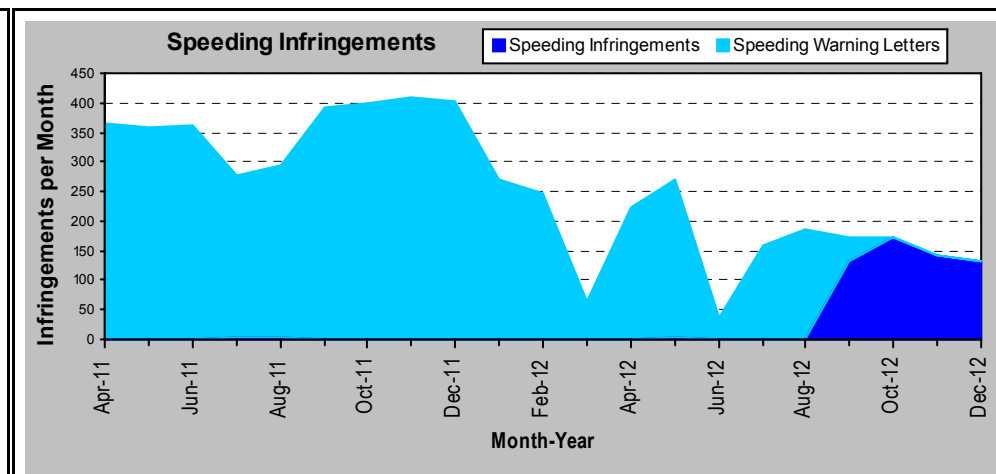
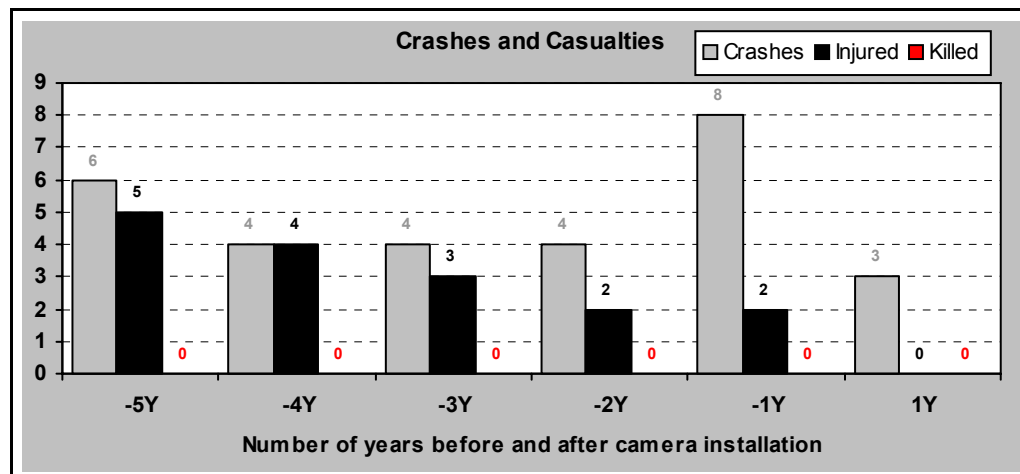
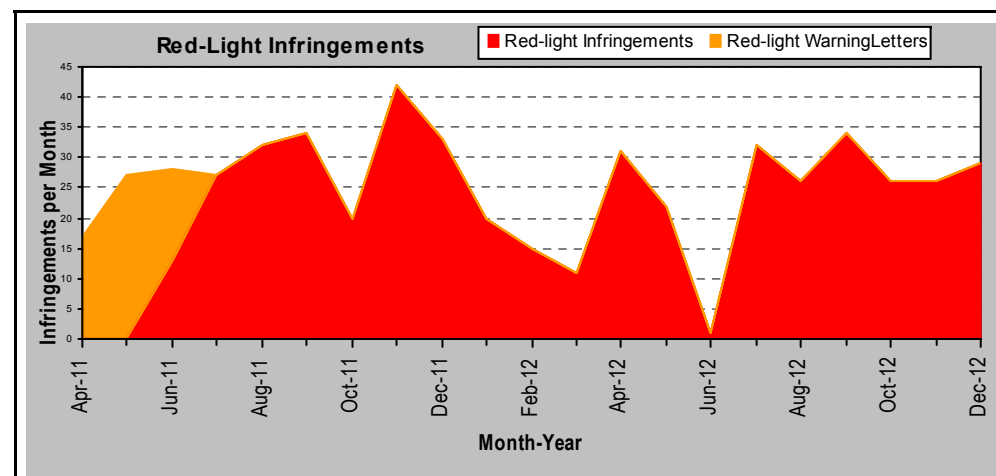
	5 years before installation <sup>1</sup>	1 year and 266 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	16	0	100%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	26	3	67%
<i>Adjacent Crashes</i>	6	1	52%
<i>Right Through Crashes</i>	11	0	100%
<i>Rear End Crashes</i>	4	1	28%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Maitland Road and Maud Street, Mayfield West

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Maitland Road and Maud Street commenced issuing warning letters in May 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

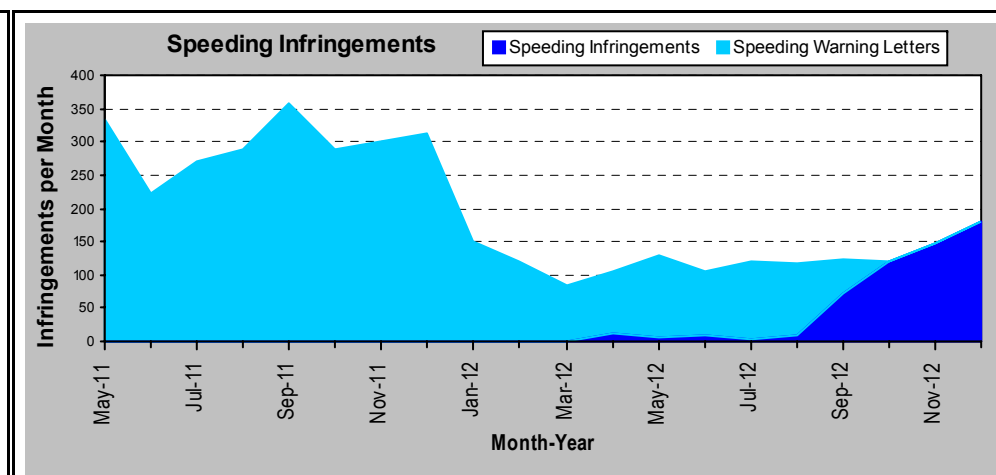
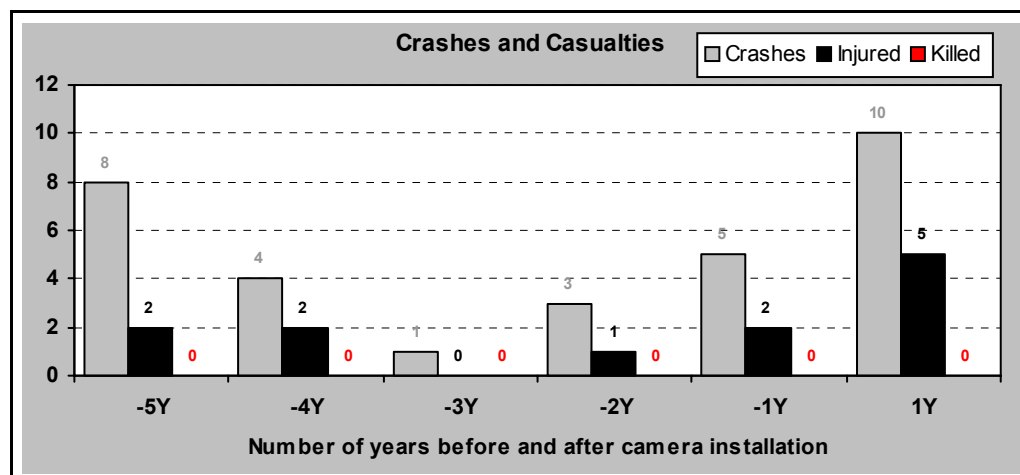
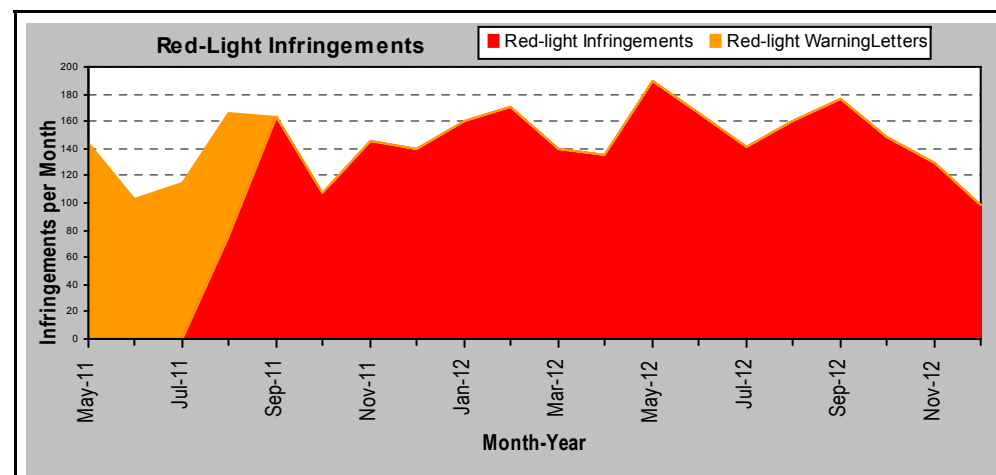
	5 years before installation <sup>1</sup>	1 year and 234 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	7	7	+205%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	21	14	+103%
<i>Adjacent Crashes</i>	4	1	24%
<i>Right Through Crashes</i>	9	8	+171%
<i>Rear End Crashes</i>	3	2	+103%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Great Western Hwy and Coleman St / Hawkesbury Rd, Mays Hill / Westmead

- There are two cameras at this intersection.
- The camera at the intersection of Great Western Hwy and Coleman St commenced issuing warning letters in July 2010.
- The camera at the intersection of Great Western Hwy and Hawkesbury Rd commenced issuing warning letters in July 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

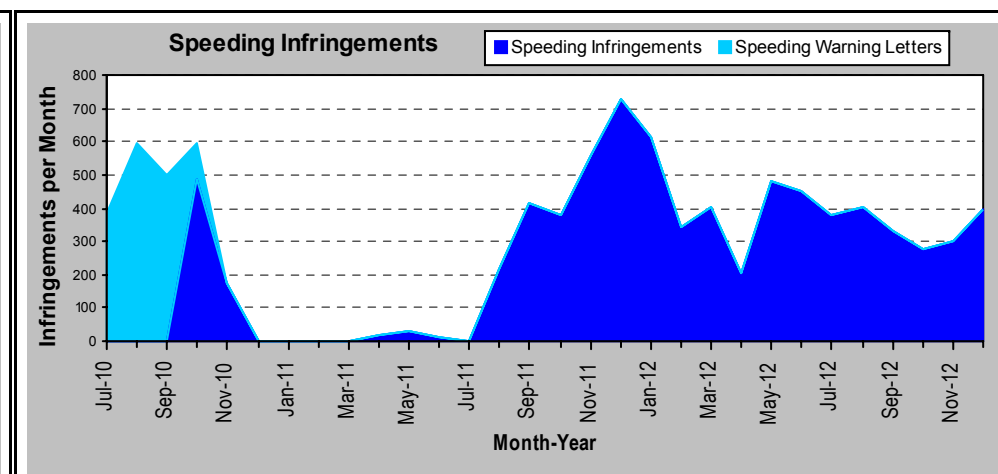
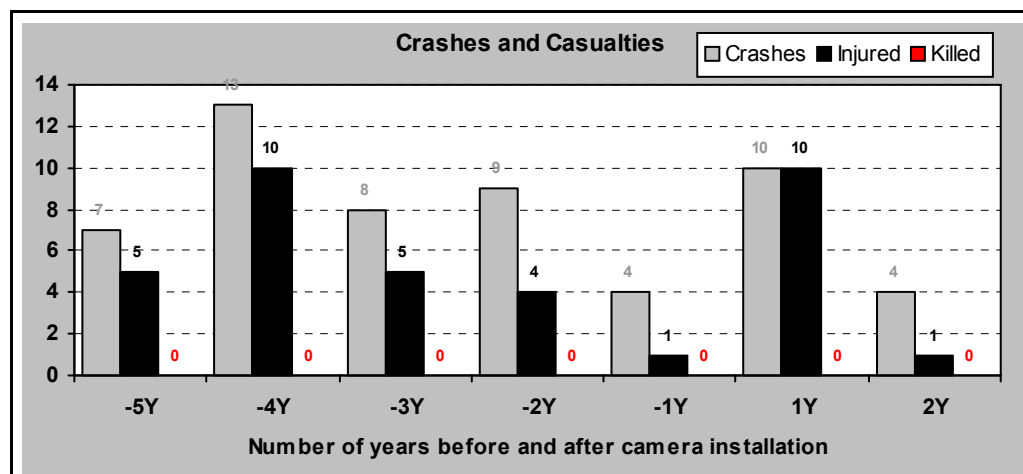
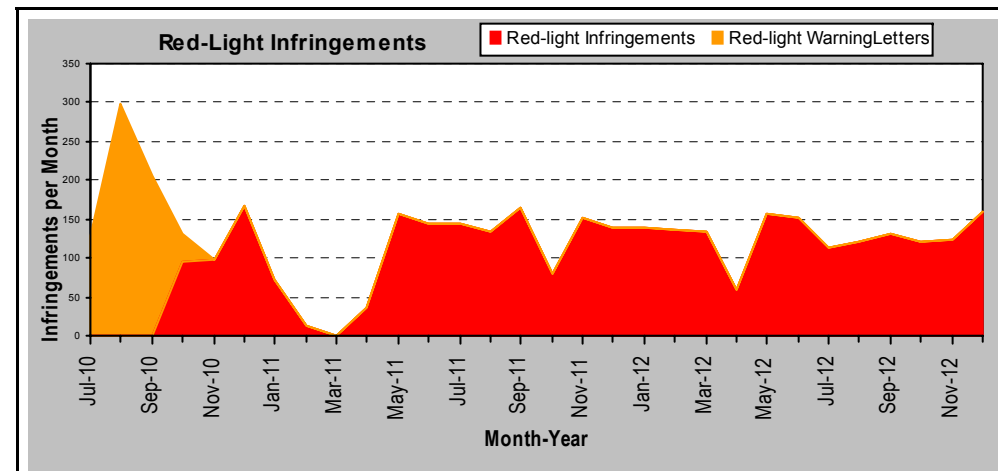
	5 years before installation <sup>1</sup>	2 years and 185 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	25	12	4%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	41	16	22%
<i>Adjacent Crashes</i>	5	1	60%
<i>Right Through Crashes</i>	17	7	18%
<i>Rear End Crashes</i>	15	6	20%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Newbridge Rd and Henry Lawson Dr, Milperra

- There is one camera at this intersection.
- The camera at the intersection of Newbridge Rd and Henry Lawson Dr commenced issuing warning letters in September 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

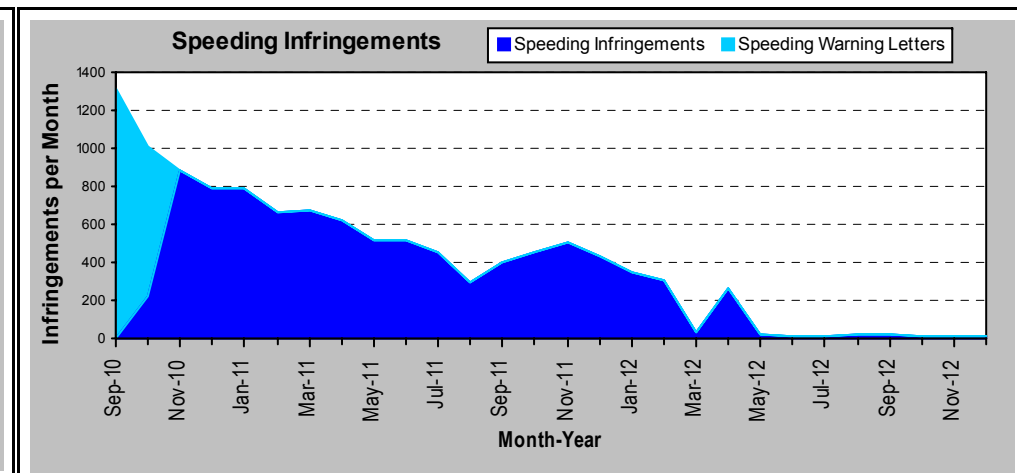
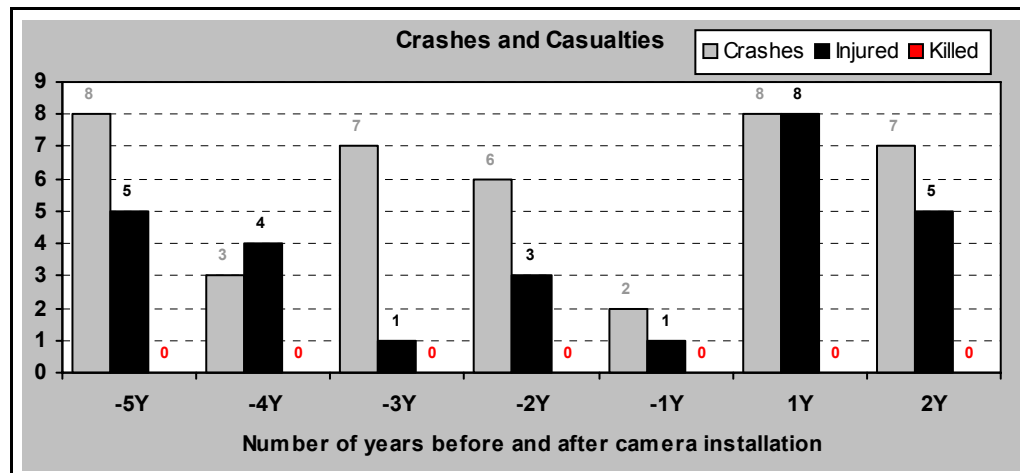
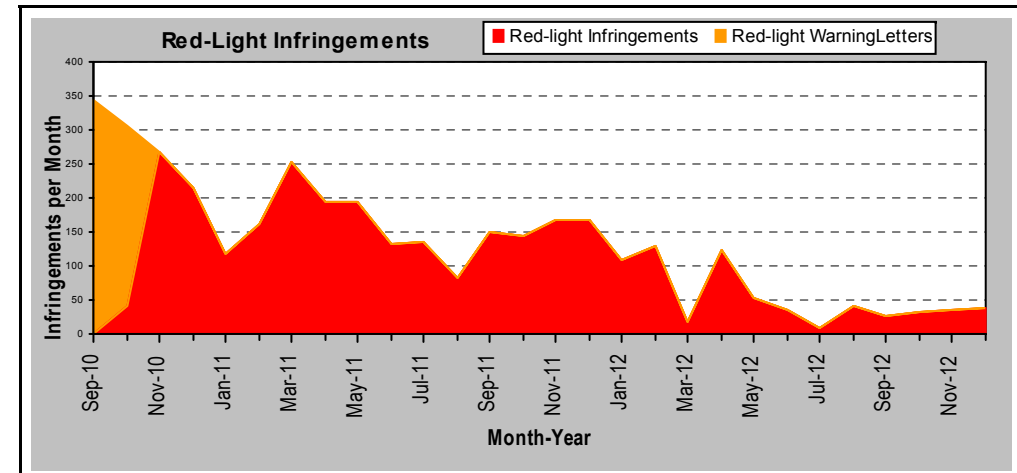
	5 years before installation <sup>1</sup>	2 years and 115 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	14	13	+101%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	26	16	+33%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	6	0	100%
<i>Rear End Crashes</i>	11	14	+175%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Kingsway and Port Hacking Rd, Miranda

- There is one camera at this intersection.
- The camera at the intersection of Kingsway and Port Hacking Rd commenced issuing warning letters in July 2010.
- While the results available show a decrease in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

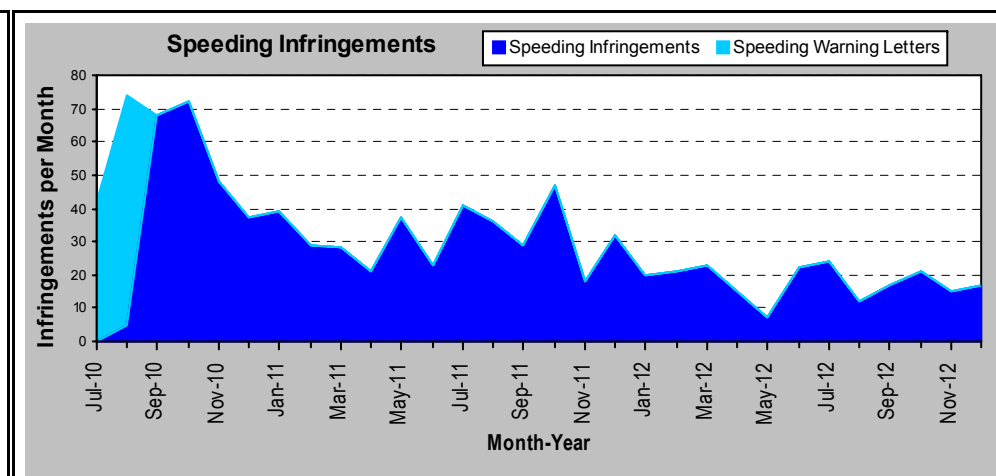
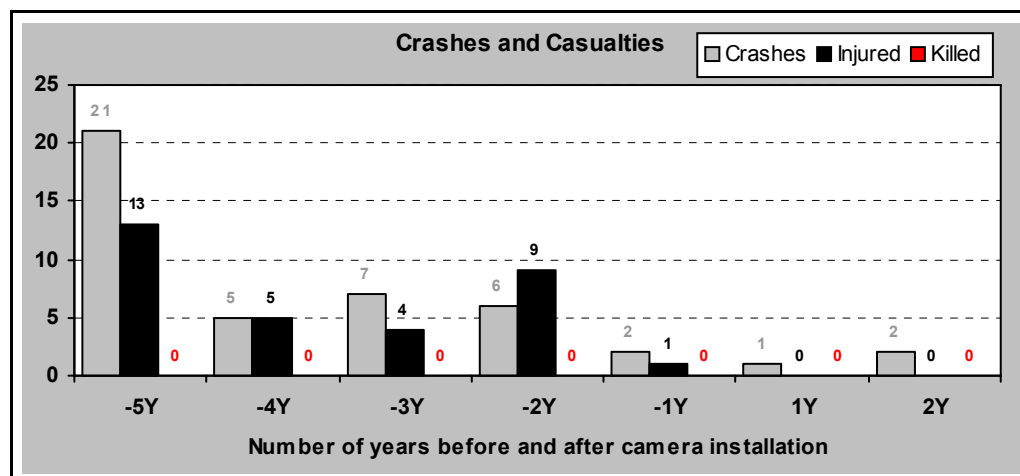
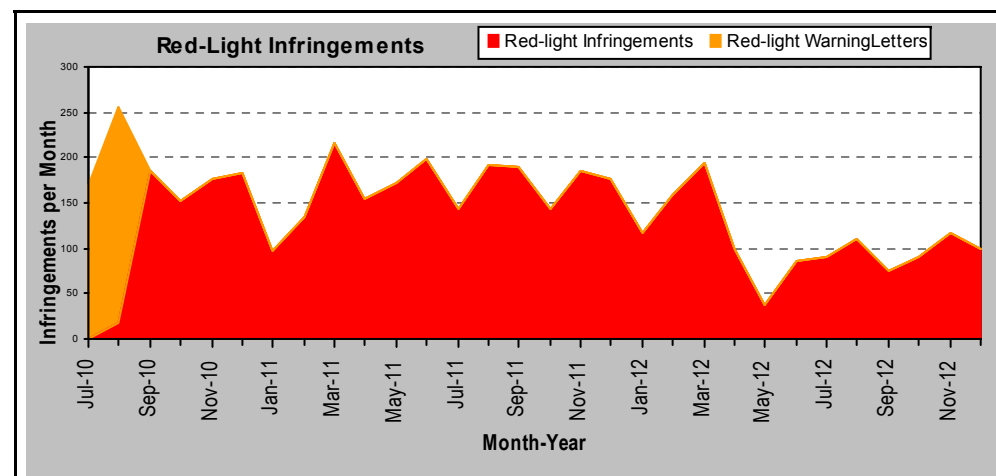
	5 years before installation <sup>1</sup>	2 years and 179 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	32	0	100%
<i>Pedestrian Casualties</i>	3	0	100%
<b>Crashes</b>	41	6	71%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	20	0	100%
<i>Rear End Crashes</i>	11	3	45%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Anzac Parade and Lang Road, Moore Park

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Anzac Parade and Lang Road commenced issuing warning letters in March 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

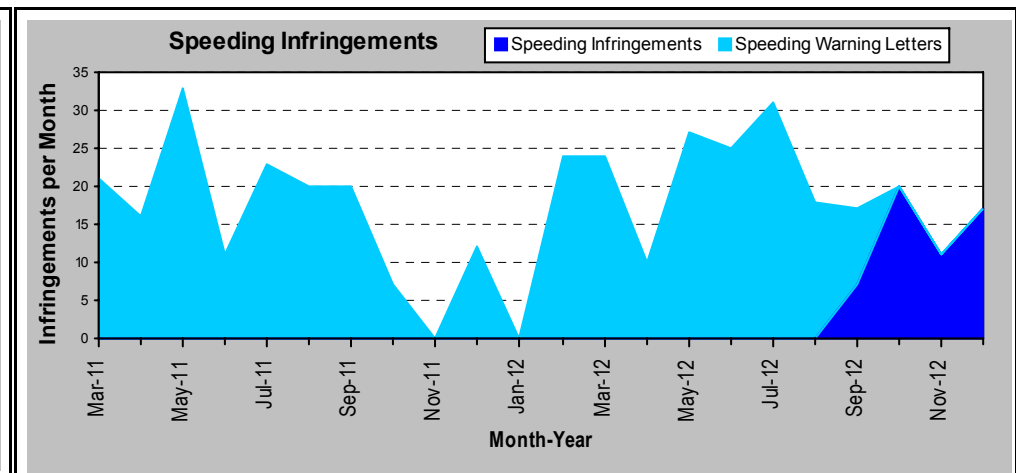
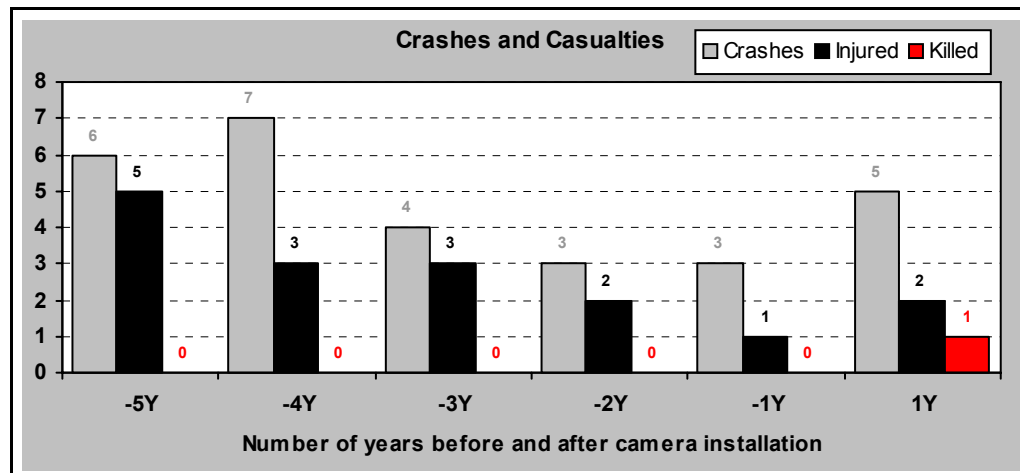
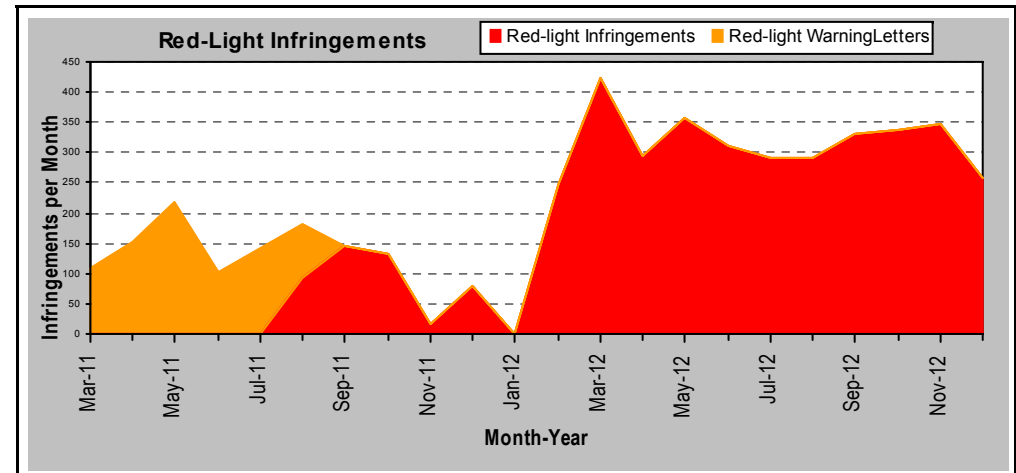
	5 years before installation <sup>1</sup>	1 year and 292 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	1	-
<b>Injuries</b>	14	4	21%
<i>Pedestrian Casualties</i>	1	1	+178%
<b>Crashes</b>	23	8	3%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	4	0	100%
<i>Rear End Crashes</i>	10	4	+11%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Anzac Pde / Flinders St and Moore Park Rd, Moore Park

- There are two cameras at this intersection.
- The camera at the intersection of Anzac Pde and Moore Park Rd commenced issuing warning letters in August 2010.
- The camera at the intersection of Flinders St and Moore Park Rd commenced issuing warning letters in August 2010.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

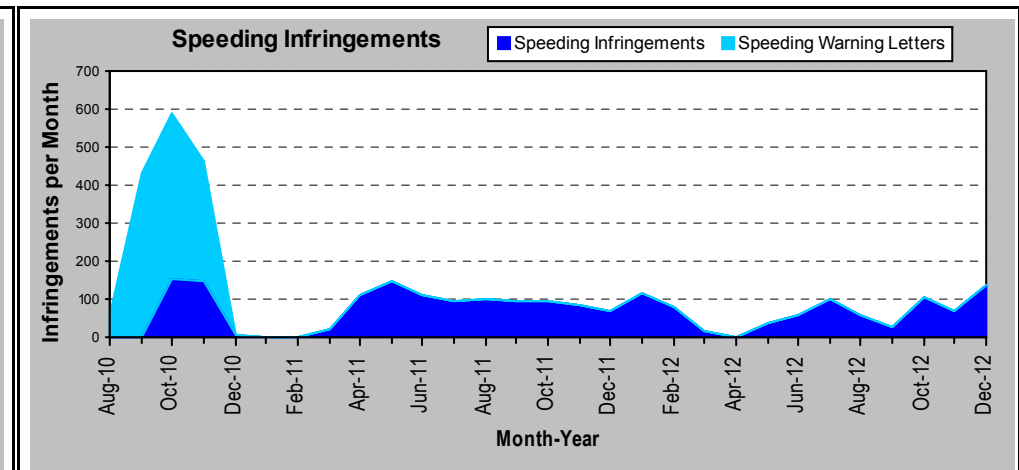
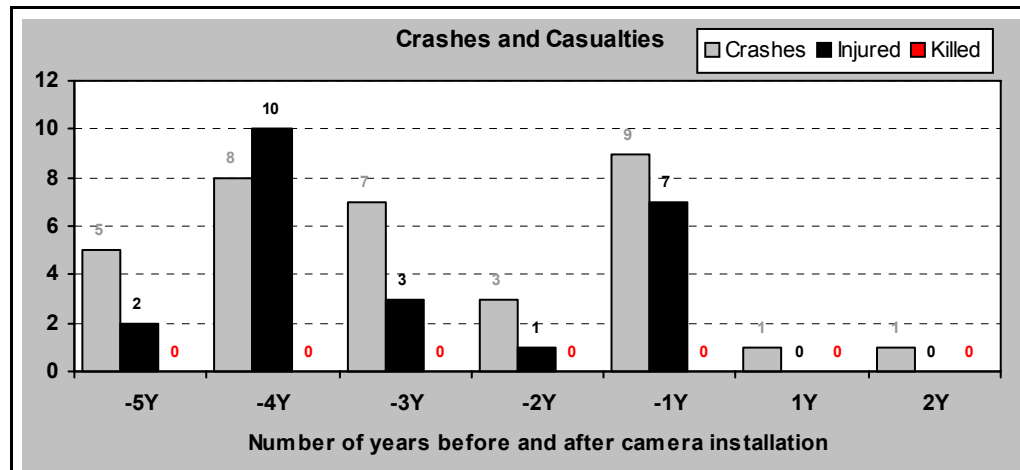
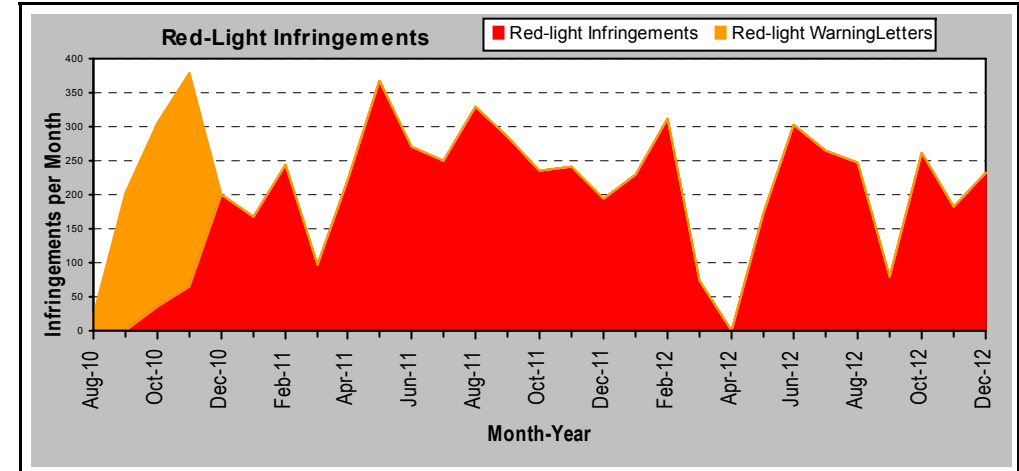
	5 years before installation <sup>1</sup>	2 years and 137 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	23	2	82%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	32	4	74%
<i>Adjacent Crashes</i>	4	1	47%
<i>Right Through Crashes</i>	13	2	68%
<i>Rear End Crashes</i>	4	1	47%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Newbridge Rd and Stockton Av, Moorebank

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Newbridge Rd and Stockton Av commenced issuing warning letters in December 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

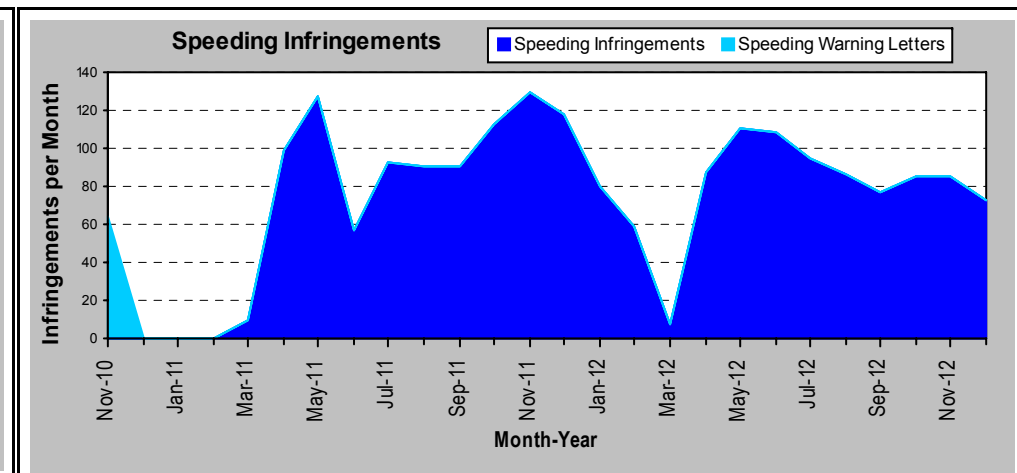
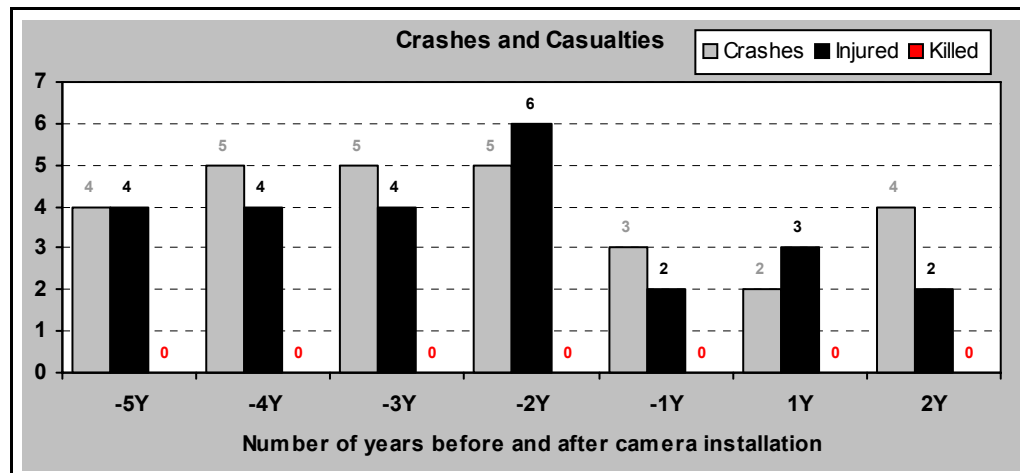
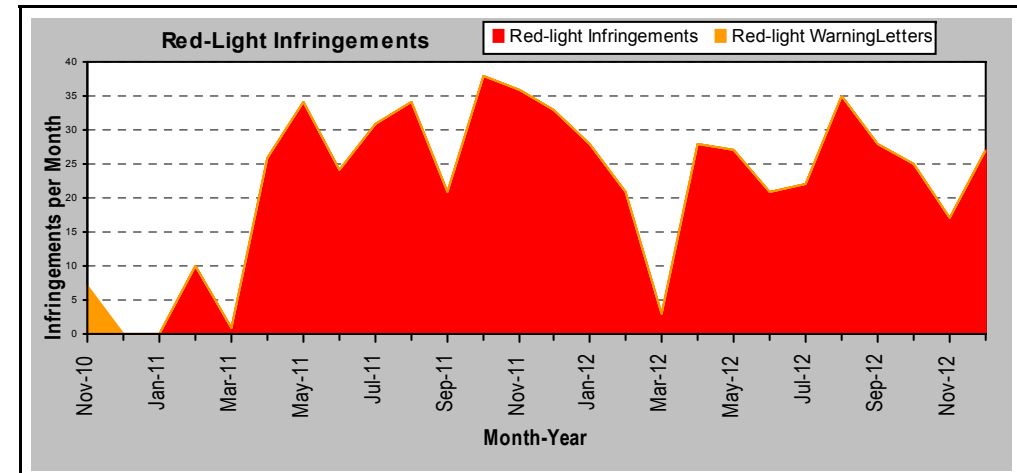
	5 years before installation <sup>1</sup>	2 years and 18 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	20	5	39%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	22	7	22%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	10	4	2%
<i>Rear End Crashes</i>	8	3	8%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Military Rd and Cowles Rd, Mosman

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Military Rd and Cowles Rd commenced issuing warning letters in December 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

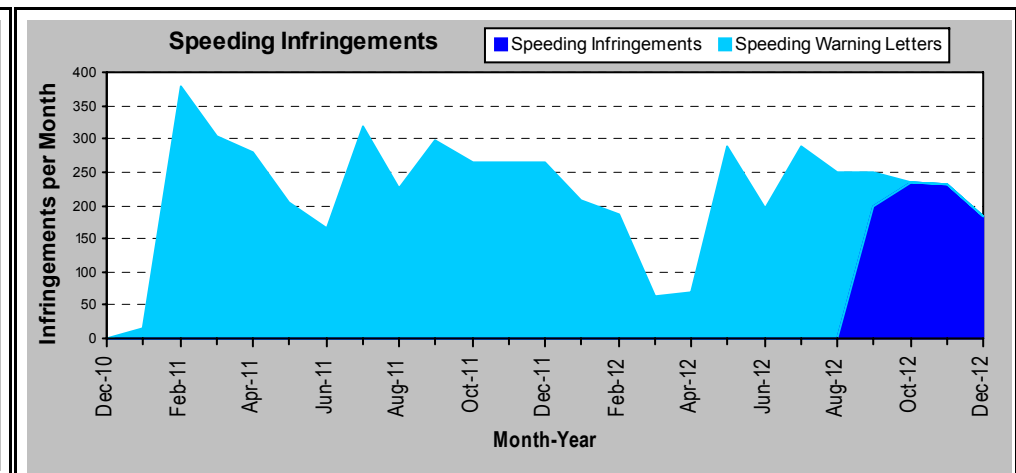
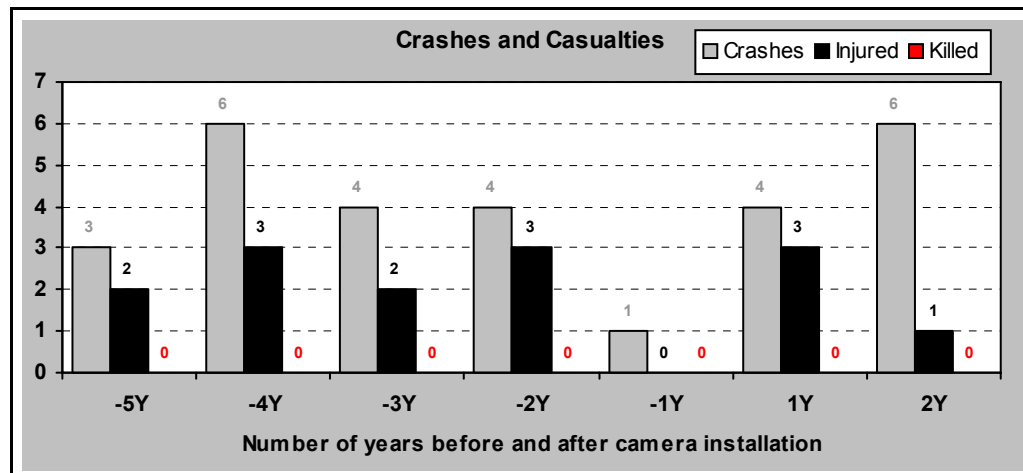
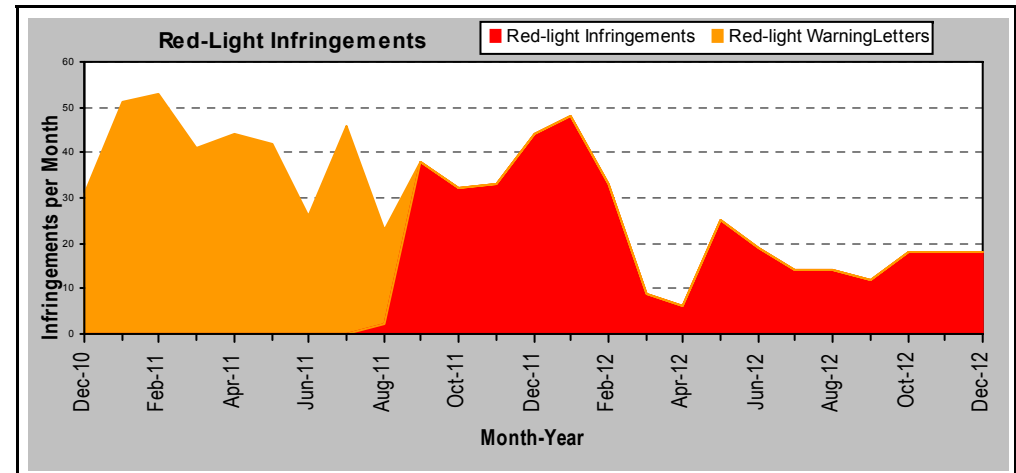
	5 years before installation <sup>1</sup>	2 years and 18 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	10	4	2%
<i>Pedestrian Casualties</i>	1	2	+388%
<b>Crashes</b>	18	10	+36%
<i>Adjacent Crashes</i>	5	3	+46%
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	7	1	65%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Wicks Rd and Epping Rd, North Ryde

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Wicks Rd and Epping Rd commenced issuing warning letters in November 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

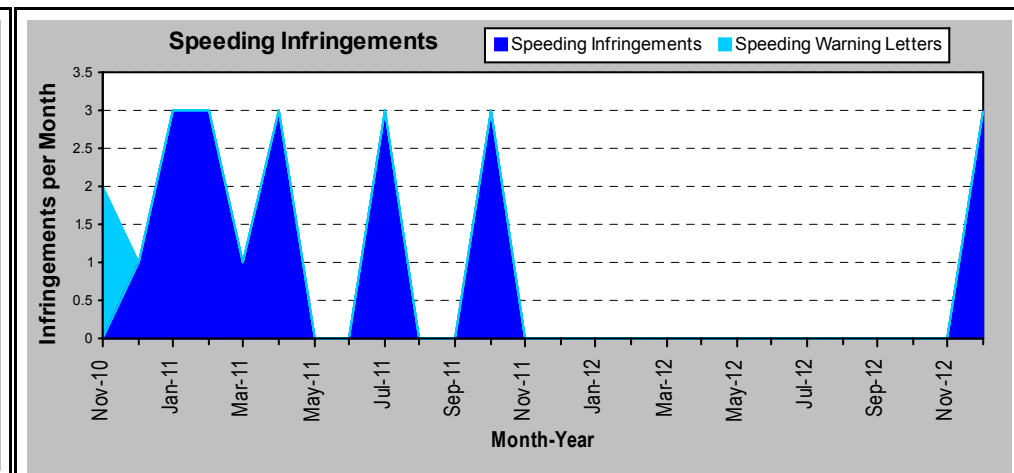
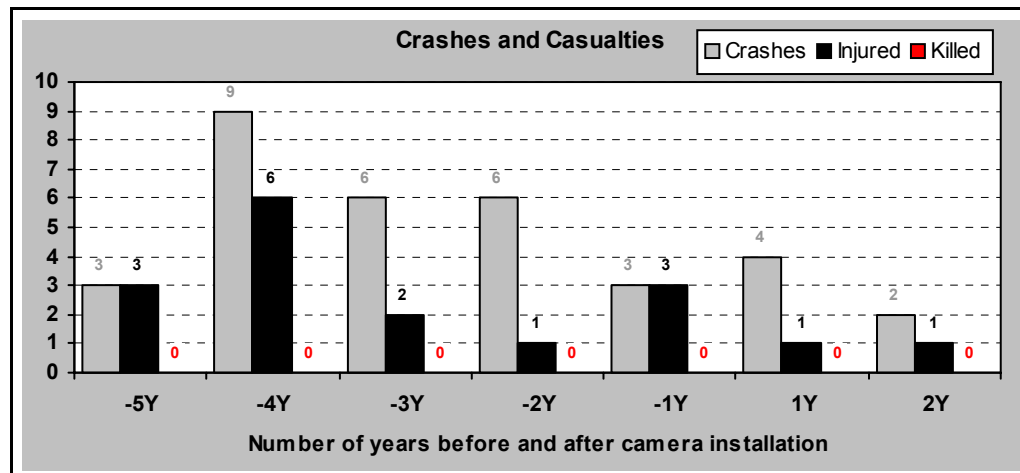
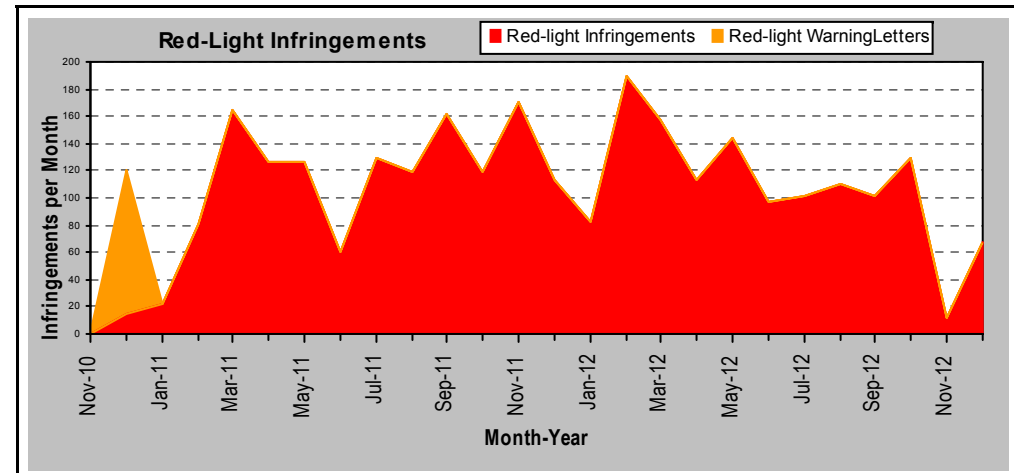
	5 years before installation <sup>1</sup>	2 years and 52 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	15	2	69%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	27	7	39%
<i>Adjacent Crashes</i>	1	0	100%
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	17	5	31%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Old Windsor Rd and Cumberland Hwy (Hart Dr), Northmead

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Old Windsor Rd and Cumberland Hwy (Hart Dr) commenced issuing warning letters in December 2010.
- While early results indicate a slight increase in casualties, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

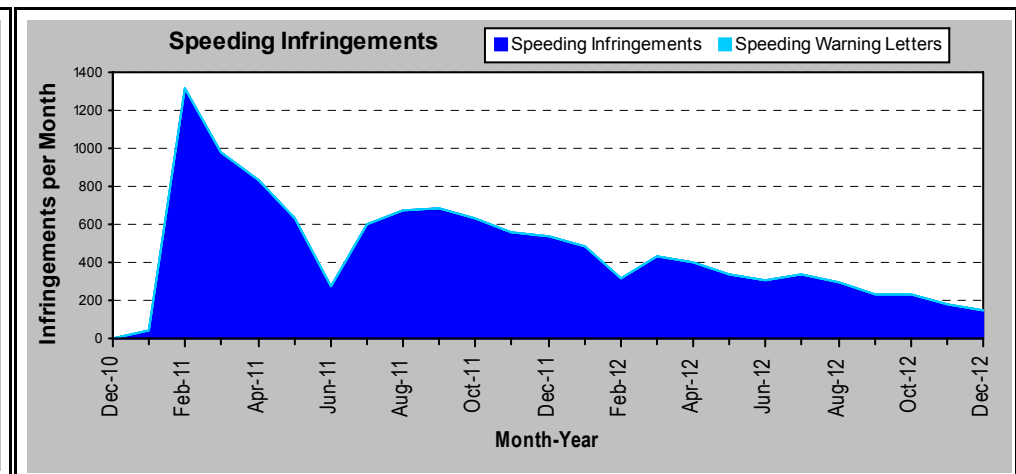
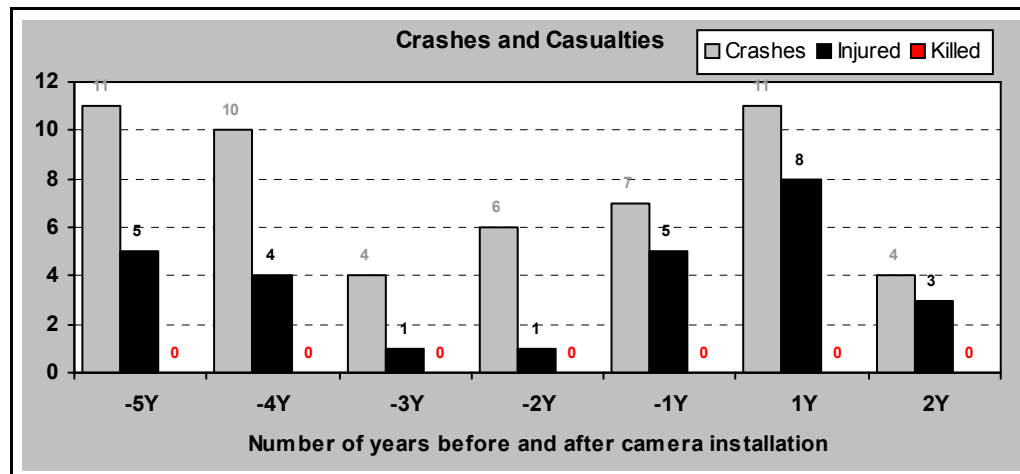
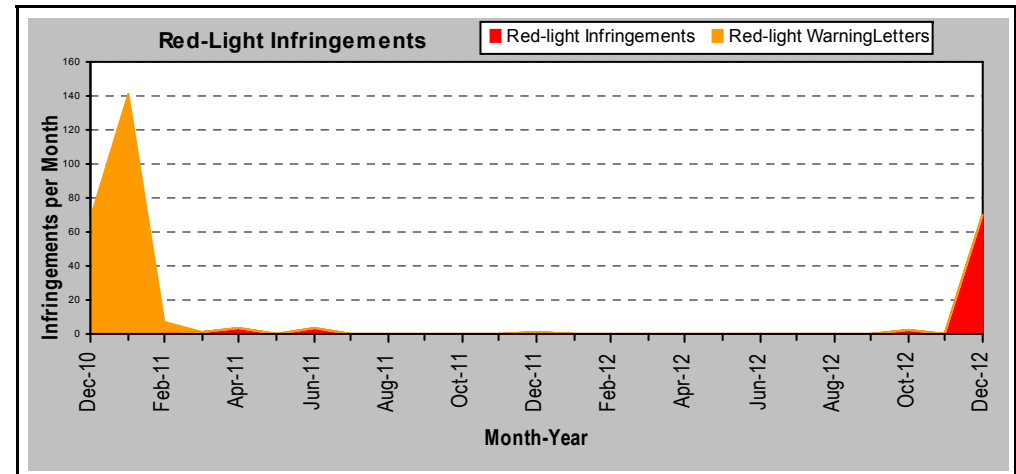
	5 years before installation <sup>1</sup>	2 years and 18 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	16	11	+68%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	38	15	4%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	0	3	-
<i>Rear End Crashes</i>	18	11	+49%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Moore Park Rd and Oxford St, Paddington

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Moore Park Rd and Oxford St commenced issuing warning letters in October 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

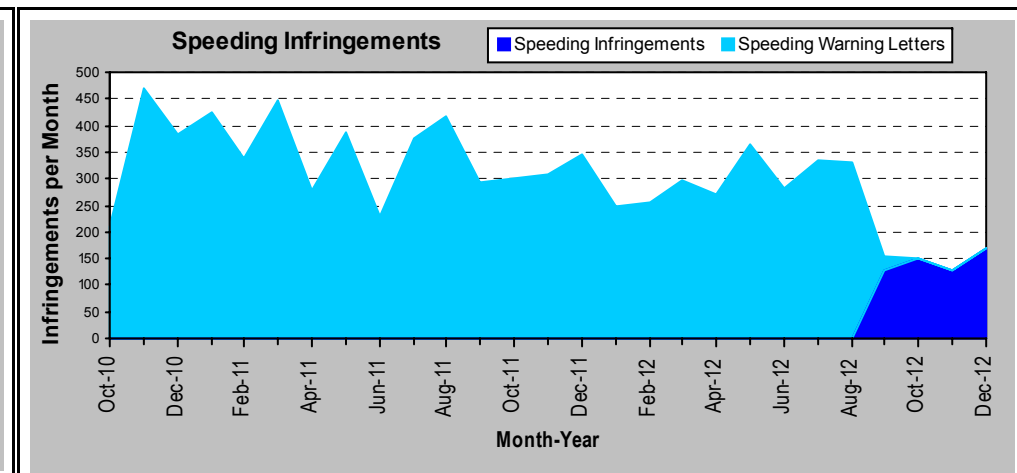
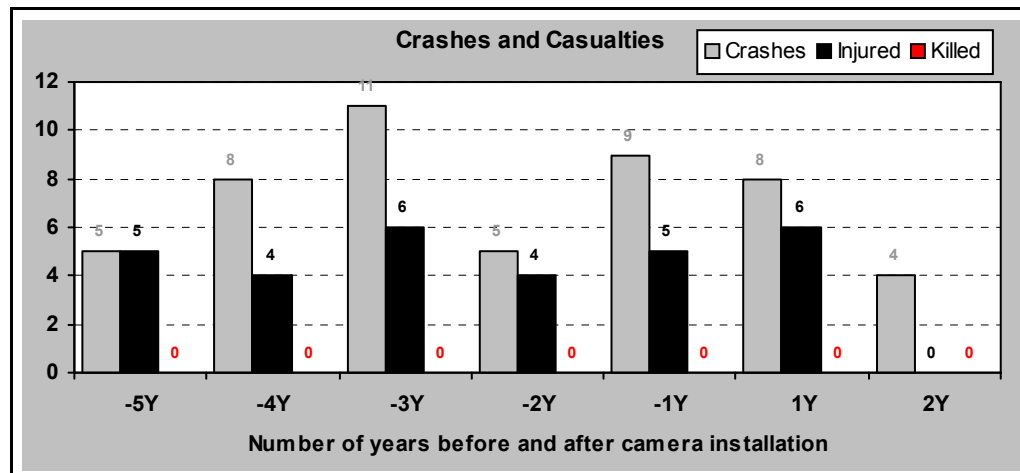
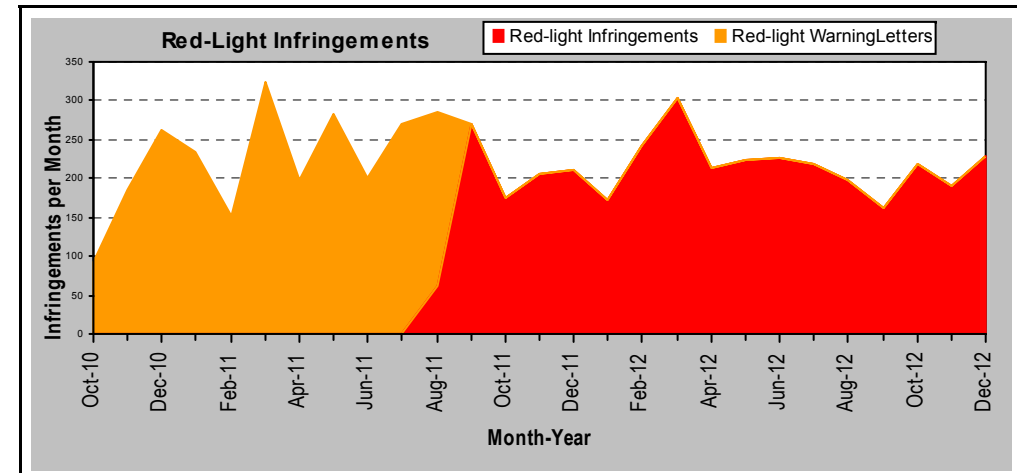
	5 years before installation <sup>1</sup>	2 years and 74 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	24	6	43%
<i>Pedestrian Casualties</i>	3	0	100%
<b>Crashes</b>	38	13	22%
<i>Adjacent Crashes</i>	11	5	+3%
<i>Right Through Crashes</i>	8	1	72%
<i>Rear End Crashes</i>	7	2	35%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## South Dowling St and Fitzroy St / Moore Park Rd, Paddington / Surry Hills

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of South Dowling St and Fitzroy St commenced issuing warning letters in June 2010.
- The camera at the intersection of South Dowling St and Moore Park Rd commenced issuing warning letters in June 2010.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

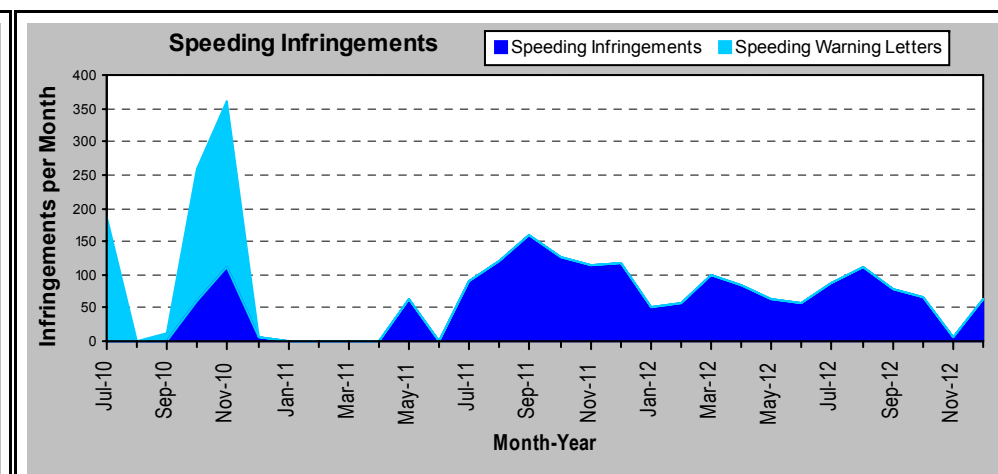
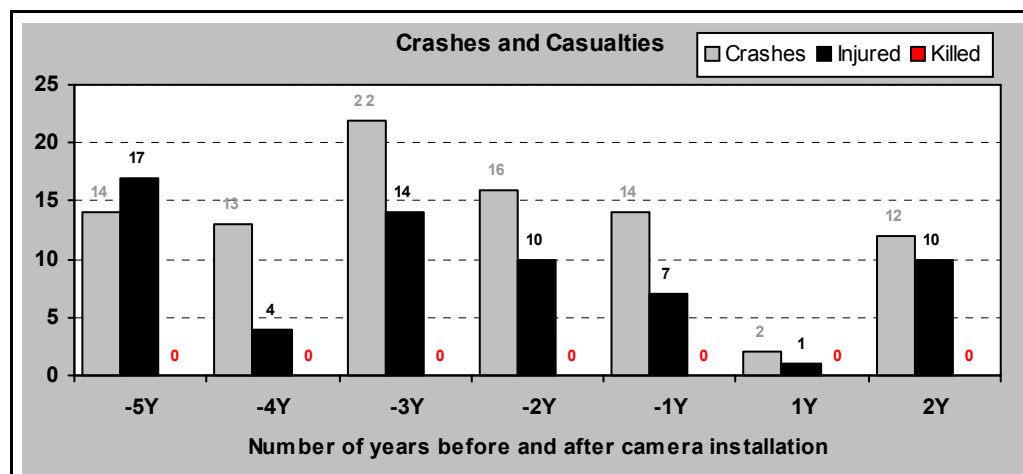
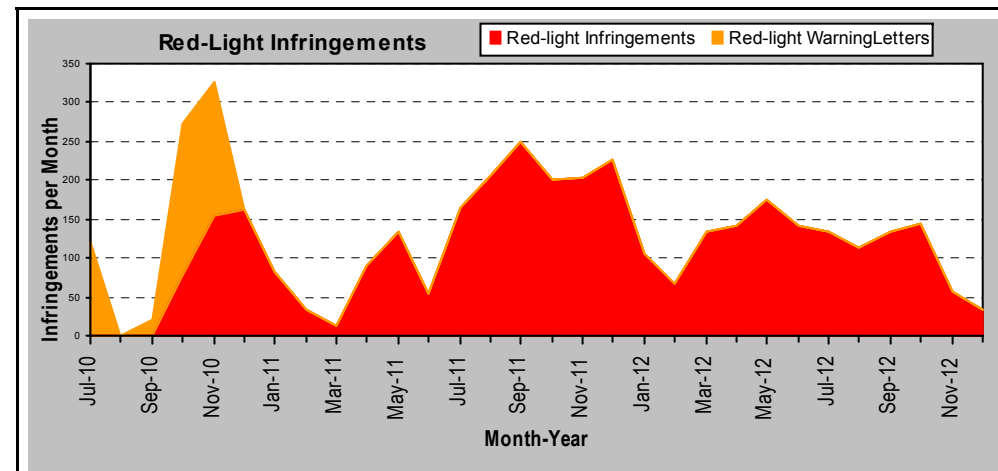
	5 years before installation <sup>1</sup>	2 years and 186 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	52	12	54%
<i>Pedestrian Casualties</i>	2	0	100%
<b>Crashes</b>	79	18	55%
<i>Adjacent Crashes</i>	54	12	56%
<i>Right Through Crashes</i>	3	3	+99%
<i>Rear End Crashes</i>	13	2	69%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Victoria Rd and Church St, Parramatta

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Victoria Rd and Church St commenced issuing warning letters in June 2010.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

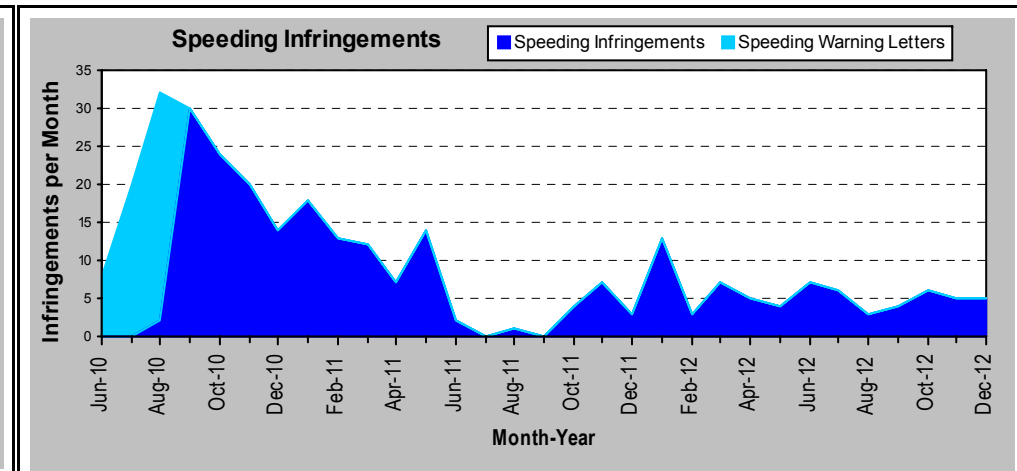
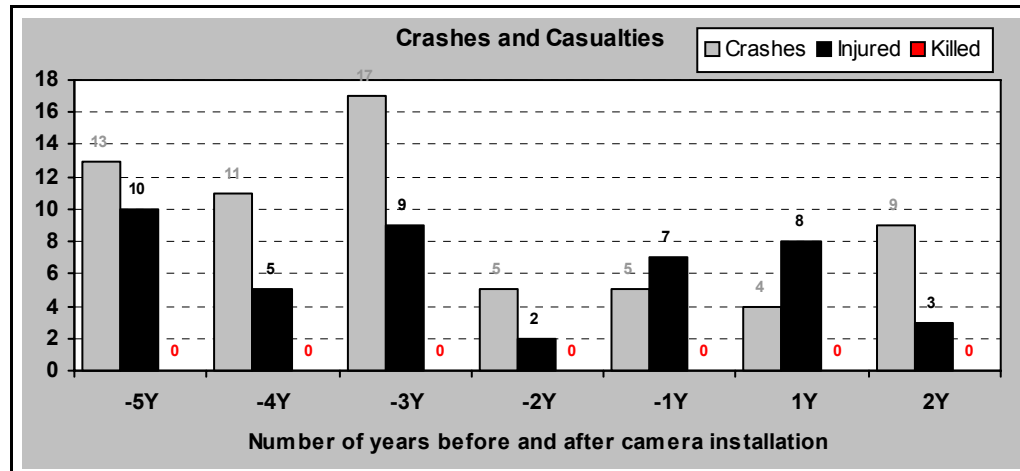
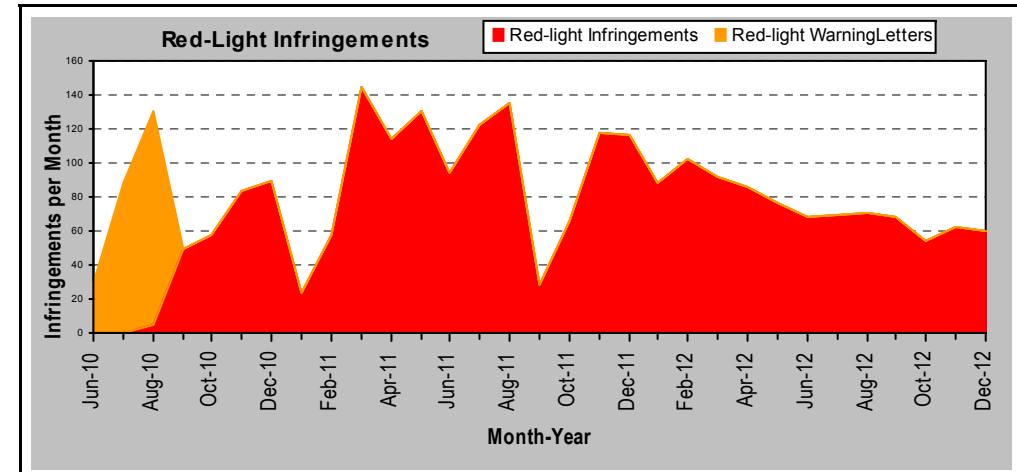
	5 years before installation <sup>1</sup>	2 years and 192 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	33	11	34%
<i>Pedestrian Casualties</i>	3	0	100%
<b>Crashes</b>	51	13	50%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	29	8	45%
<i>Rear End Crashes</i>	7	1	72%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Pennant Hills Rd and Beecroft Rd (W), Pennant Hills (school zone)

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Pennant Hills Rd and Beecroft Rd (W) commenced issuing warning letters in September 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

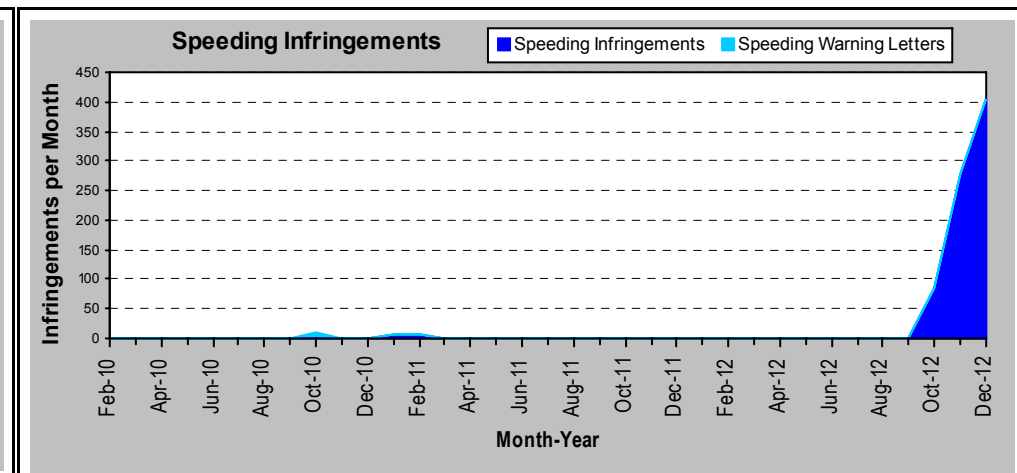
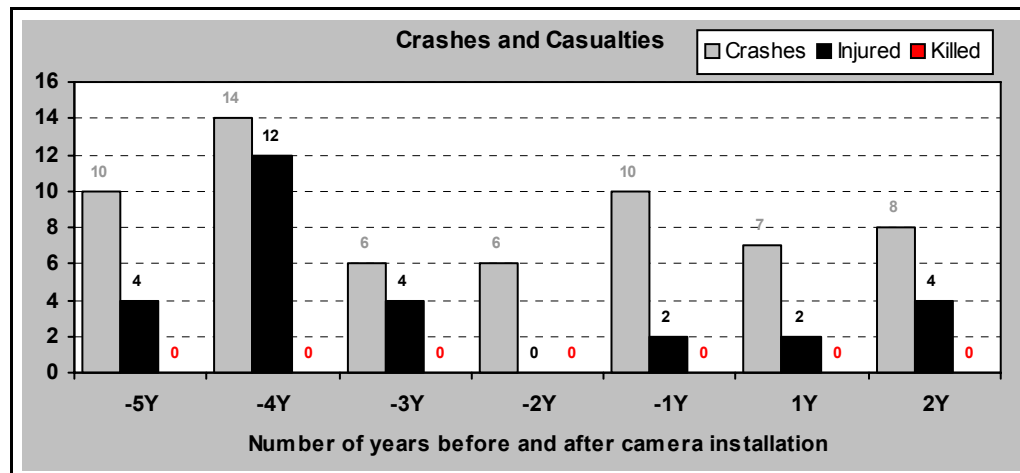
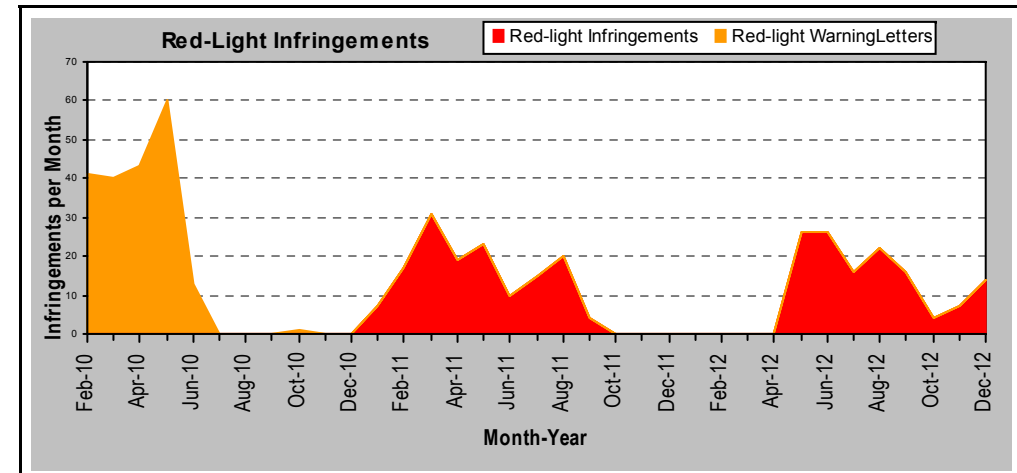
	5 years before installation <sup>1</sup>	2 years and 123 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	22	7	32%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	46	18	16%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	43	12	40%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Gordon St and New Canterbury Rd, Petersham

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Gordon St and New Canterbury Rd commenced issuing warning letters in November 2010. This camera enforces red-light running only.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

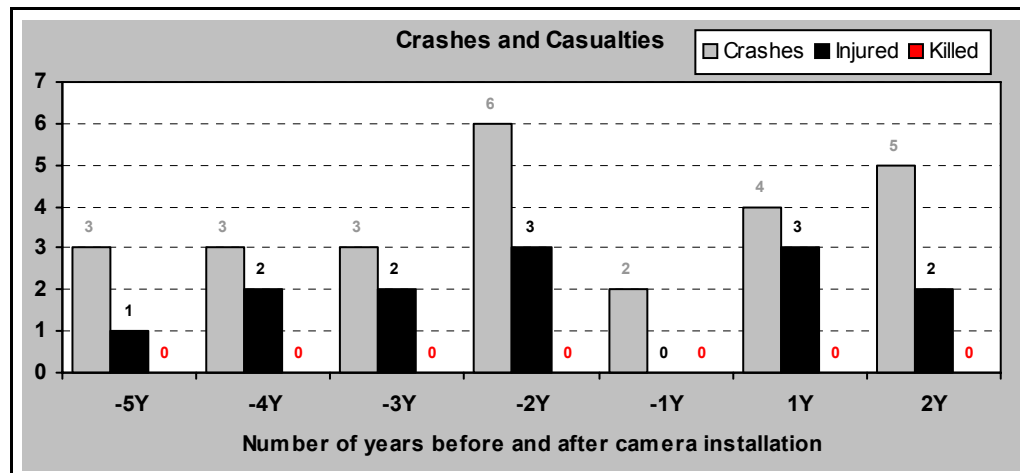
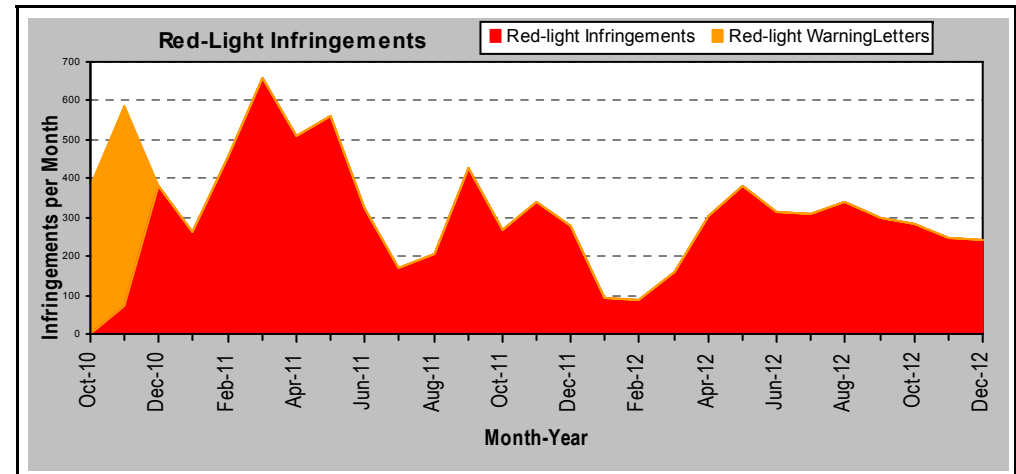
	5 years before installation <sup>1</sup>	2 years and 54 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	8	5	+46%
<i>Pedestrian Casualties</i>	1	2	+366%
<b>Crashes</b>	17	10	+37%
<i>Adjacent Crashes</i>	5	1	53%
<i>Right Through Crashes</i>	4	2	+16%
<i>Rear End Crashes</i>	3	3	+133%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Avoca Street and Darley Road, Randwick

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Avoca Street and Darley Road commenced issuing warning letters in June 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

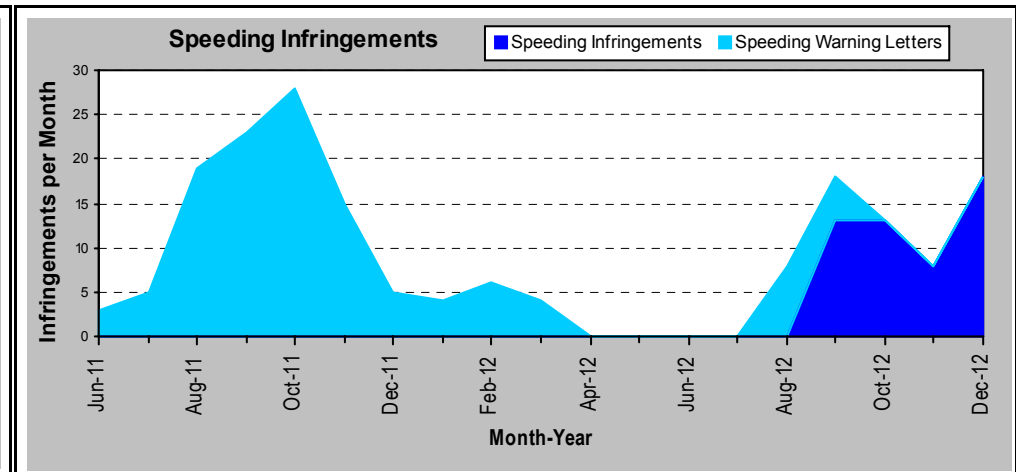
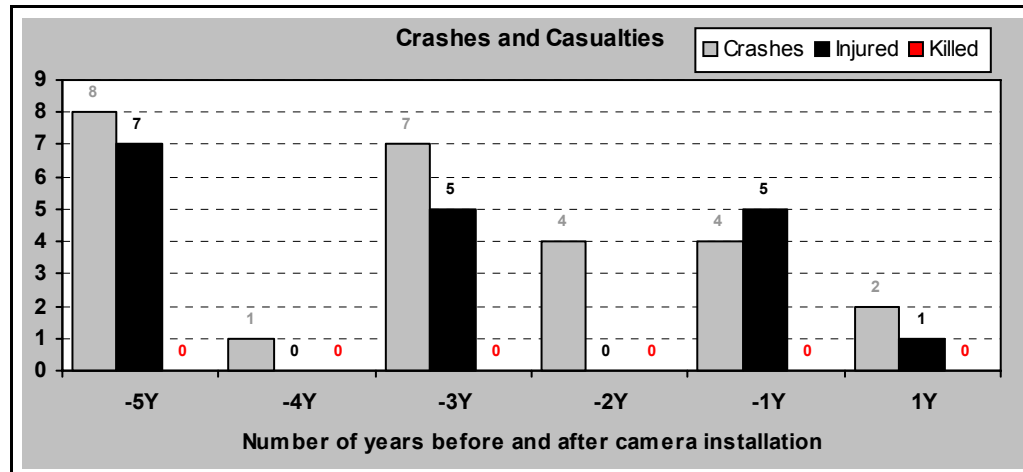
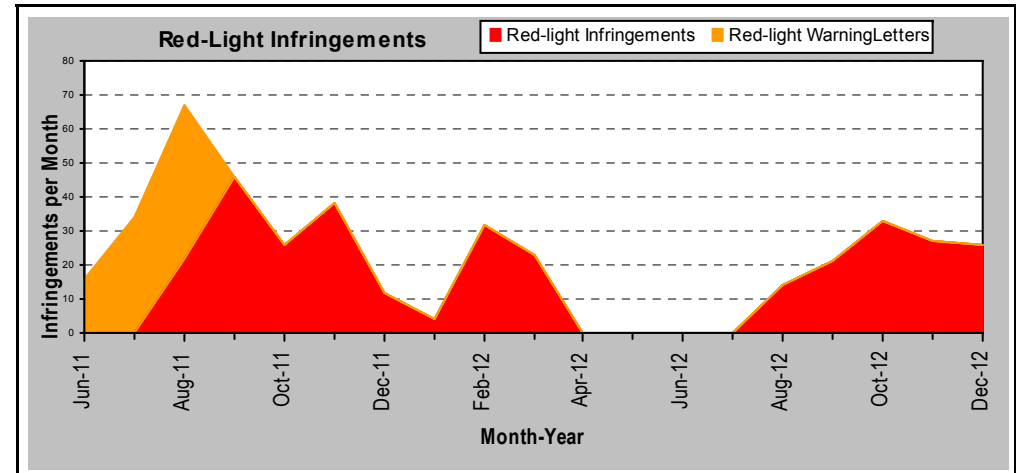
	5 years before installation <sup>1</sup>	1 year and 195 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	17	1	81%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	24	4	46%
<i>Adjacent Crashes</i>	3	1	+9%
<i>Right Through Crashes</i>	10	2	35%
<i>Rear End Crashes</i>	5	1	35%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



### Chalmers Street and Cleveland Street, Redfern (school zone)

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Chalmers Street and Cleveland Street commenced issuing warning letters in June 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

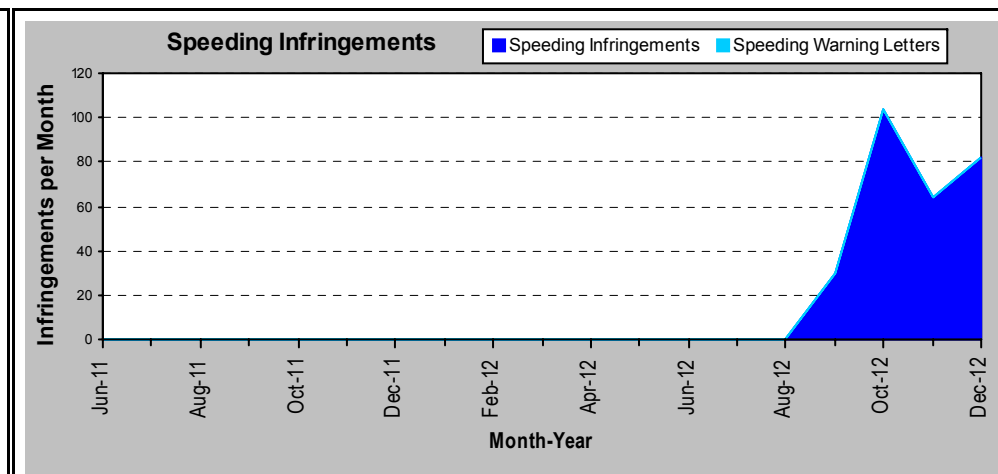
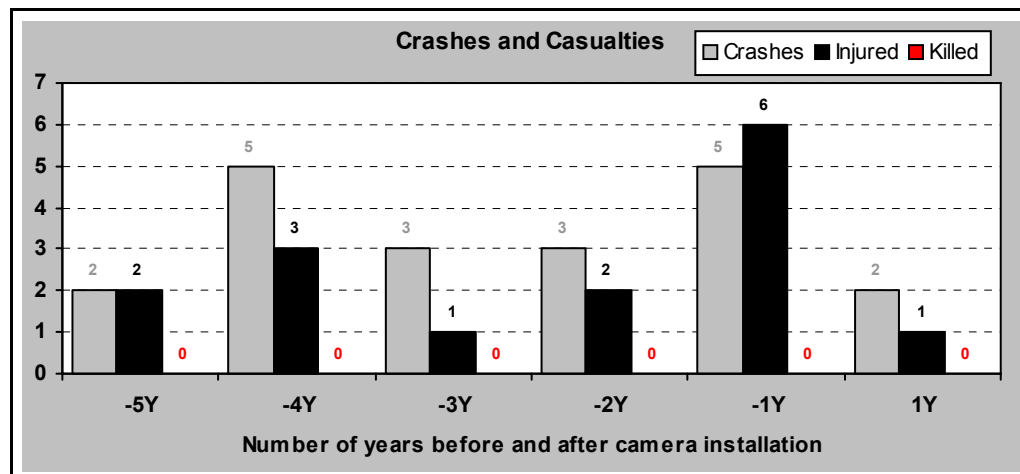
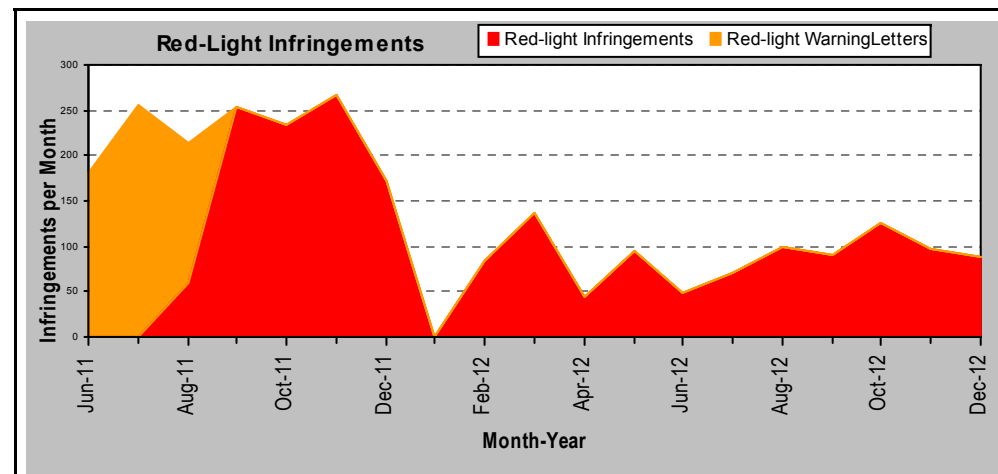
	5 years before installation <sup>1</sup>	1 year and 206 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	14	2	54%
<i>Pedestrian Casualties</i>	3	0	100%
<b>Crashes</b>	18	5	11%
<i>Adjacent Crashes</i>	1	1	+220%
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	9	2	29%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Bestic St and West Botany Street, Rockdale

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Bestic St and West Botany Street commenced issuing warning letters in November 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

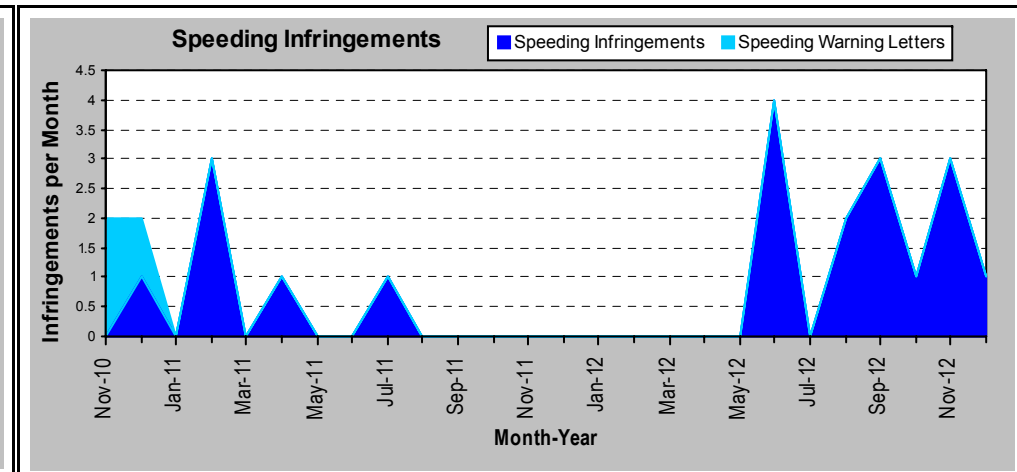
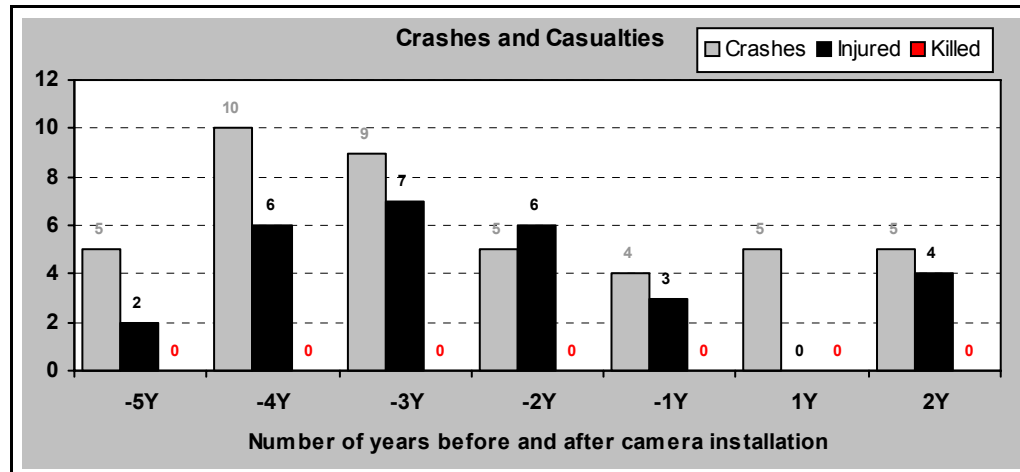
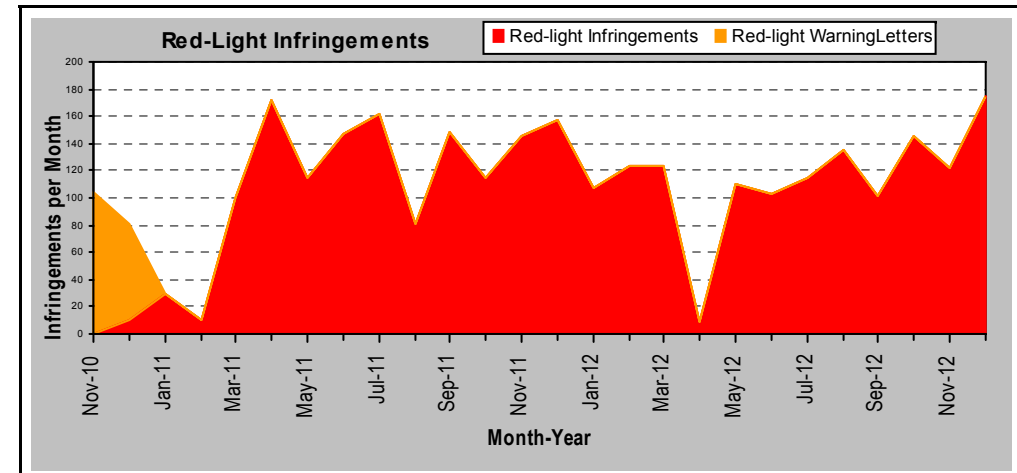
	5 years before installation <sup>1</sup>	2 years and 52 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	24	4	61%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	33	10	29%
<i>Adjacent Crashes</i>	13	7	+26%
<i>Right Through Crashes</i>	13	1	82%
<i>Rear End Crashes</i>	4	2	+17%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Princes Hwy and Bay St / the Sevenways, Rockdale

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Princes Hwy and Bay St commenced issuing warning letters in June 2011.
- The camera at the intersection of Princes Hwy and The Sevenways commenced issuing warning letters in July 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

## Crashes at enforced intersection

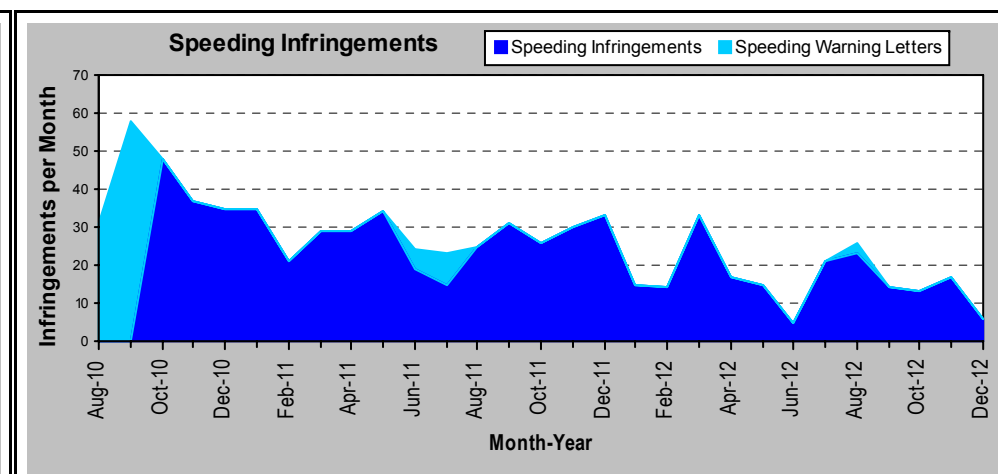
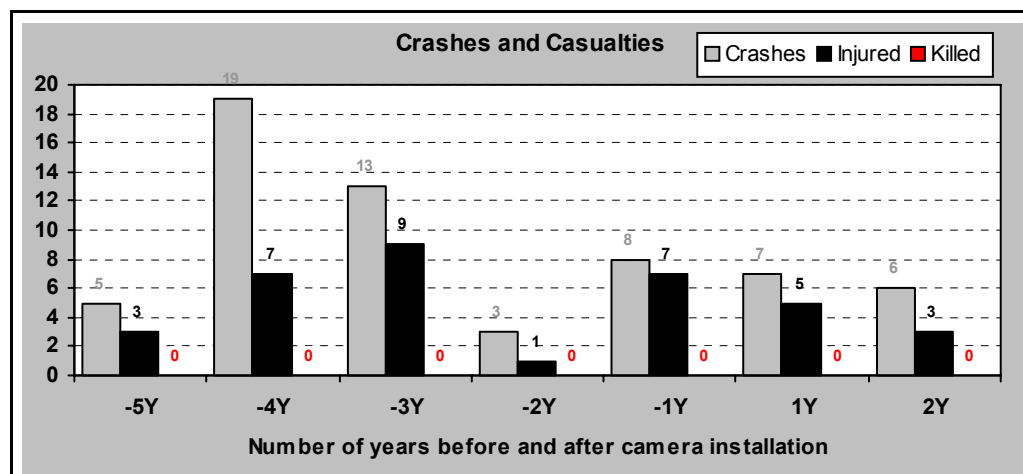
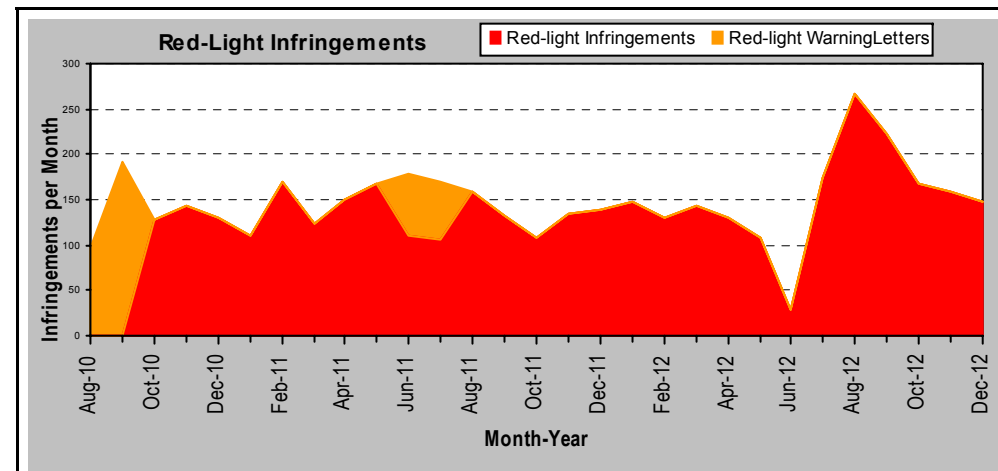
	5 years before installation <sup>1</sup>	2 years and 156 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	27	9	31%
<i>Pedestrian Casualties</i>	3	1	31%
<b>Crashes</b>	48	17	27%
<i>Adjacent Crashes</i>	3	1	31%
<i>Right Through Crashes</i>	21	4	61%
<i>Rear End Crashes</i>	13	7	+11%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

## Infringements at safety camera location



## King Georges Rd and Moorefields Rd, Roselands

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of King Georges Rd and Moorefields Rd commenced issuing warning letters in October 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

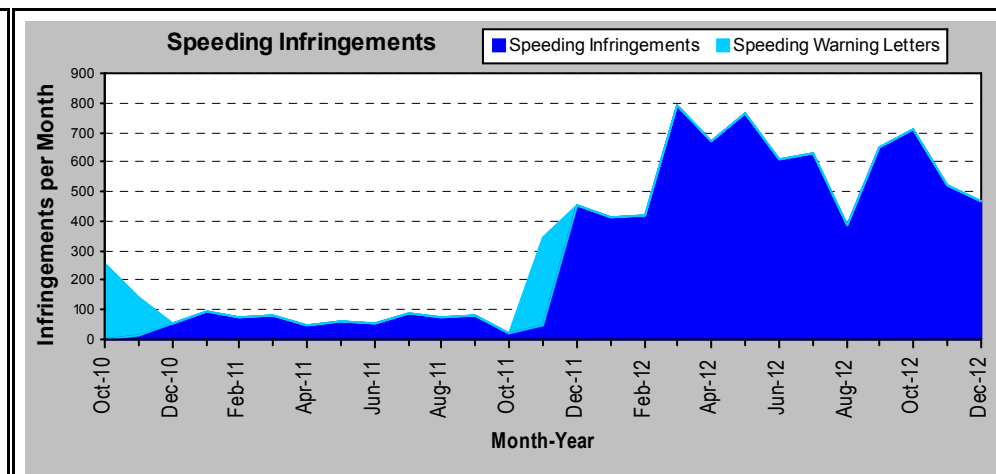
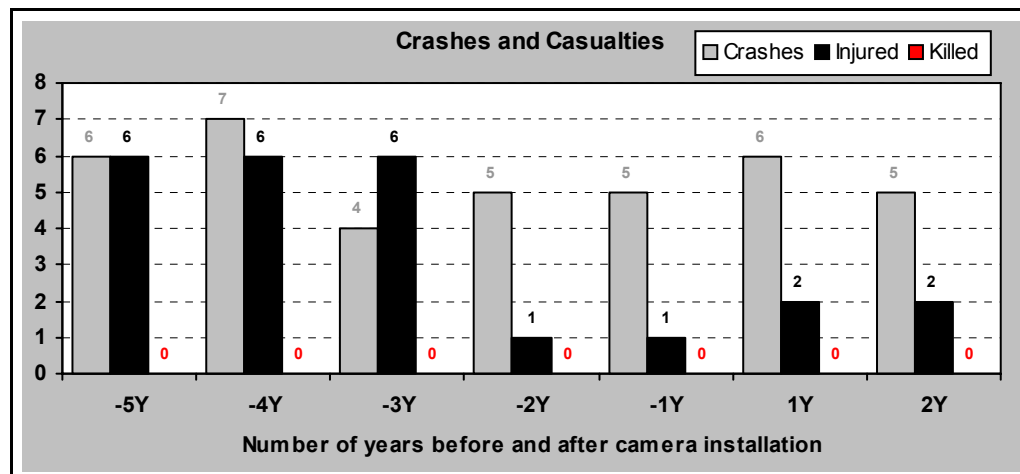
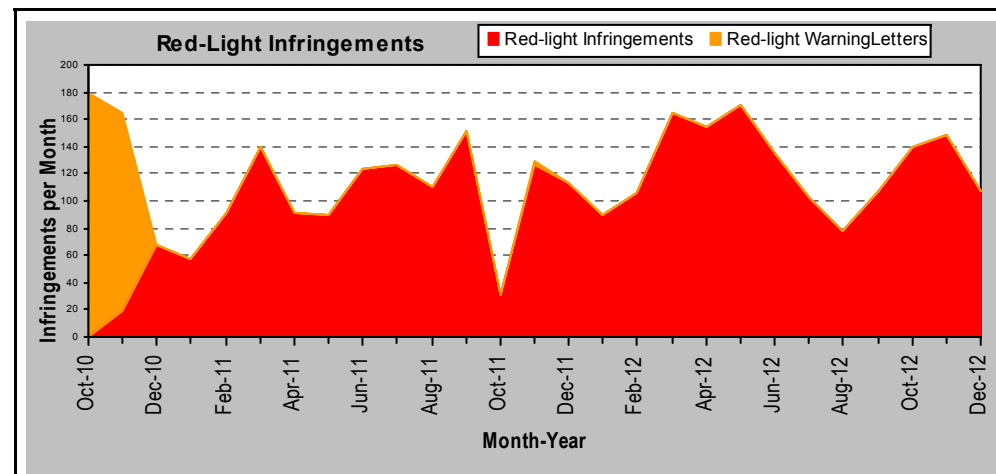
	5 years before installation <sup>1</sup>	2 years and 93 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	20	4	56%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	27	12	1%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	9	0	100%
<i>Rear End Crashes</i>	12	8	+48%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Canterbury Rd and King Georges Rd, Roselands / Wiley Park

- There are two cameras at this intersection.
- The camera at the intersection of Canterbury Rd and King Georges Rd commenced issuing warning letters in June 2010.
- The camera at the intersection of Canterbury Rd and King Georges Rd commenced issuing warning letters in August 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

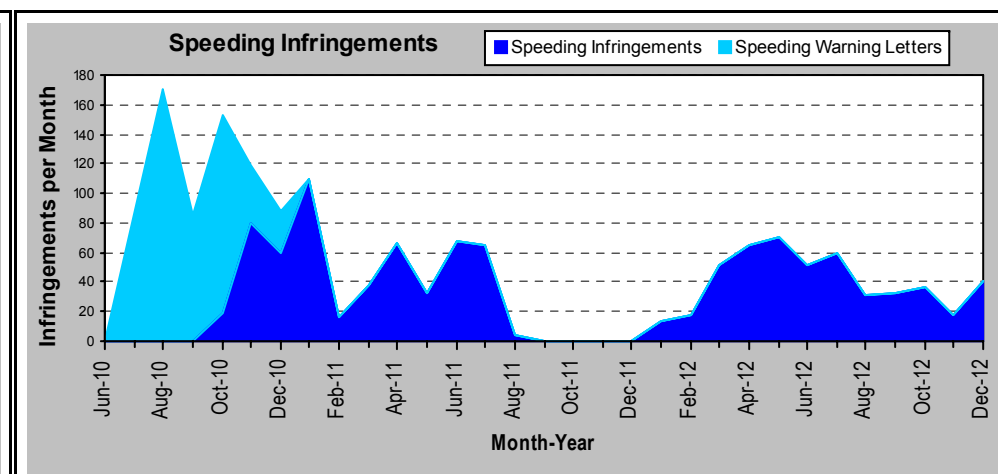
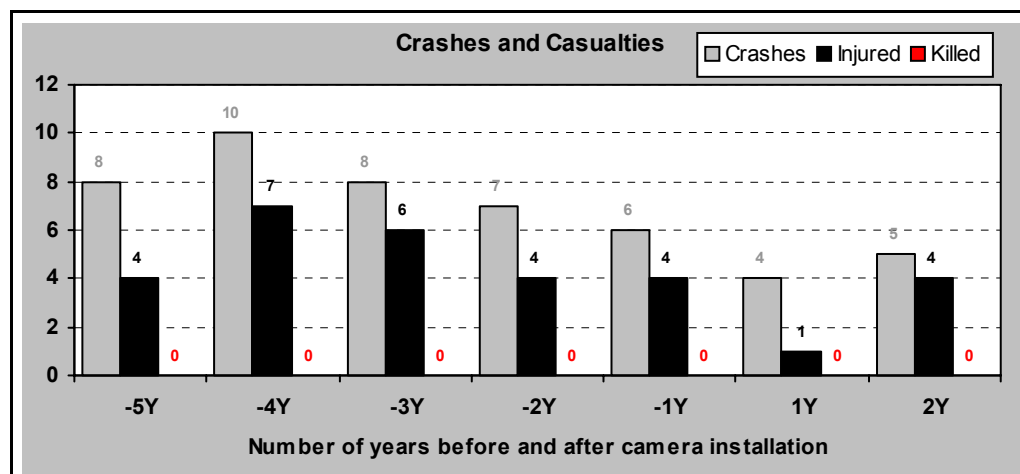
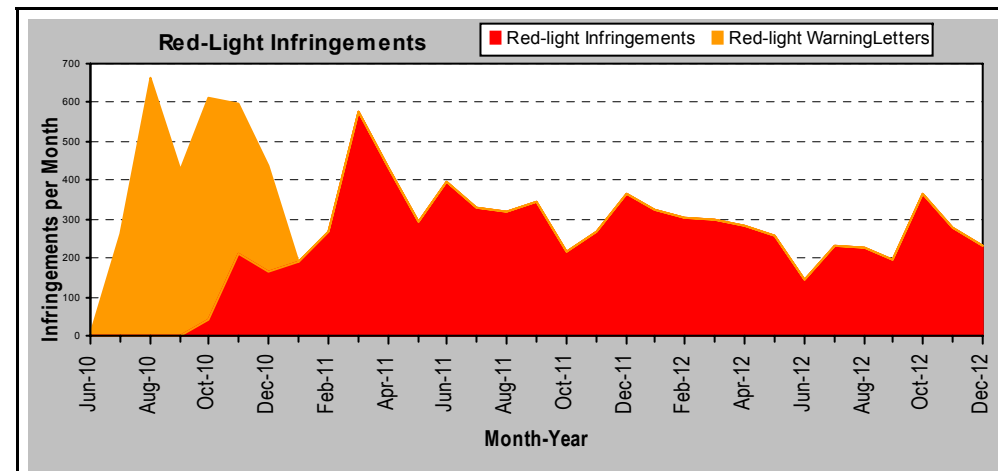
	5 years before installation <sup>1</sup>	2 years and 187 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	25	6	52%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	39	11	44%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	6	0	100%
<i>Rear End Crashes</i>	22	8	28%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Victoria Rd and Evans St, Rozelle

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Victoria Rd and Evans St commenced issuing warning letters in October 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

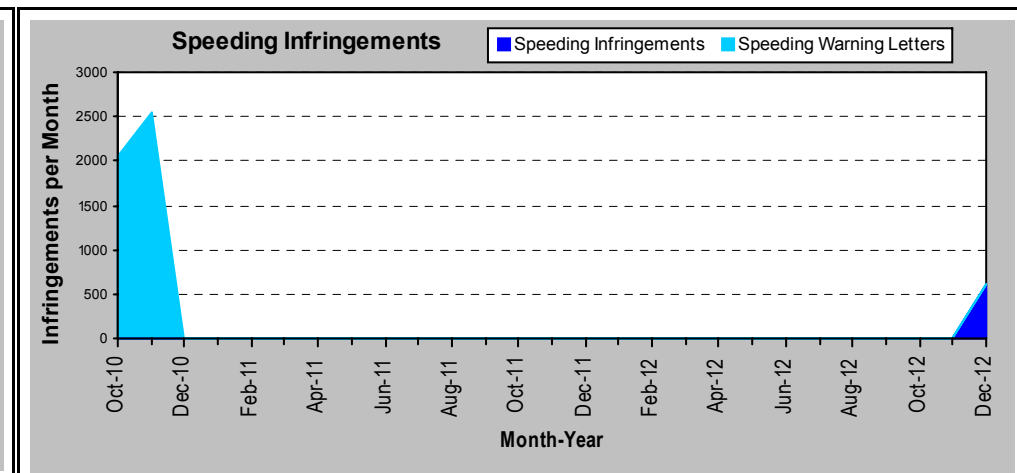
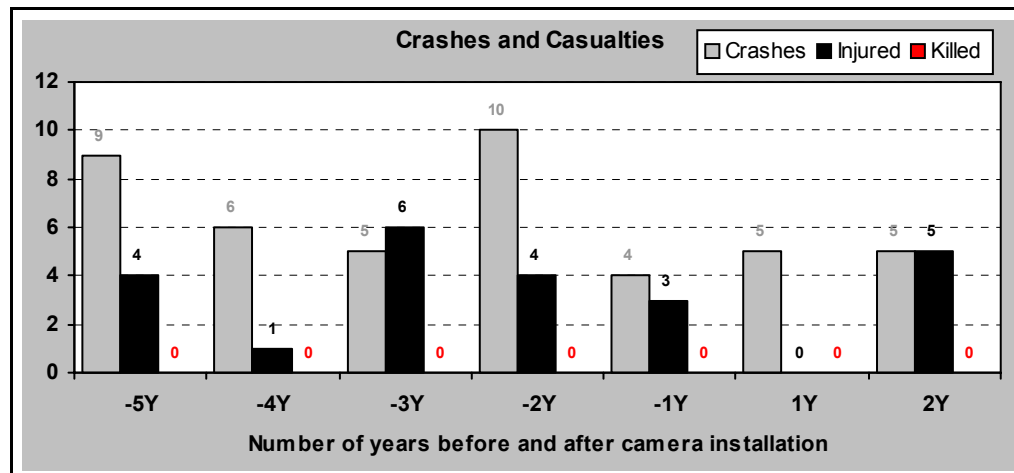
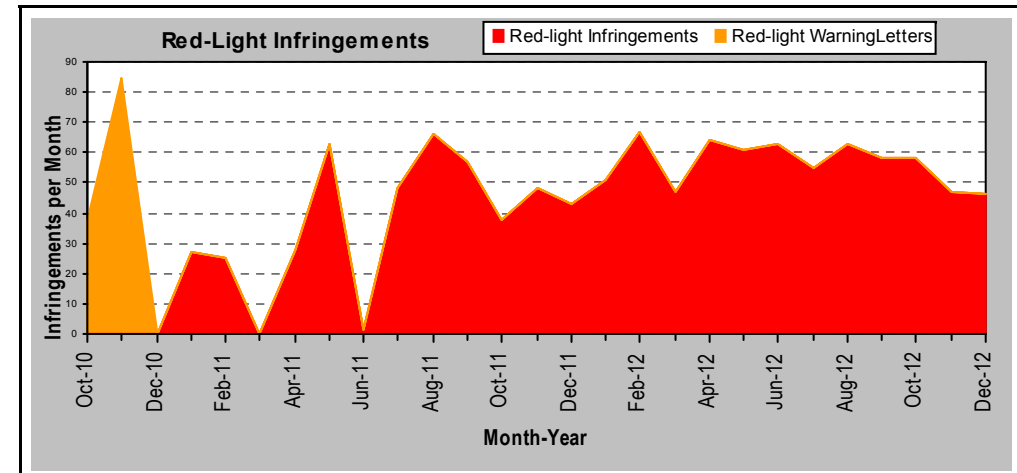
	5 years before installation <sup>1</sup>	2 years and 79 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	18	5	37%
<i>Pedestrian Casualties</i>	2	0	100%
<b>Crashes</b>	34	10	34%
<i>Adjacent Crashes</i>	16	7	1%
<i>Right Through Crashes</i>	3	1	25%
<i>Rear End Crashes</i>	7	1	68%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Wellington St and Victoria Rd, Rozelle

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Wellington St and Victoria Rd commenced issuing warning letters in September 2010. This camera enforces red-light running only.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

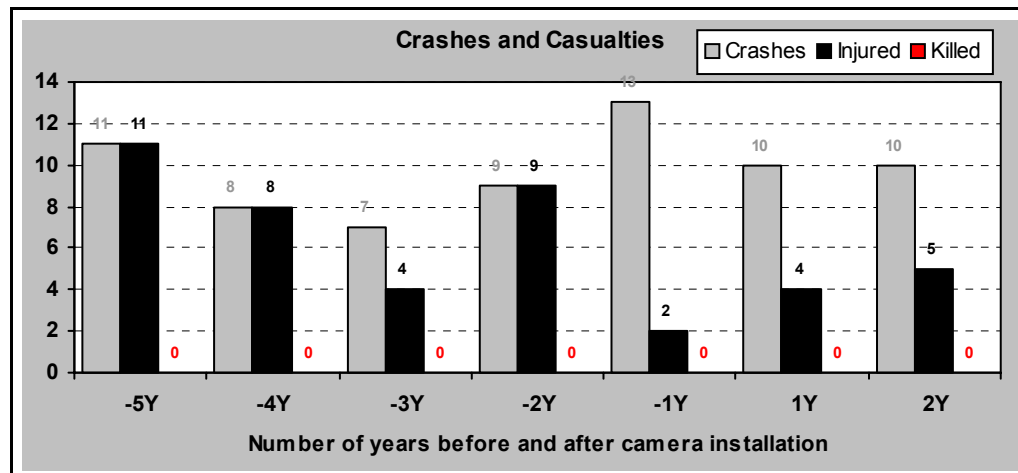
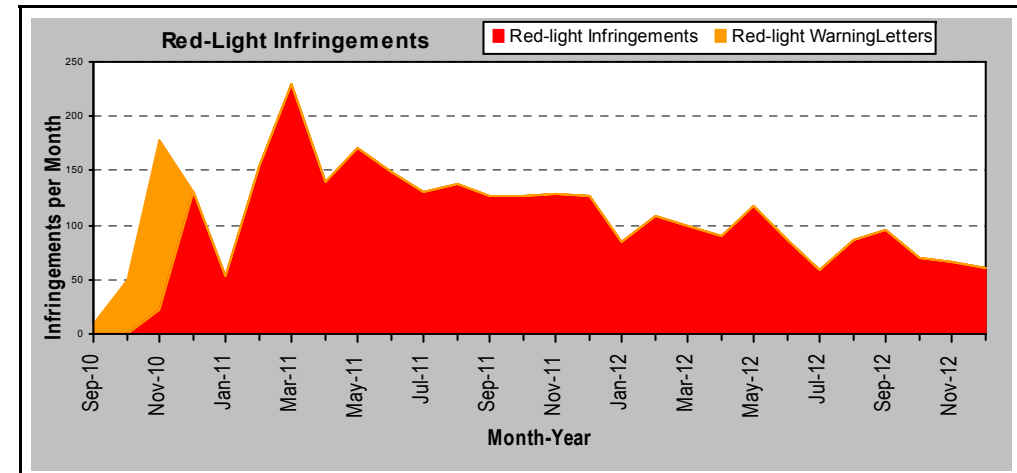
	5 years before installation <sup>1</sup>	2 years and 96 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	34	11	28%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	48	22	+1%
<i>Adjacent Crashes</i>	9	4	2%
<i>Right Through Crashes</i>	3	1	26%
<i>Rear End Crashes</i>	7	2	37%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Victoria Road and Devlin Street, Ryde

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Victoria Road and Devlin Street commenced issuing warning letters in June 2011.
- While the results available show a decrease in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

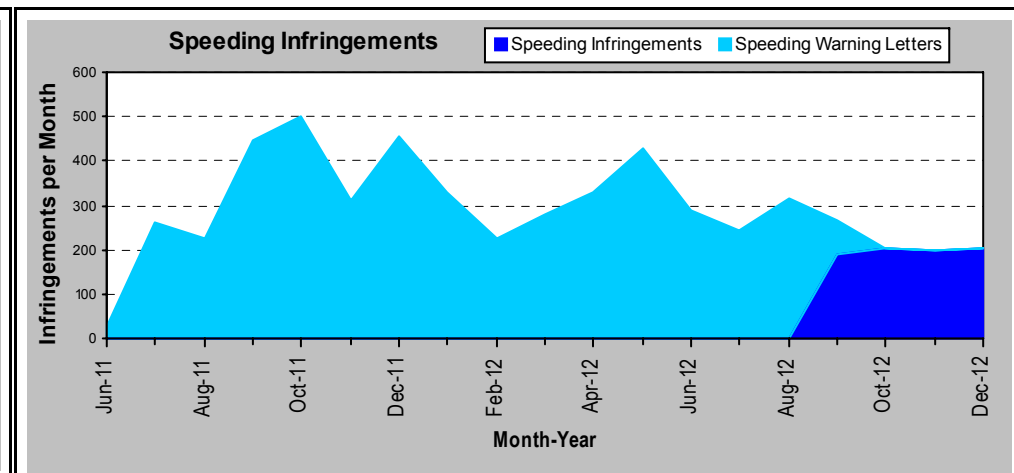
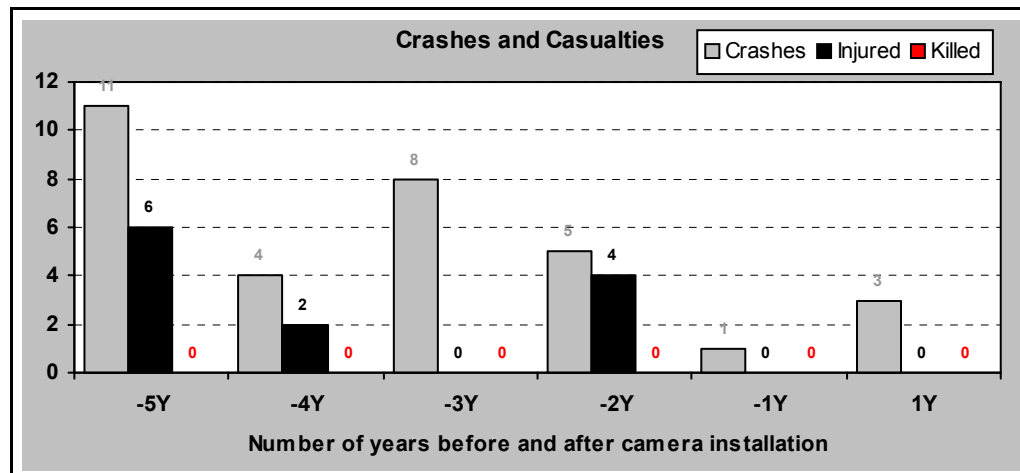
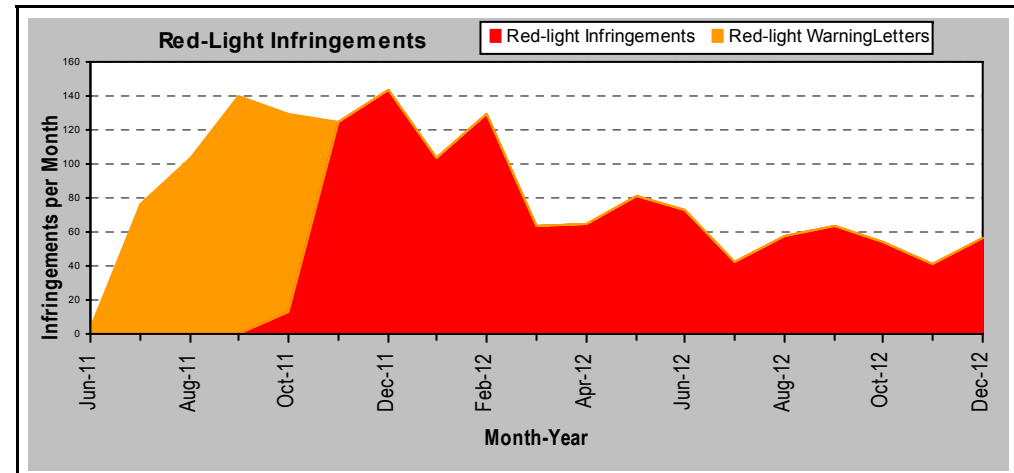
	5 years before installation <sup>1</sup>	1 year and 189 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	12	0	100%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	29	4	55%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	14	2	53%
<i>Rear End Crashes</i>	6	2	+10%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Silverwater Rd and M4 East bound on ramp, Silverwater

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Silverwater Rd and M4 East bound on ramp commenced issuing warning letters in June 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

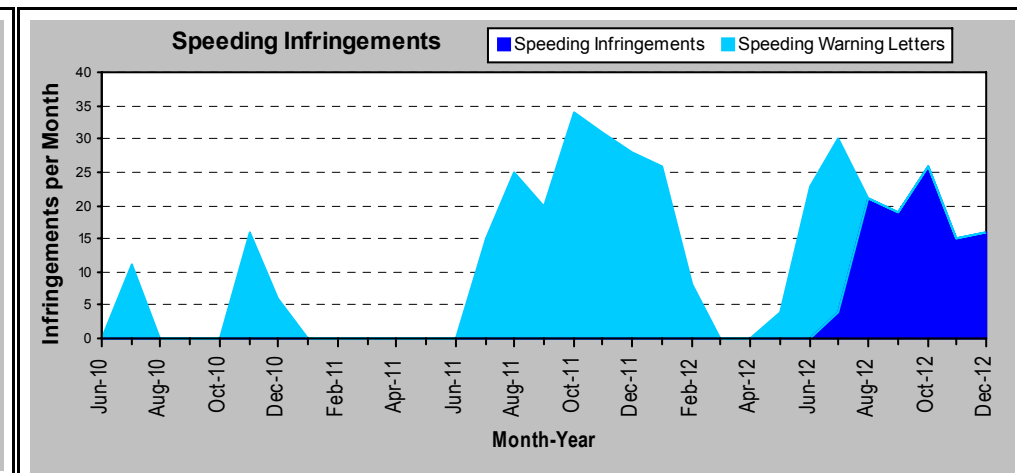
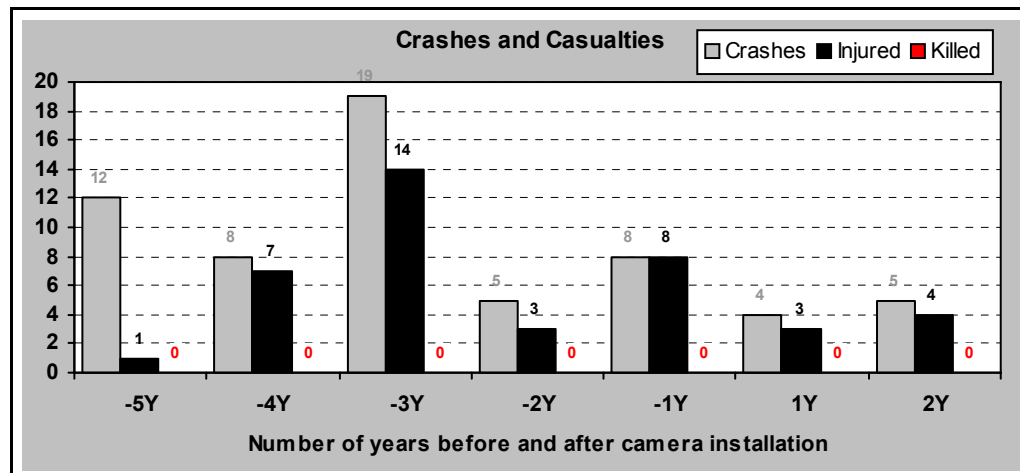
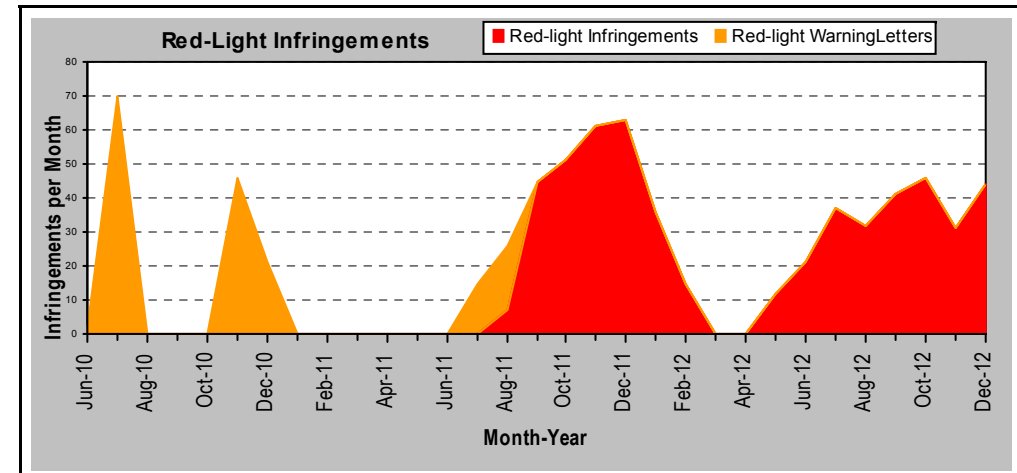
	5 years before installation <sup>1</sup>	2 years and 187 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	33	11	34%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	52	18	31%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	34	10	41%
<i>Rear End Crashes</i>	7	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Victoria St and Hassall St, Smithfield

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Victoria St and Hassall St commenced issuing warning letters in November 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

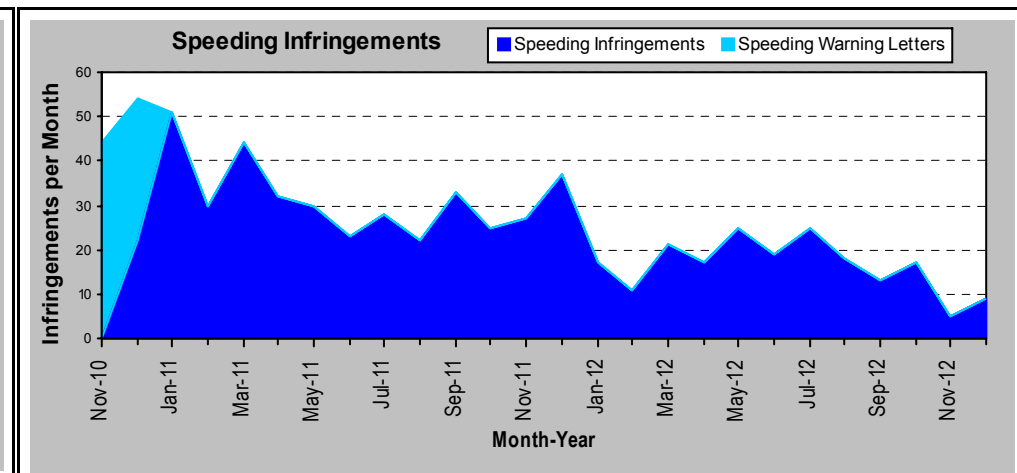
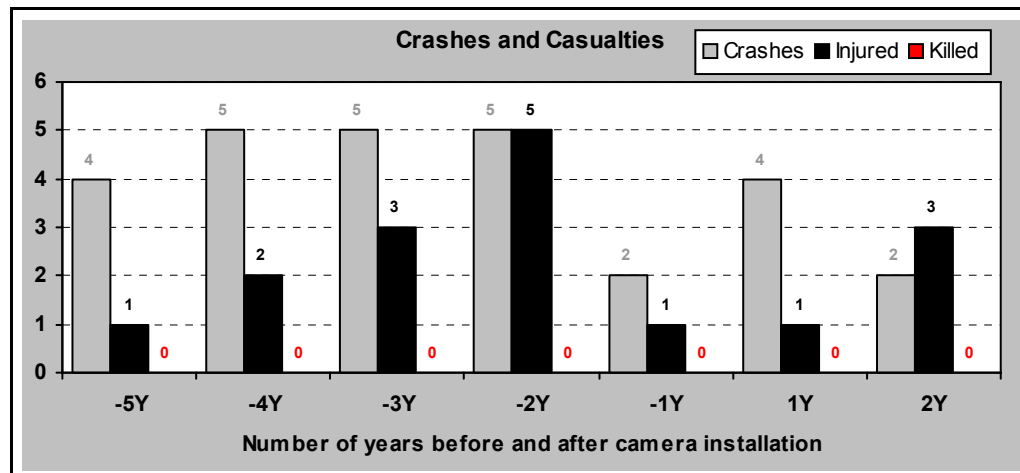
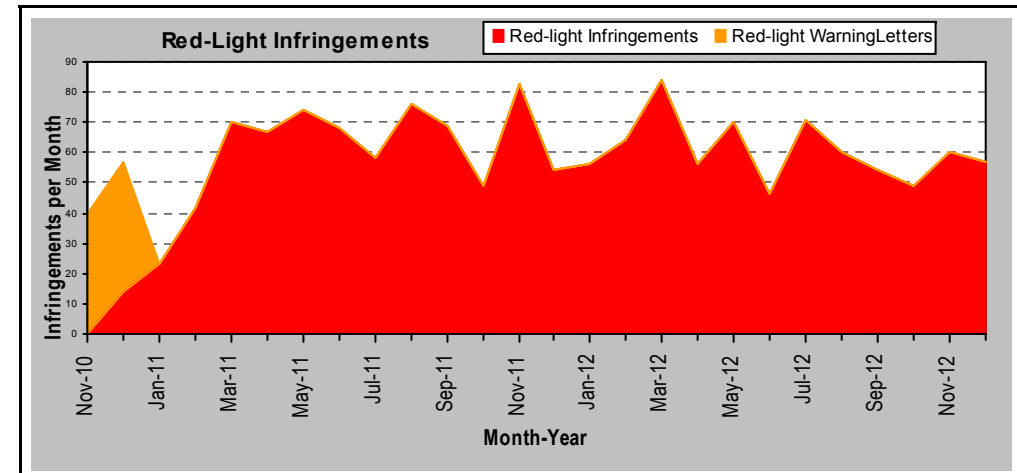
	5 years before installation <sup>1</sup>	2 years and 52 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	12	4	22%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	21	7	22%
<i>Adjacent Crashes</i>	5	2	7%
<i>Right Through Crashes</i>	9	3	22%
<i>Rear End Crashes</i>	1	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Parker St and Jamison Rd, South Penrith

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Parker St and Jamison Rd commenced issuing warning letters in November 2010.
- While the results available show a decrease in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

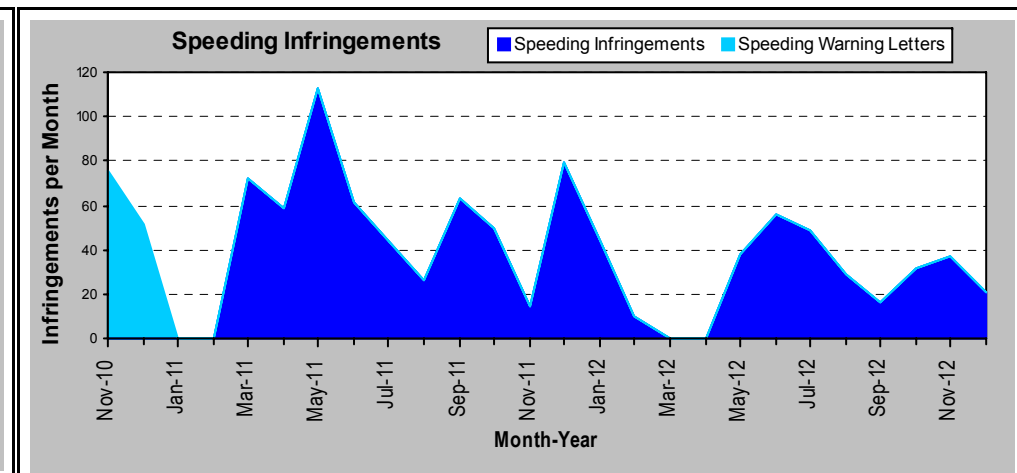
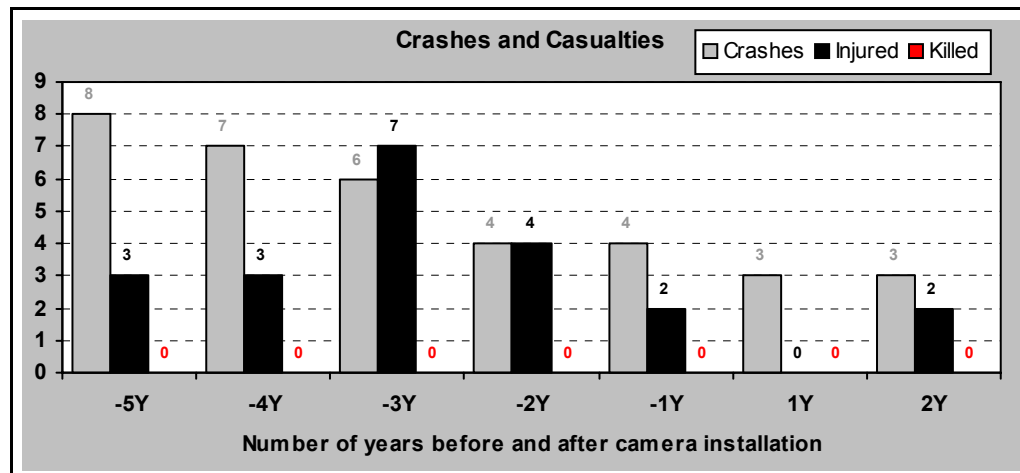
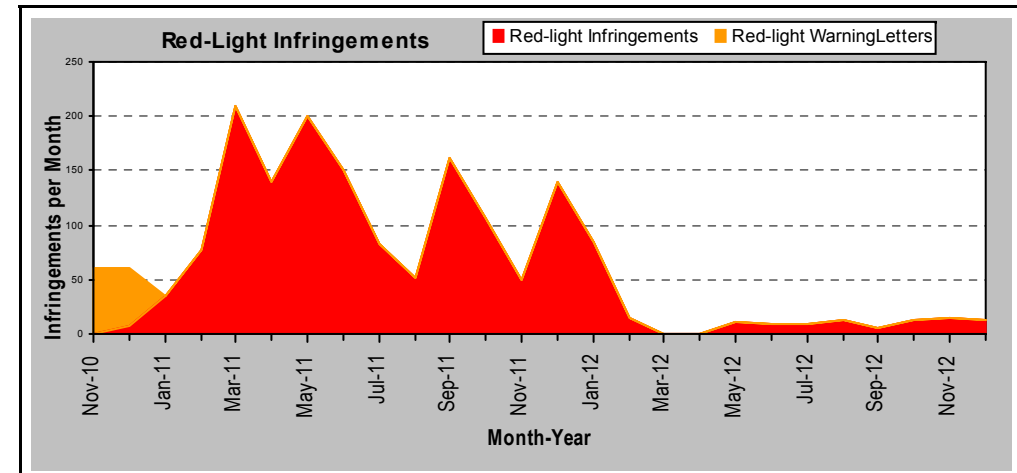
	5 years before installation <sup>1</sup>	2 years and 52 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	19	2	75%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	29	8	36%
<i>Adjacent Crashes</i>	4	0	100%
<i>Right Through Crashes</i>	12	4	22%
<i>Rear End Crashes</i>	10	3	30%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Cumberland Highway and Old Prospect Road, South Wentworthville

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Cumberland Highway and Old Prospect Road commenced issuing warning letters in April 2011.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

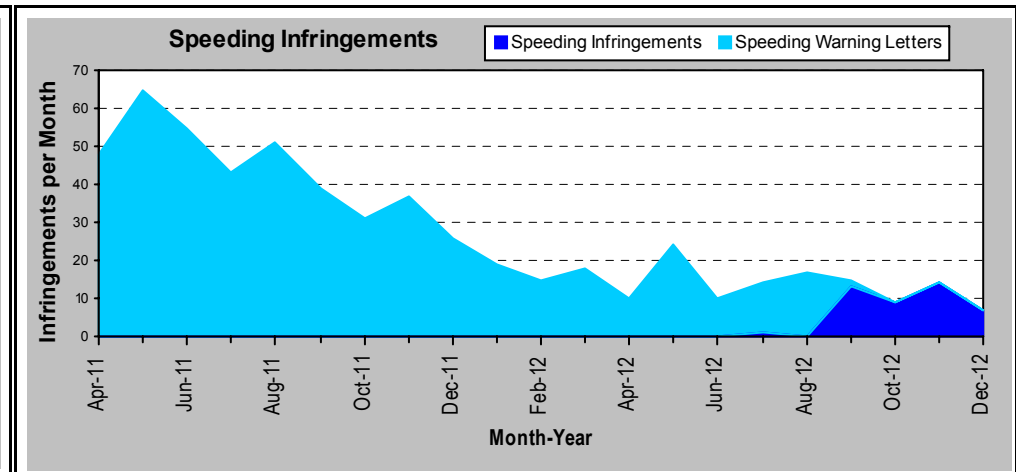
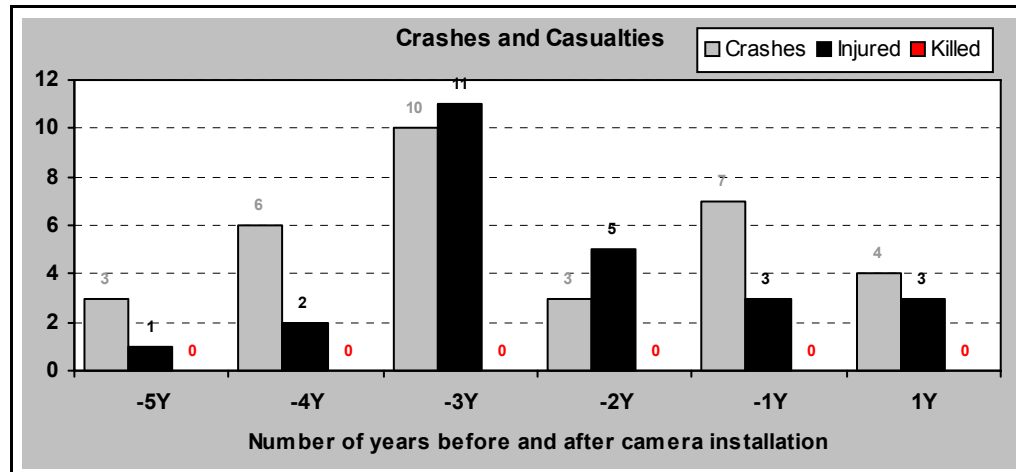
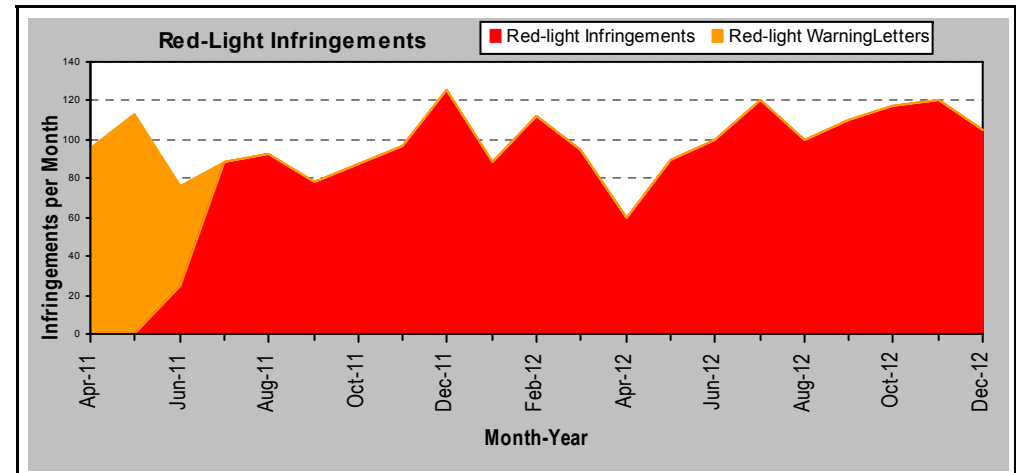
	5 years before installation <sup>1</sup>	1 year and 270 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	22	5	35%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	29	10	1%
<i>Adjacent Crashes</i>	2	1	+44%
<i>Right Through Crashes</i>	12	3	28%
<i>Rear End Crashes</i>	11	5	+31%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Great Western Hwy and Charles Hackett Dr / Pages Rd, St Marys

- There are two cameras at this intersection.
- The camera at the intersection of Great Western Hwy and Charles Hackett Dr commenced issuing warning letters in July 2010.
- The camera at the intersection of Great Western Hwy and Pages Rd commenced issuing warning letters in July 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the cameras.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

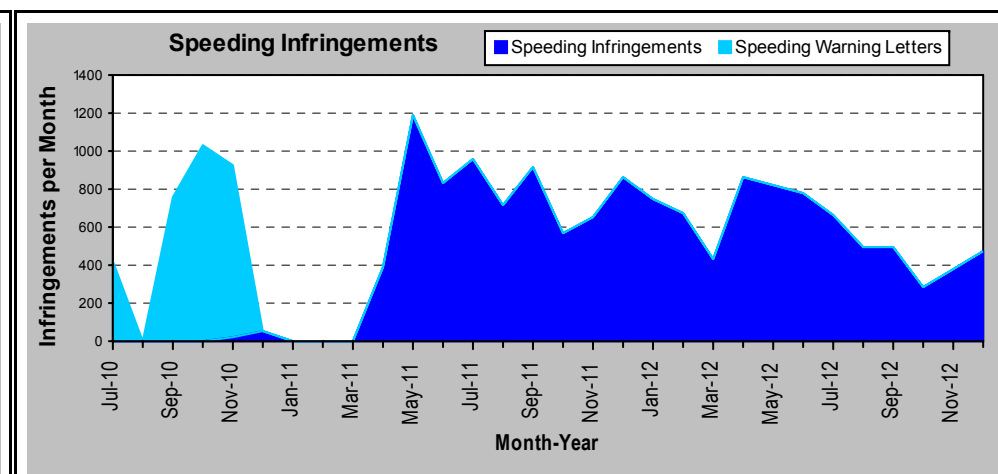
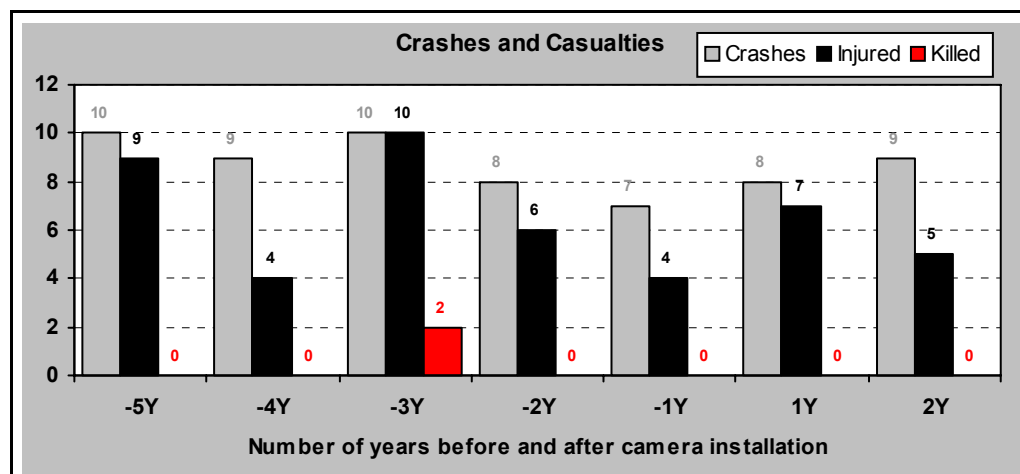
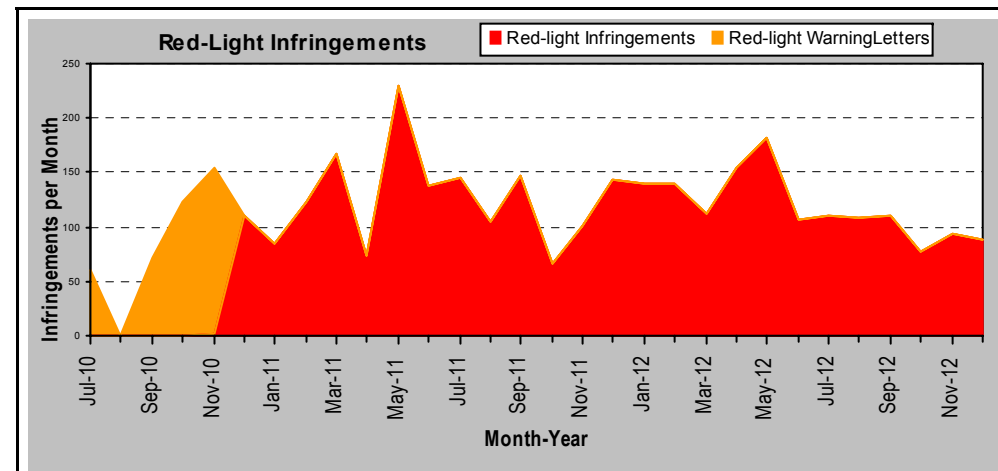
	5 years before installation <sup>1</sup>	2 years and 178 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	2	0	100%
<b>Injuries</b>	33	13	21%
<i>Pedestrian Casualties</i>	1	1	+101%
<b>Crashes</b>	44	19	13%
<i>Adjacent Crashes</i>	4	0	100%
<i>Right Through Crashes</i>	29	5	65%
<i>Rear End Crashes</i>	6	12	+302%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Cleveland St and South Dowling St, Surry Hills

- There is one camera at this intersection.
- The camera at the intersection of Cleveland St and South Dowling St commenced issuing warning letters in June 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

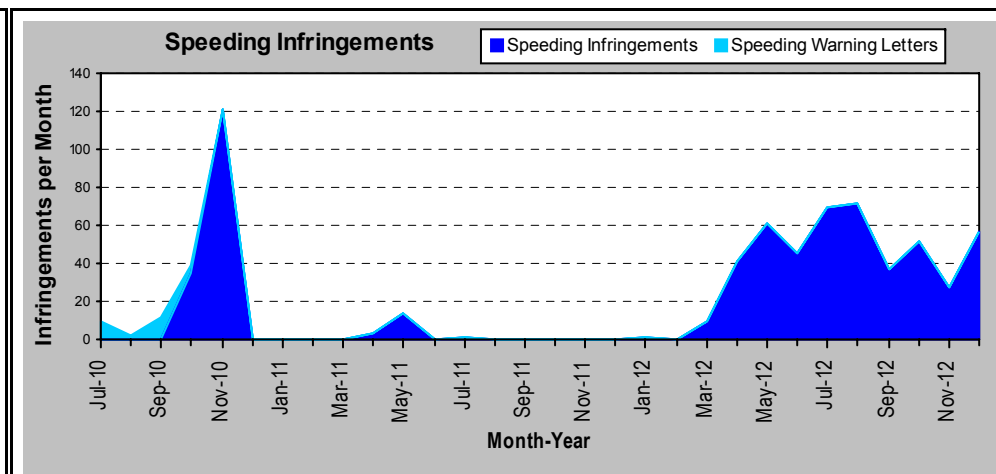
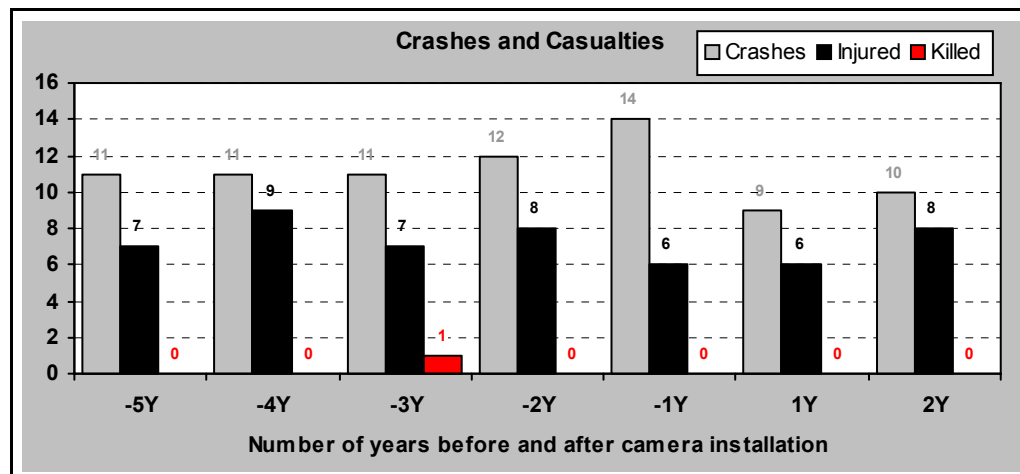
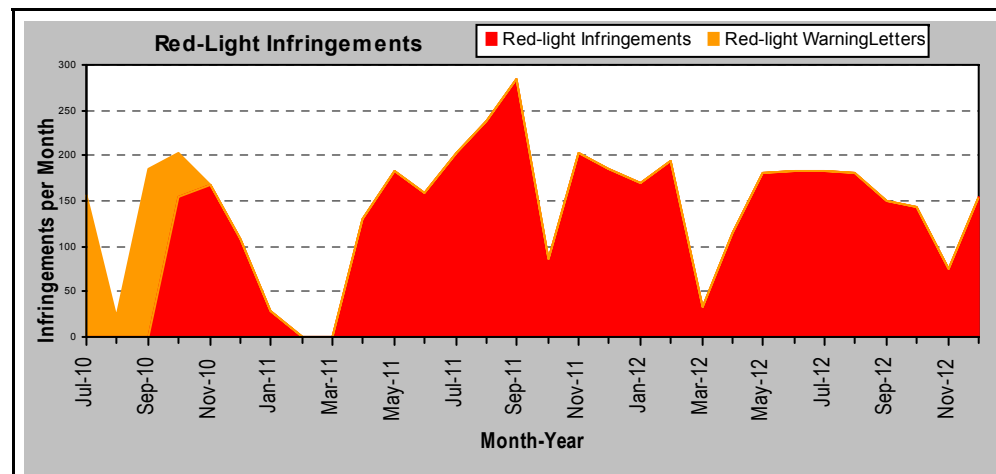
	5 years before installation <sup>1</sup>	2 years and 186 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	1	0	100%
<b>Injuries</b>	37	15	19%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	59	22	26%
<i>Adjacent Crashes</i>	9	4	11%
<i>Right Through Crashes</i>	11	6	+9%
<i>Rear End Crashes</i>	18	7	22%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Pennant Hills Rd and Parkes St, Thornleigh

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Pennant Hills Rd and Parkes St commenced issuing warning letters in December 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

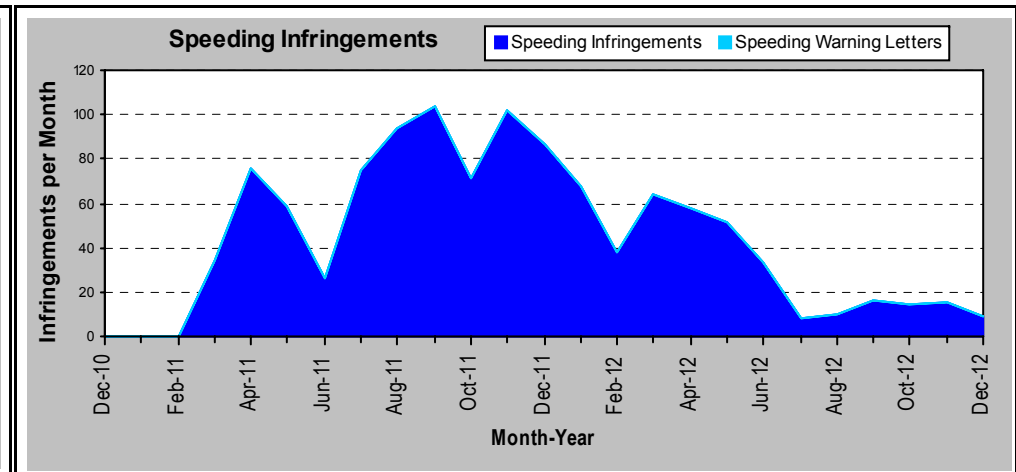
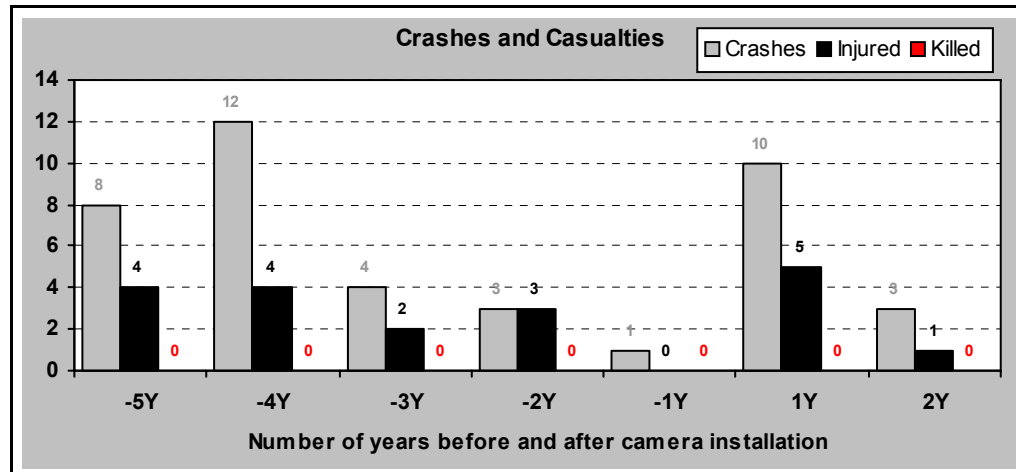
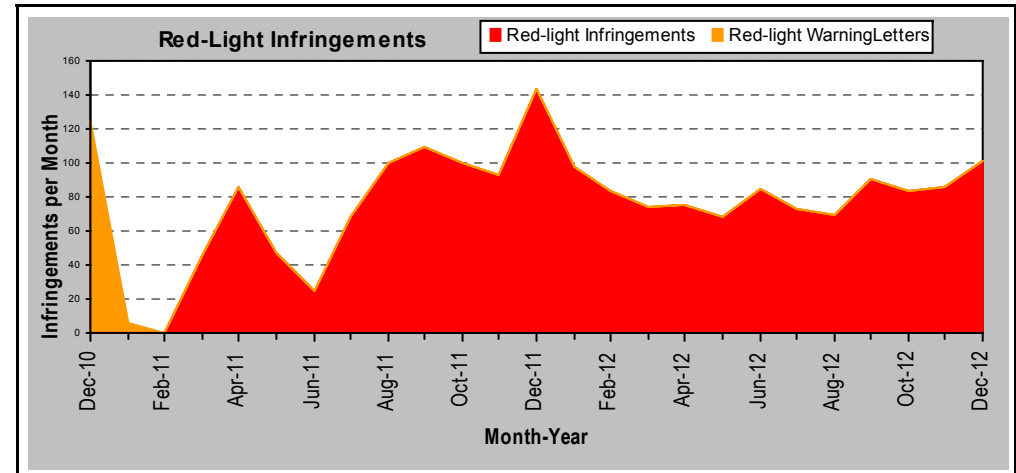
	5 years before installation <sup>1</sup>	2 years and 18 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	13	6	+13%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	28	13	+13%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	4	1	39%
<i>Rear End Crashes</i>	16	11	+68%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Wattle Street and William Henry Street, Ultimo

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Wattle Street and William Henry Street commenced issuing warning letters in June 2011.
- While the results available show a decrease in casualty crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

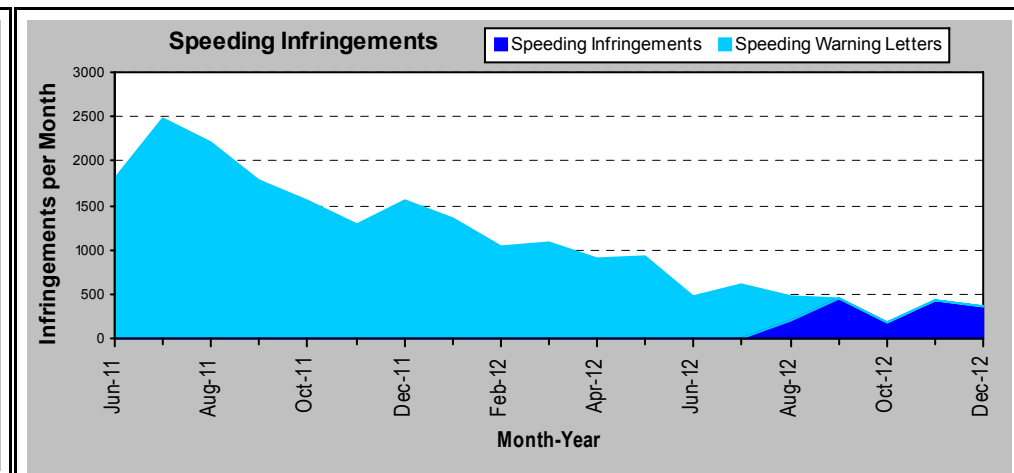
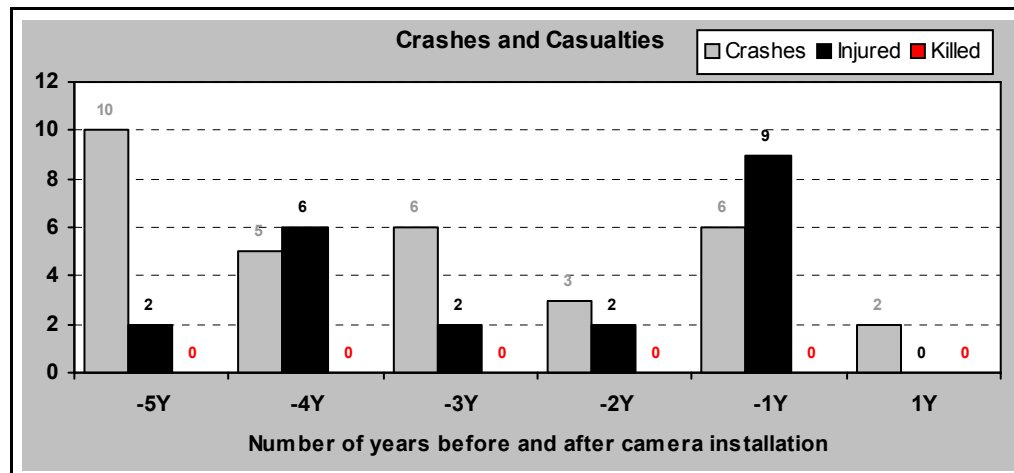
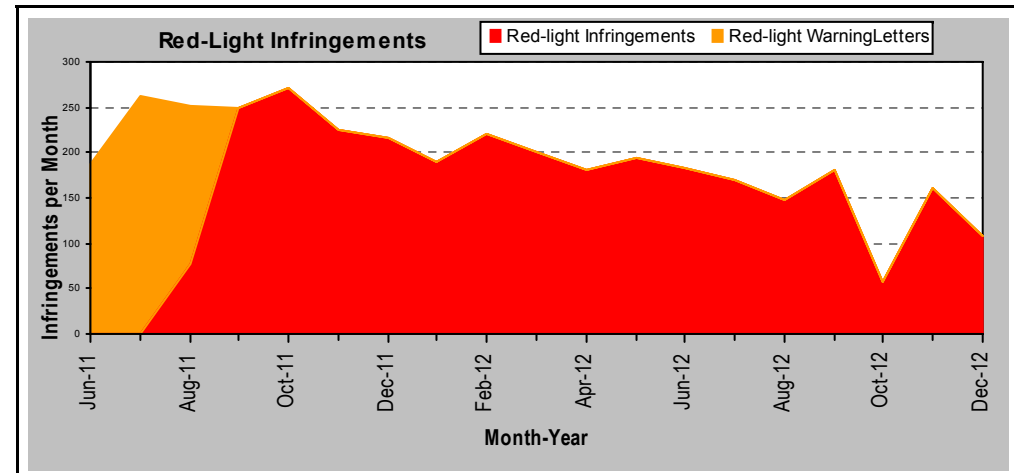
	5 years before installation <sup>1</sup>	1 year and 206 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	21	1	85%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	30	3	68%
<i>Adjacent Crashes</i>	14	2	54%
<i>Right Through Crashes</i>	8	0	100%
<i>Rear End Crashes</i>	5	1	36%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Princes Highway and Five Islands Road, Unanderra

- There is one camera at this intersection.
- The camera at the intersection of Princes Highway and Five Islands Road commenced issuing warning letters in April 2011.
- While the results available show a decrease in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

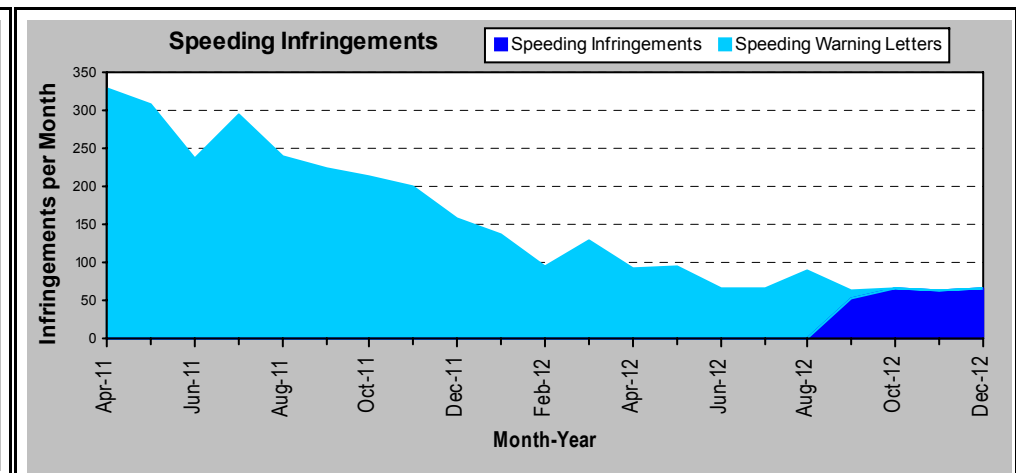
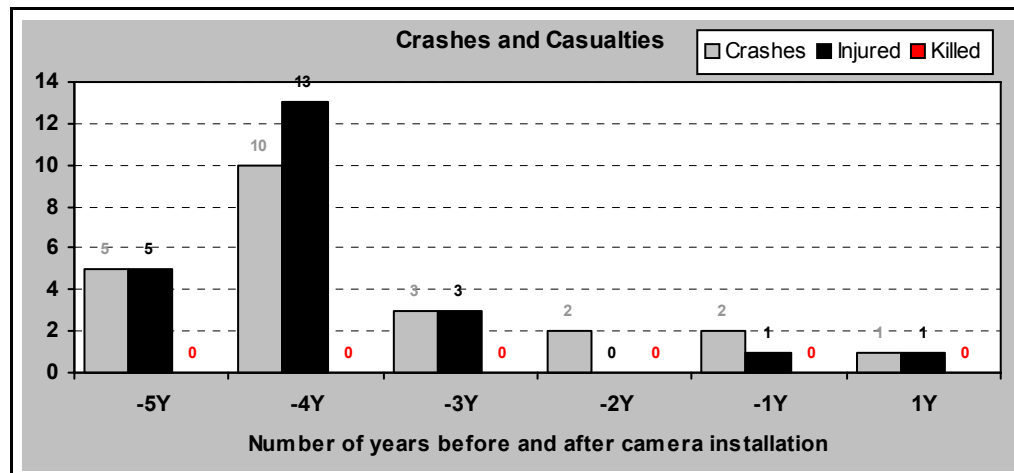
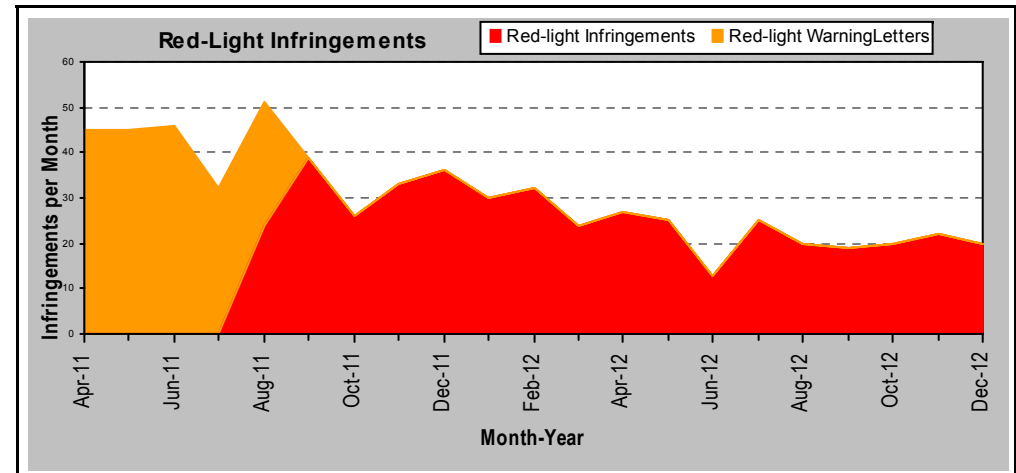
	5 years before installation <sup>1</sup>	1 year and 265 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	22	1	87%
<i>Pedestrian Casualties</i>	0	1	-
<b>Crashes</b>	22	3	60%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	15	0	100%
<i>Rear End Crashes</i>	4	1	28%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Hume Hwy and Bigge St, Warwick Farm

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Hume Hwy and Bigge St commenced issuing warning letters in November 2010.
- While the results available show a decrease in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

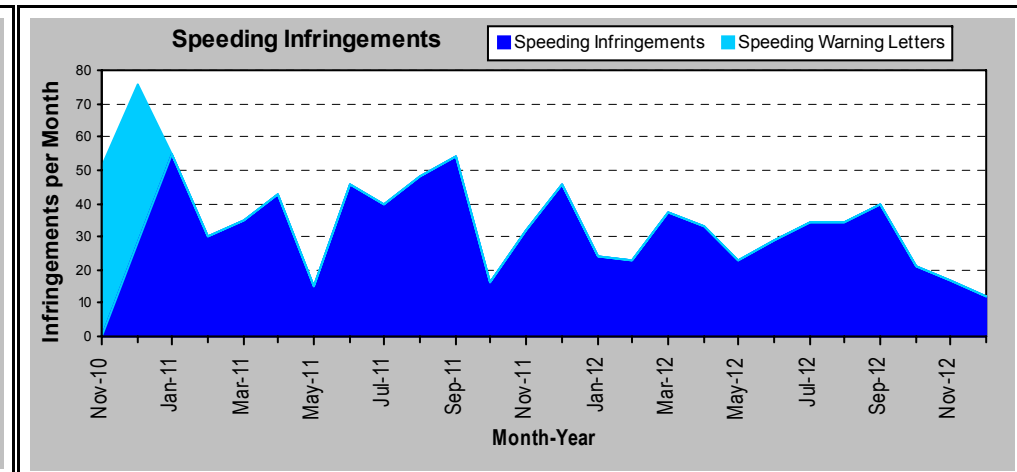
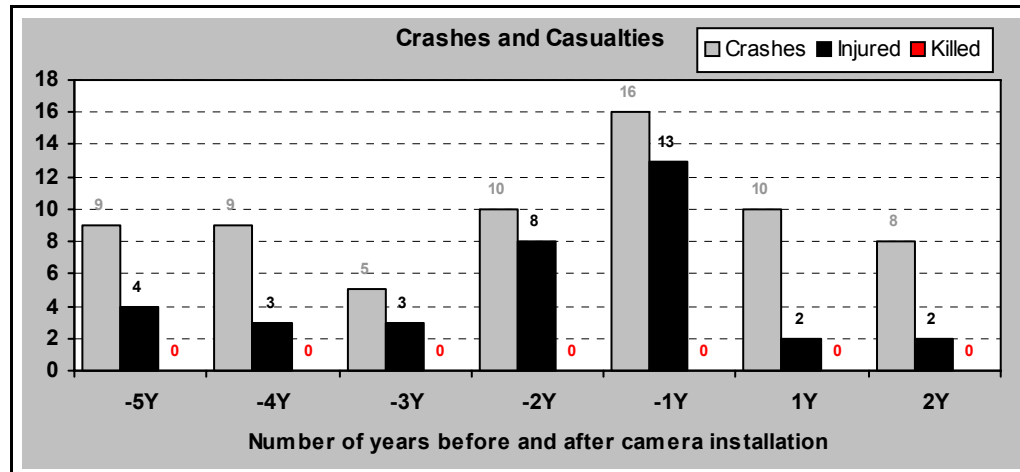
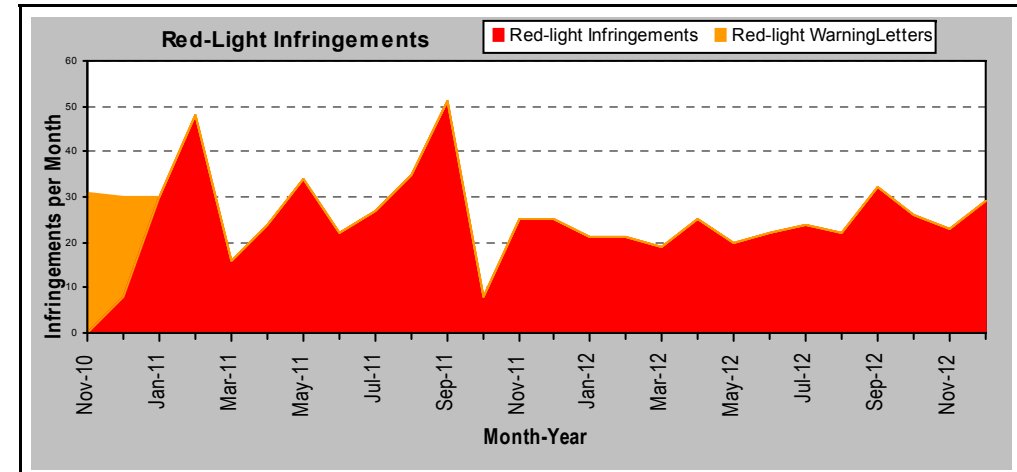
	5 years before installation <sup>1</sup>	2 years and 48 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	31	4	70%
<i>Pedestrian Casualties</i>	1	0	100%
<b>Crashes</b>	49	18	14%
<i>Adjacent Crashes</i>	1	0	100%
<i>Right Through Crashes</i>	15	5	22%
<i>Rear End Crashes</i>	21	9	+1%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Bourke St and Botany Rd, Waterloo

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Bourke St and Botany Rd commenced issuing warning letters in June 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

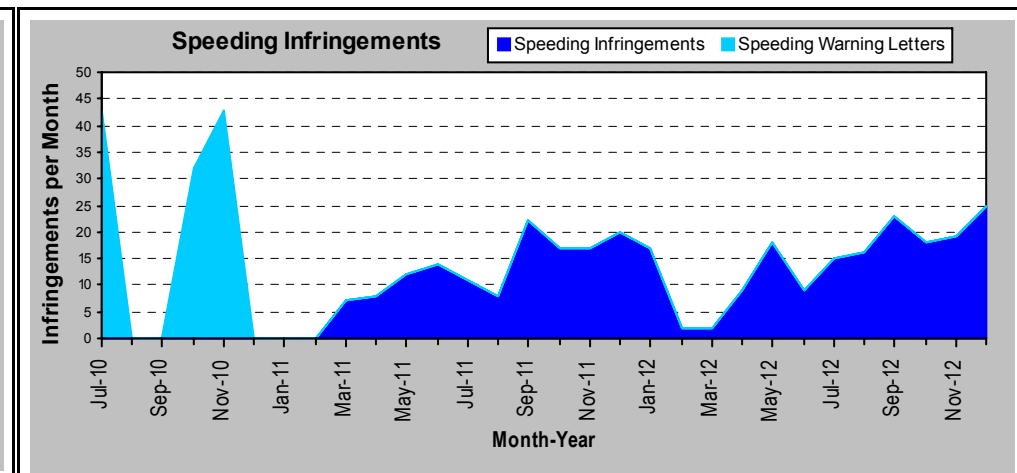
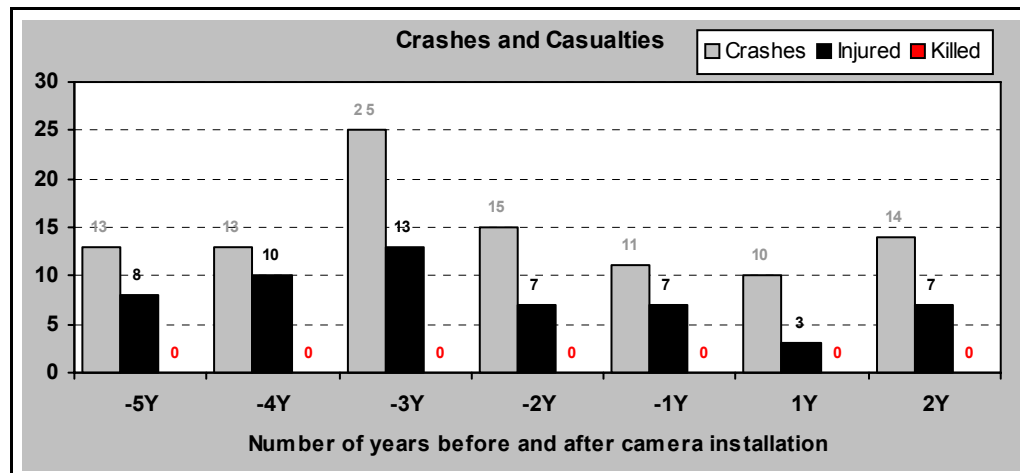
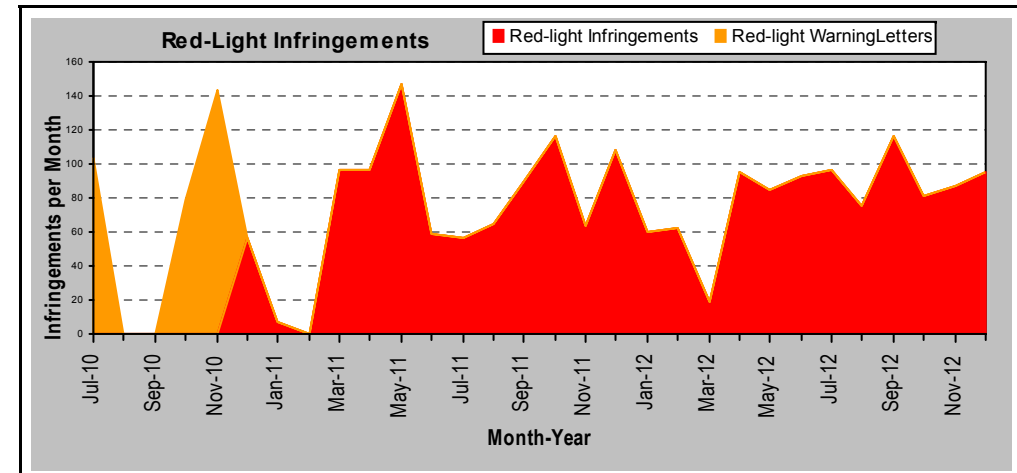
	5 years before installation <sup>1</sup>	2 years and 186 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	45	11	51%
<i>Pedestrian Casualties</i>	3	0	100%
<b>Crashes</b>	77	28	28%
<i>Adjacent Crashes</i>	12	6	0%
<i>Right Through Crashes</i>	28	8	43%
<i>Rear End Crashes</i>	14	5	29%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Great Western Hwy and Station St, Wentworthville

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Great Western Hwy and Station St commenced issuing warning letters in September 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

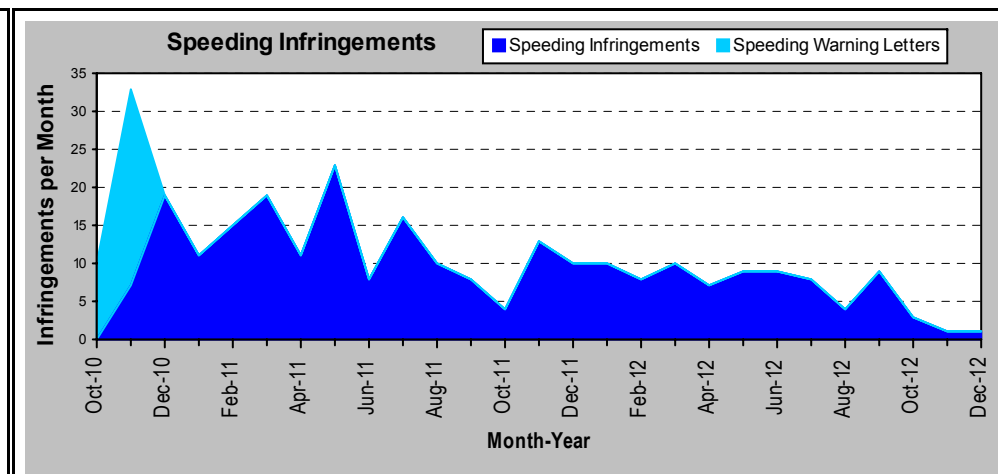
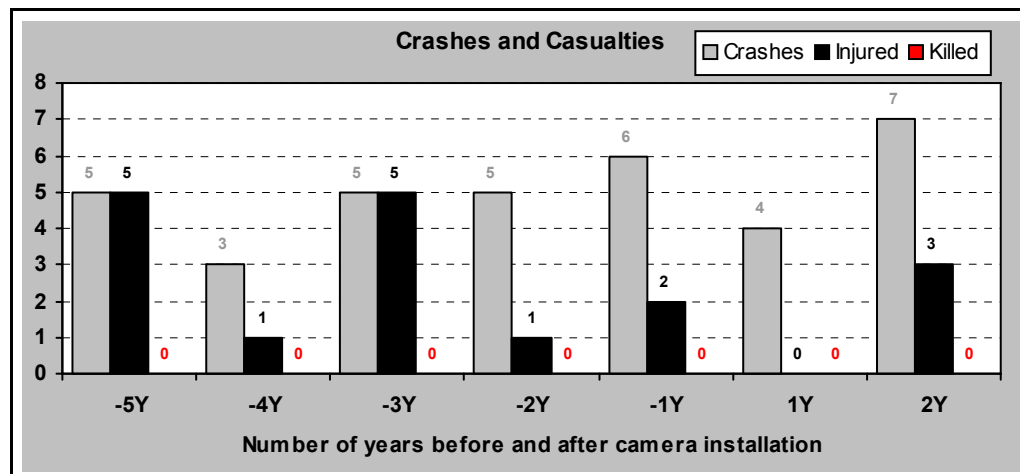
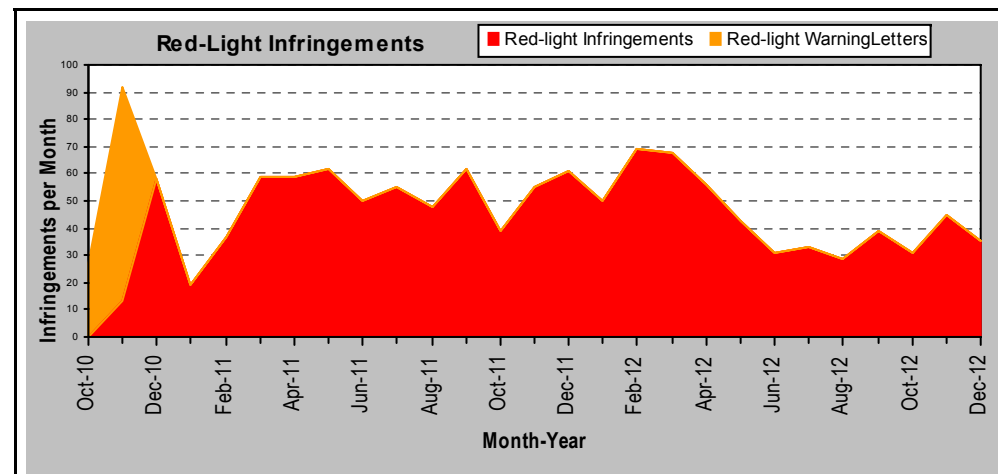
	5 years before installation <sup>1</sup>	2 years and 97 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	14	3	53%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	24	13	+20%
<i>Adjacent Crashes</i>	5	1	56%
<i>Right Through Crashes</i>	5	2	12%
<i>Rear End Crashes</i>	9	7	+72%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location





## Pennant Hills Rd and Eaton Rd, West Pennant Hills

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Pennant Hills Rd and Eaton Rd commenced issuing warning letters in August 2010.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

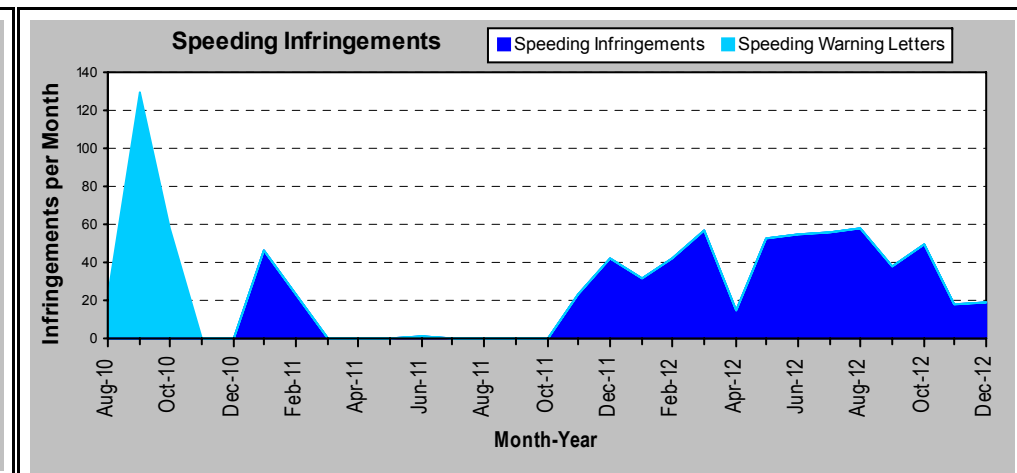
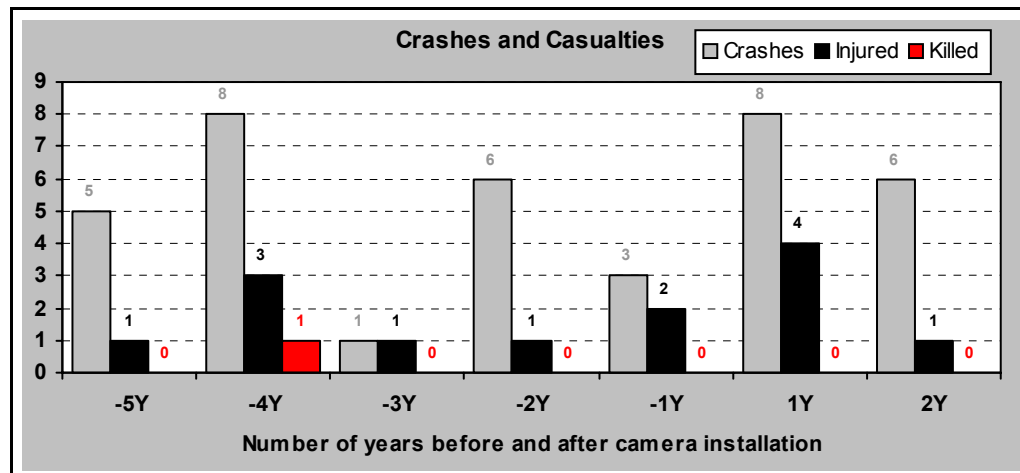
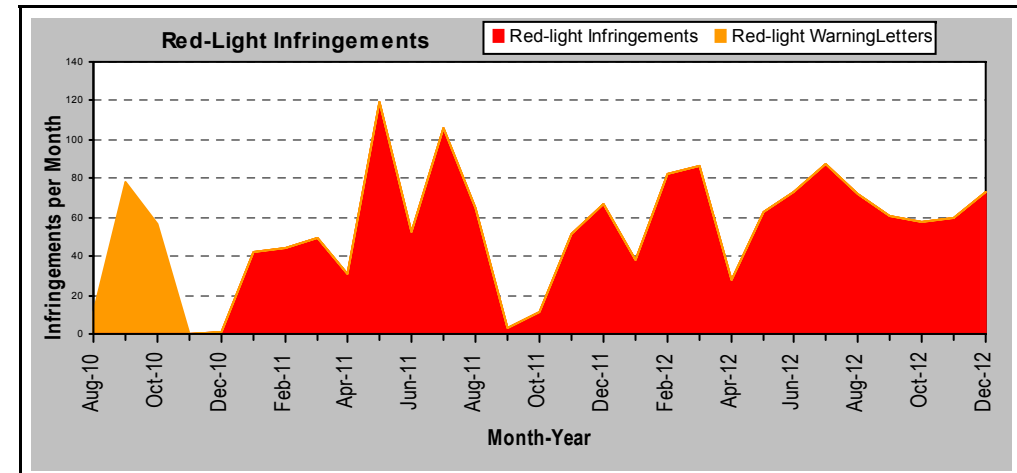
	5 years before installation <sup>1</sup>	2 years and 129 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	1	0	100%
<b>Injuries</b>	8	7	+86%
<i>Pedestrian Casualties</i>	0	0	-
<b>Crashes</b>	23	17	+57%
<i>Adjacent Crashes</i>	2	1	+6%
<i>Right Through Crashes</i>	4	0	100%
<i>Rear End Crashes</i>	11	14	+171%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Ryde Rd and Lady Game Dr, West Pymble

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Ryde Rd and Lady Game Dr commenced issuing warning letters in December 2010.
- While the results available so far are encouraging, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

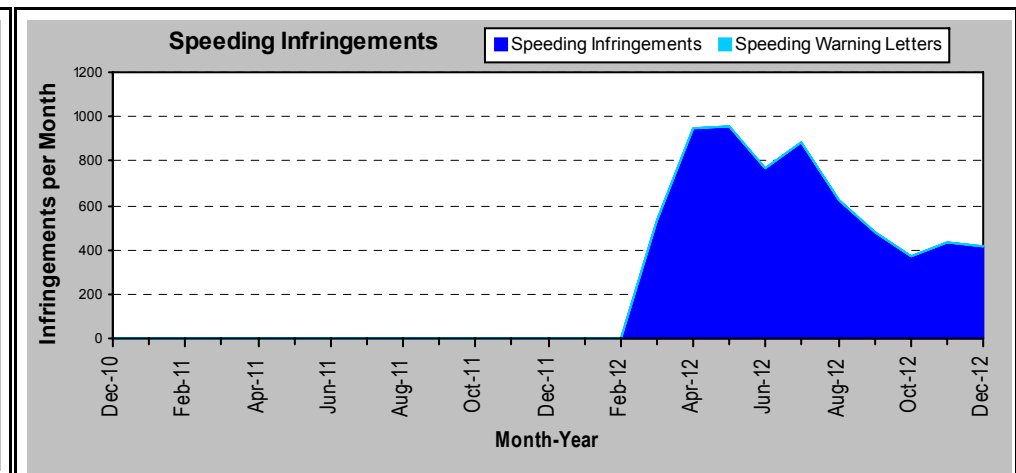
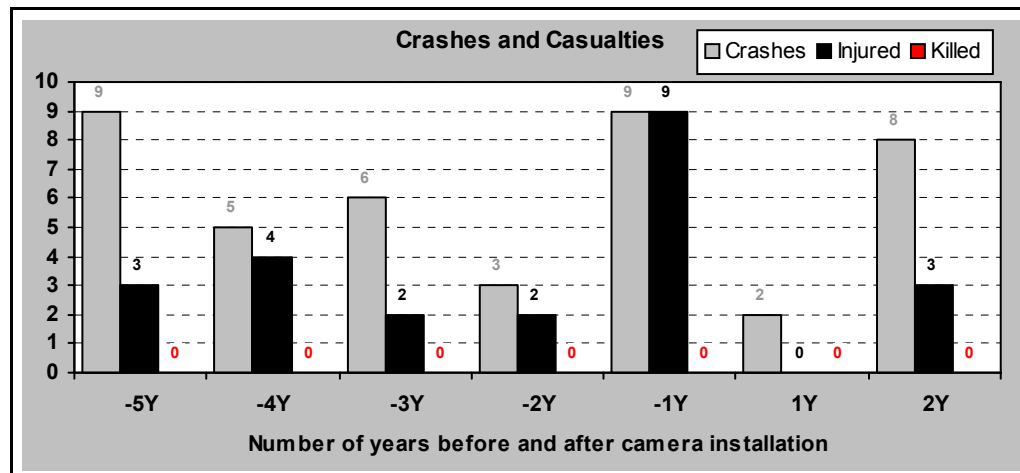
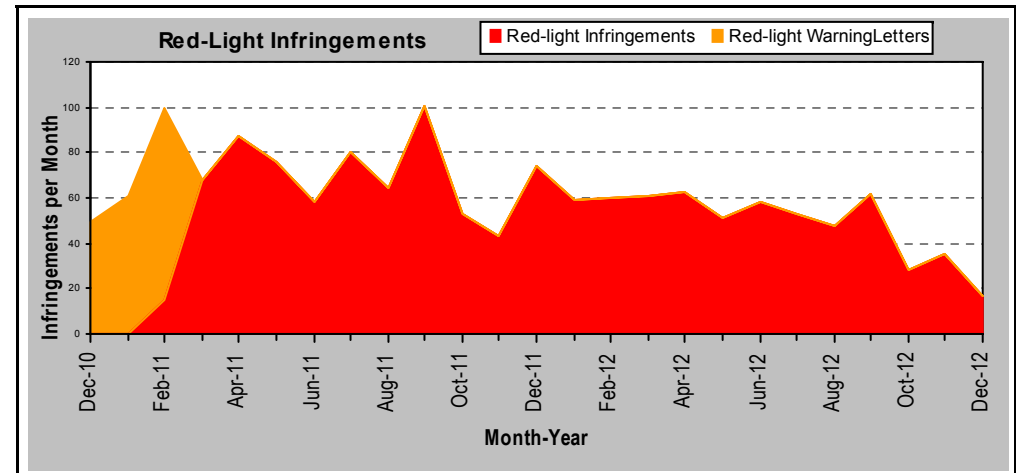
	5 years before installation <sup>1</sup>	2 years and 18 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	20	4	51%
<i>Pedestrian Casualties</i>	0	1	-
<b>Crashes</b>	32	11	16%
<i>Adjacent Crashes</i>	1	0	100%
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	20	6	27%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Windang Road and Boronia Avenue, Windang

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Windang Road and Boronia Avenue commenced issuing warning letters in May 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

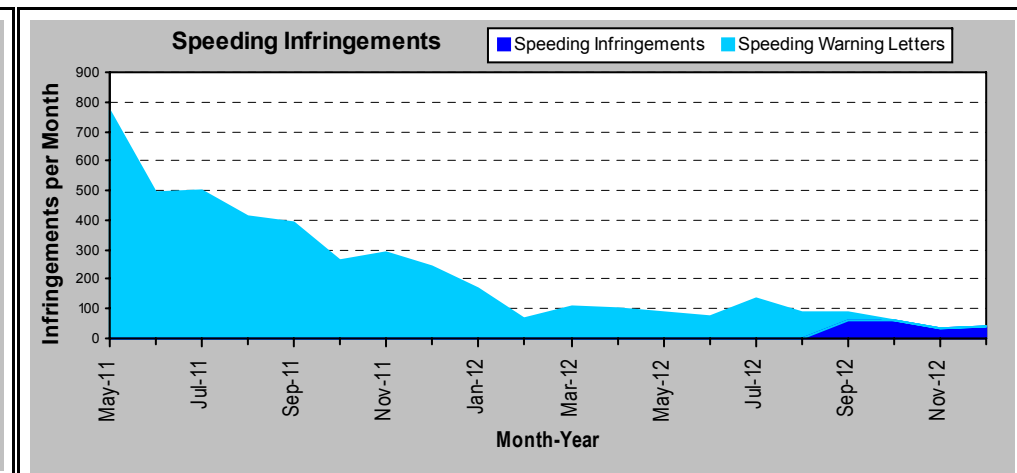
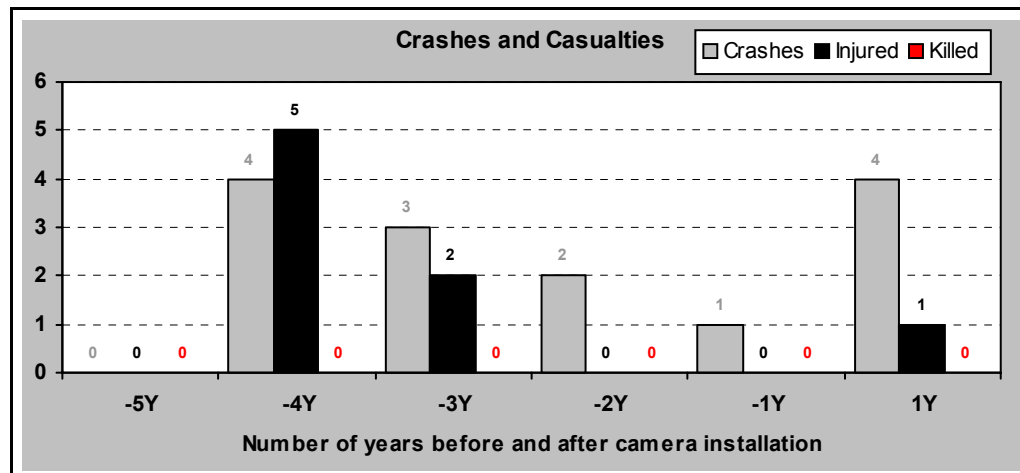
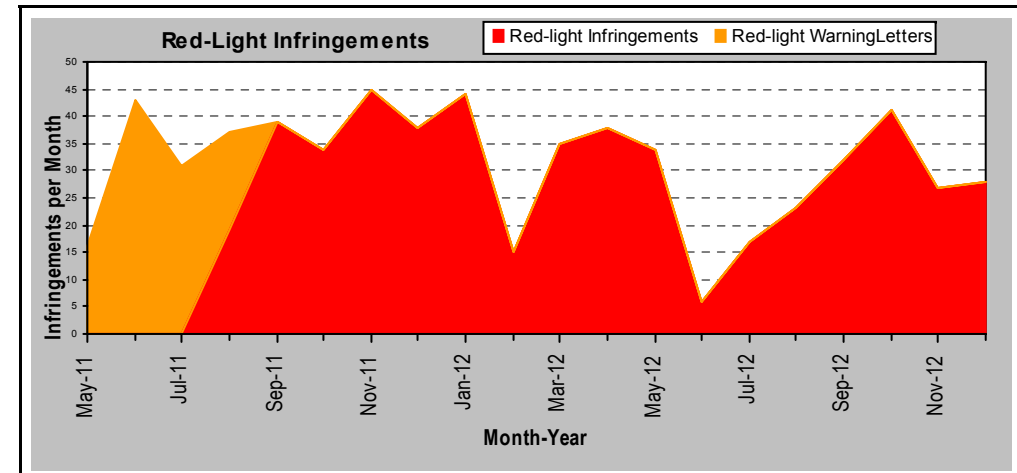
	5 years before installation <sup>1</sup>	1 year and 229 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	7	2	12%
<i>Pedestrian Casualties</i>	3	0	100%
<b>Crashes</b>	10	7	+115%
<i>Adjacent Crashes</i>	0	1	-
<i>Right Through Crashes</i>	4	0	100%
<i>Rear End Crashes</i>	2	4	+515%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Corrimal Street and Burelli Street, Wollongong

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Corrimal Street and Burelli Street commenced issuing warning letters in April 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

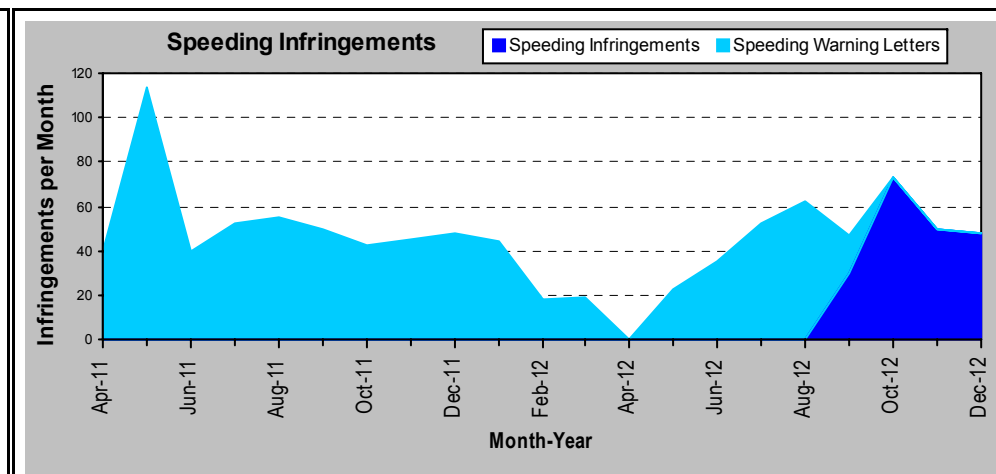
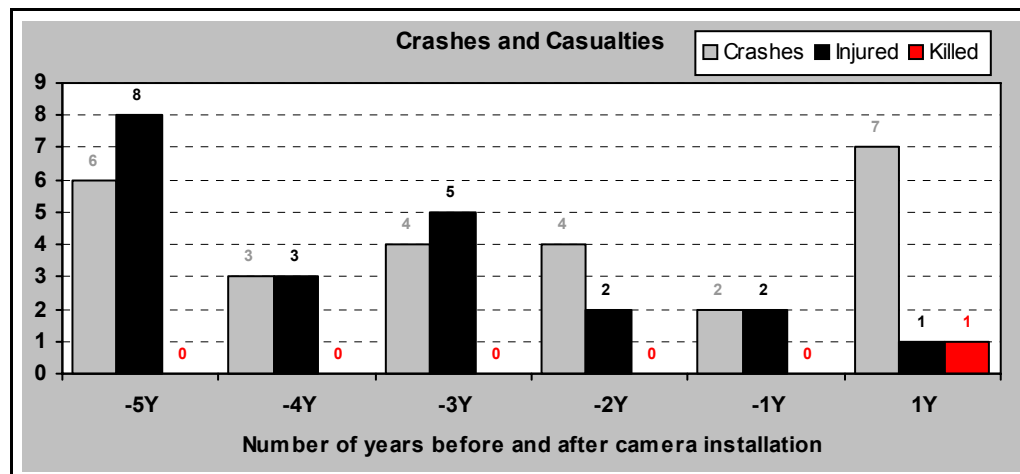
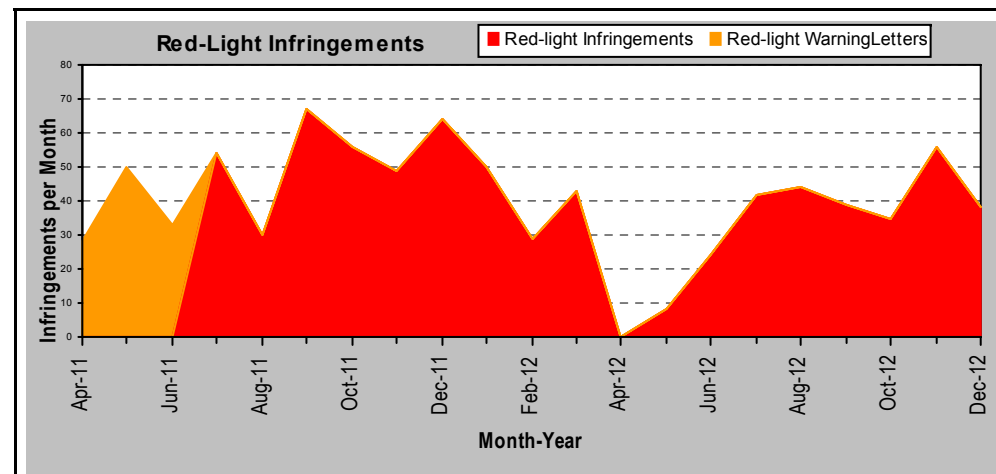
	5 years before installation <sup>1</sup>	1 year and 258 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	1	-
<b>Injuries</b>	20	1	85%
<i>Pedestrian Casualties</i>	2	1	+47%
<b>Crashes</b>	19	7	+8%
<i>Adjacent Crashes</i>	4	4	+193%
<i>Right Through Crashes</i>	11	1	73%
<i>Rear End Crashes</i>	1	0	100%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Gladstone Avenue and Princes Highway, Wollongong

- There is one camera at this intersection.
- The camera at the intersection of Gladstone Avenue and Princes Highway commenced issuing warning letters in June 2011.
- While early results indicate a slight increase in crashes, a more comprehensive analysis over a longer time period is required before making any conclusions about the effectiveness of the camera.
- The infringement graphs show the number of warning letters and infringements issued at this intersection as well as the trend in infringements since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

### Crashes at enforced intersection

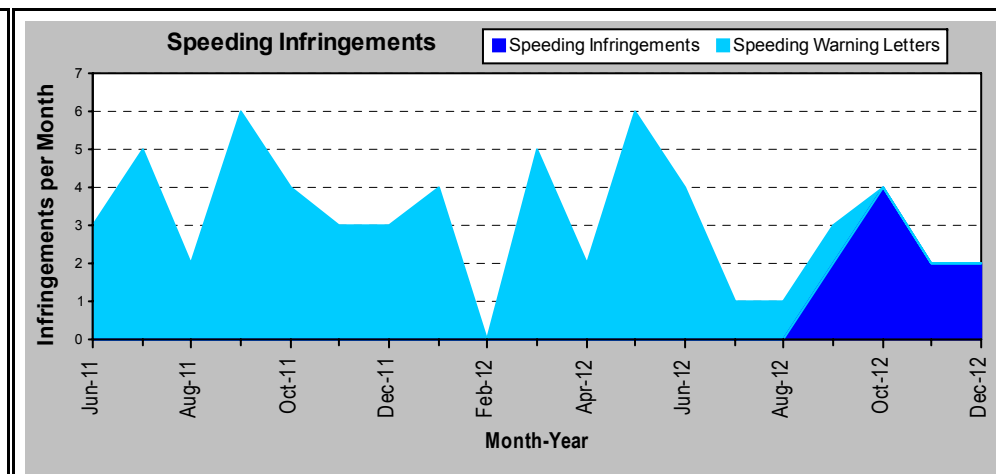
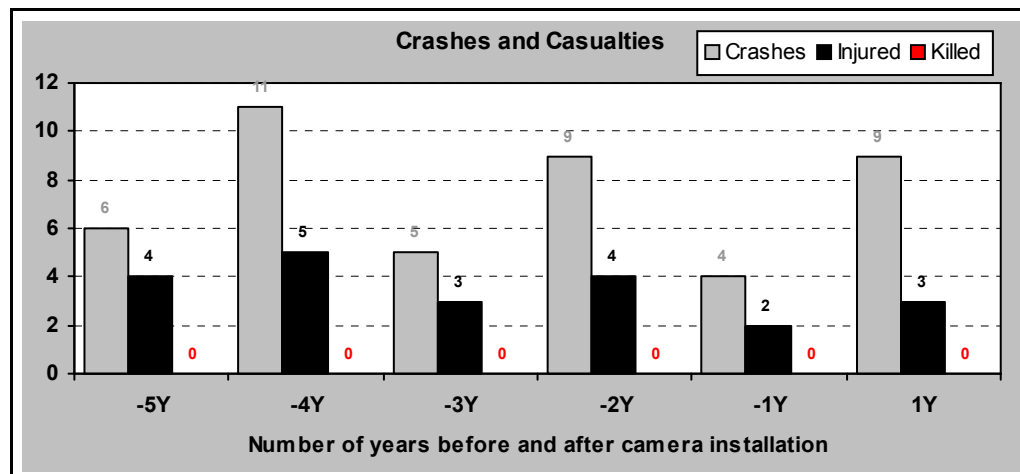
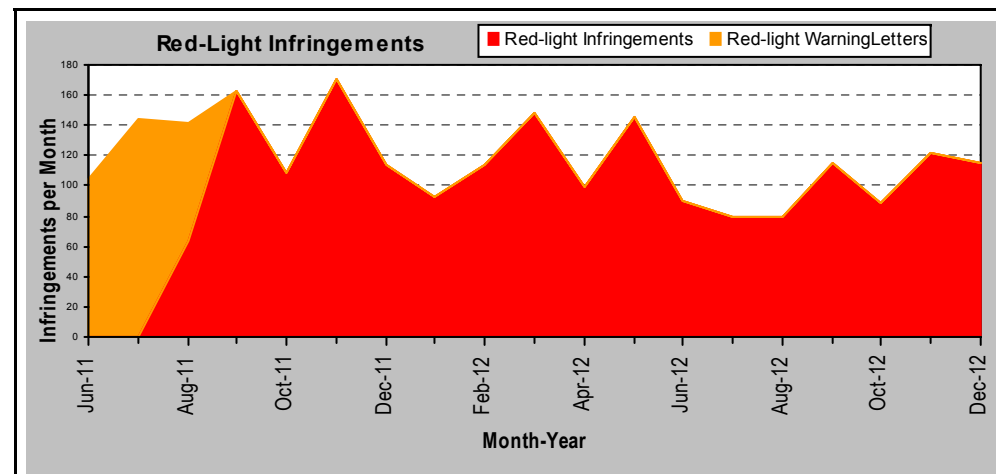
	5 years before installation <sup>1</sup>	1 year and 202 days after installation <sup>2</sup>	Percentage reduction <sup>3</sup>
<b>Fatalities</b>	0	0	-
<b>Injuries</b>	18	6	+7%
<i>Pedestrian Casualties</i>	3	0	100%
<b>Crashes</b>	35	13	+20%
<i>Adjacent Crashes</i>	4	3	+142%
<i>Right Through Crashes</i>	23	8	+12%
<i>Rear End Crashes</i>	2	1	+61%

<sup>1</sup> Ending 91 days before the start of the warning letter period.

<sup>2</sup> Ending end of December 2012

<sup>3</sup> The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods. Red values indicate an increase.

### Infringements at safety camera location



## Appendix C: Analysis of the NSW fixed speed camera program

### Overview of fixed speed camera locations

	Location	Road
1	Ashfield	Hume Highway, between Murrell Street and Queen Street
2	Auburn	Parramatta Road, between Harbord Street and Duck Street
3	Bankstown	Hume Highway, between Rookwood Road and Stacey Street
4	Bar Point	F3 Freeway, between Jolls Bridge and Mt White Exit Ramp
5	Bardwell Park / Arncliffe	M5 Tunnel, between Bexley Road and Marsh Street
6	Ben Lomond	New England Highway, between Ross Road and Ben Lomond Road
7	Berkshire Park	Richmond Road, between Llandilo Road and Sanctuary Drive
8	Berry	Princes Highway, between Kangaroo Valley Road and Victoria Street
9	Bexley North	Bexley Road, between Kingsland Road North and Miller Avenue
10	Beverly Hills	King Georges Road, between Stoney Creek Road and Edgbaston Road
11	Blandford	New England Highway, between Hayles Street and Mills Street
12	Bomaderry	Bolong Road, between Beinda Street and Coomea Street
13	Bonnyrigg	Elizabeth Drive, between Brown Road and Humphries Road
14	Bonnyrigg	Cabramatta Road, between Katinka Street and Tarlington Parade
15	Bonville	Pine Creek Way, between Bonville Creek and Bonville Station Road
16	Brogo	Princes Highway, between Pioneer Close and Brogo River
17	Bulli	Princes Highway, between Grevillea Park Road and Black Diamond Place
18	Burringbar	Tweed Valley Way, between Blakeney's Road and Cooradilla Road
19	Burwood Heights	Hume Highway, between Kelso Street and Appian Way
20	Camellia	James Ruse Drive, between Victoria Road and Grand Avenue North
21	Canterbury	Canterbury Road, between Gould Street and Jeffrey Street
22	Caringbah	Captain Cook Drive, between Cawarra Road and Gannons Road
23	Carlingford	Pennant Hills Road, between Evans Road and Coleman Avenue
24	Castle Hill	Old Northern Road, between Telfer Road and Brisbane Road
25	Charmhaven	Pacific Highway, between Wallarah Creek and Lowana Avenue
26	Concord West	Concord Road, between Nirranda Street and Mepunga Street
27	Condell Park	Edgar Street, between Augusta Street and Upper Railway Parade
28	Corrimal	Northern Distributor, between Towradgi Road and Railway Street
29	Darlinghurst	Eastern Distributor, between Oxford Street and William Street
30	Eastgardens/Maroubra	Bunnerong Road, between Fitzgerald Avenue and Smith Street
31	Edgecliff	New South Head Road, between Waratah Street and New Beach Road
32	Ewingsdale	Pacific Highway, between St Helena Road and Ewingsdale Road.
33	Fairfield East	Fairfield Street, between Scott Street and Mandarin Street
34	Foxground	Princes Highway, between Foxground Road and Broughton Creek
35	Gateshead	Pacific Highway, between Sydney Street and Macquarie Avenue
36	Greystanes	Greystanes Road, between Merrylands Road and Old Prospect Road
37	Guildford	Woodville Road, between Kenelda Avenue and Osgood Street
38	Gwynneville*	Southern Freeway, between Northern Distributor Overpass and Gipps Road Overpass (NB)
39	Gwynneville*	Southern Freeway, between University Avenue Overpass and Mount Ousley Road (SB)
40	Hartley	Great Western Highway, between Mid Hartley Road and Blackmans Creek Road
41	Hungry Head	Pacific Highway, between Boundary Road and Ballards Road
42	Hurstville	Forest Road, between Lily Street and Cronulla Street
43	Kingswood	Parker Street, between Copeland Street and Gascoigne Street
44	Kogarah	Princes Highway, between Gray Street and President Avenue
45	Korora	Pacific Highway, between Bruxner Park Road and Korora Basin Road
46	Kurrajong	Bells Line of Road, between Queen Street and Bellbird Avenue
47	Lane Cove	Centennial Avenue, between Gentle Street and Figtree Street
48	Lane Cove Tunnel	Lane Cove Tunnel, between the Mowbray Road and the Pacific Highway
49	Lansvale	Hume Highway, between Henry Lawson Drive and Knight Street
50	Lindfield	Pacific Highway, between Eton Road and Gladstone Parade
51	Liverpool	Bigge Street, between Elizabeth Drive and Campbell Street
52	Lochinvar	New England Highway, between Robert Road and Station Lane
53	M2 Tunnel	M2 Motorway, between Terry Creek and Norfolk Road
54	Macksville	Pacific Highway, between Florence Wilmont Drive and Watt Creek
55	Maroubra	Malabar Road, between Mons Avenue and Duncan Street
56	Mayfield West	Pacific Highway, between Werribie Street and Tourle Street
57	Merrylands	Merrylands Road, between Chetwynd Road and Davies Street
58	Miranda	Kingsway, between Sylva Avenue and University Road
59	Moore Park	Cleveland Street, between Anzac Parade and South Dowling Street
60	Mosman	Macpherson Street, between Ourimbah Road and Montague Road
61	Narrabeen	Pittwater Road, between Ocean Street and Devitt Street
62	New Italy	Pacific Highway, between New Italy Road and Turners Road
63	Nords Wharf	Pacific Highway, between Nords Wharf Road and Flowers Drive
64	North Curl Curl	Harbord Road, between Abbott Road and Brighton Street
65	North Narrabeen	Pittwater Road, between Garden Street and Namona Street
66	North Parramatta	Pennant Hills Road, between Castle Street and Bellevue Street
67	North Parramatta / Oatlands	Pennant Hills Road, between Masons Drive and Suttor Avenue

68	North Wollongong	Princes Highway, between Ajax Avenue and Exeter Avenue
69	Old Guilford	Woodville Road, between Orchardleigh Street and Middleton Road
70	Ourimbah	F3 Freeway, between Dogtrap Road Overpass and Ourimbah Creek Road
71	Ourimbah	Pacific Highway, between Yates Road and Dog Trap Road
72	Padstow	Gibson Avenue, between Turvey Street and Bryant Street
73	Peakhurst	Henry Lawson Drive, between Belmore Road and Ogilvy Street
74	Penshurst	Forest Road, between Penshurst Street and St Georges Street
75	Picnic Point	Henry Lawson Drive, between Carinya Road and The River Road
76	Queanbeyan	Lanyon Drive, between Tomsitt Drive and Hoover Road
77	Randwick	Avoca Street, between Howard Street and Barker Road
78	Rankin Park	McCaffrey Drive, between Duval Street and Orara Street
79	Rosebery/Alexandria	Botany Road, between Gardeners Road and Gillespie Street
80	Rydalmere	Victoria Road, between Park Road and John Street
81	Ryde	Blaxland Road, between Reservoir Lane and North Road
82	Ryde	Victoria Road, between Margaret Street and Cressy Road
83	Sandgate	Pacific Highway, between Wallsend Road and Ironbark Creek
84	South Windsor	George Street, between Rickaby Street and Yarrowonga Street
85	Strathfield	The Boulevarde, between Torrington Parade and Russell Street
86	Sydney	Sydney Harbour Tunnel, between Cahill Expressway and Warringah Freeway
87	Tenterfield	New England Highway, between Duncan Street and George Street
88	Terrigal	Terrigal Drive, between Brunswick Road and Bellbird Avenue
89	Toongabbie	Fitzwilliam Road, between Reynolds Street and Binalong Road
90	Valla Beach	Pacific Highway, between Valla Beach Road and Oyster Creek
91	Valley Heights	Great Western Highway, between The Valley Road and Sun Valley Road
92	Wahroonga	Pacific Highway, between Gilda Avenue and Woodville Avenue
93	Wardell	Pacific Highway, between Riverside Drive and Carlisle Street
94	Warrawong	Northcliffe Drive, between Griffin Street and Kully Street
95	West Pennant Hills	Castle Hill Road, between Pennant Hills Road and Coonara Avenue
96	Wollongbar	Bruxner Highway, between Convernys Lane and McLeans Ridges Road
97	Wollongong	Princes Highway, between Mount Keira Road and Highway Avenue
98	Woodburn	Pacific Highway, between Wagner Street and Norman Street
99	Woolloomooloo / East Sydney	Cross City Tunnel, between McLachlan Avenue and Harbour Street
100	Wyoming	Henry Parry Drive, between Glennie Street and Dwyer Street
101	Yagoona	Hume Highway, between Smith Street and Brennan Avenue

\*Southern Freeway, Gwynneville has two cameras operating approximately 1,000 metres apart and infringing in different directions, therefore these cameras were directionally analysed as separate locations in the direction they enforce.

## Hume Highway, Ashfield (school zone)

Location; Hume Highway, between Murrell Street and Queen Street

School zone: Ashfield Public School

Length description: 260m east to 150m west of camera

Total length: 410m (patch to patch)

Number of cameras: 1

Started infringing: 07/08/2007

Status: **Review**

### Current camera performance

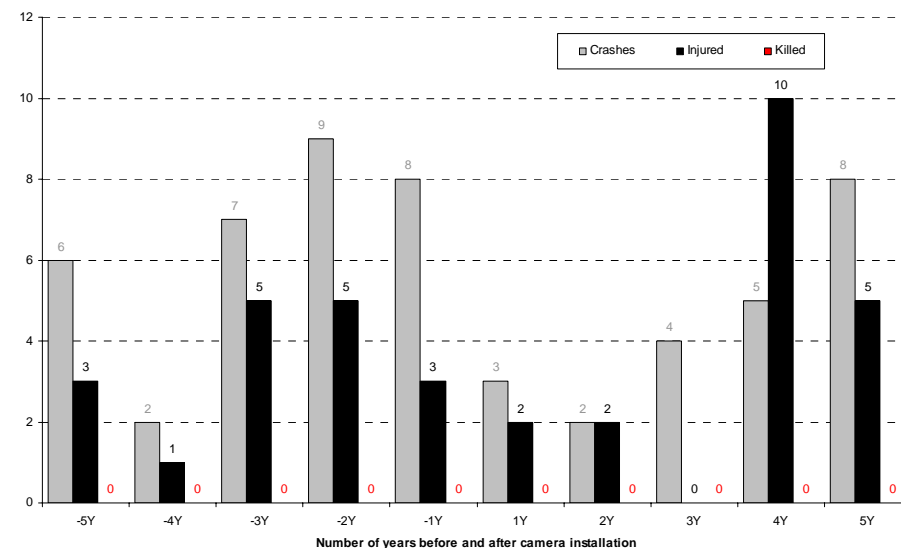
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	17	20	+18%
Casualties	17	20	+18%
Crashes	32	22	31%
Casualty Cost	\$2.31M	\$2.72M	+18%

\* May 2002 to May 2007

- The current pre and post installation analysis shows that crashes have reduced at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 31 per cent reduction in the annual average number of crashes, however there has been an 18 per cent increase in the annual average number of casualties.
- This location is recommended for comprehensive safety review as there has been an increase in casualties at this location in the most recent five year period.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

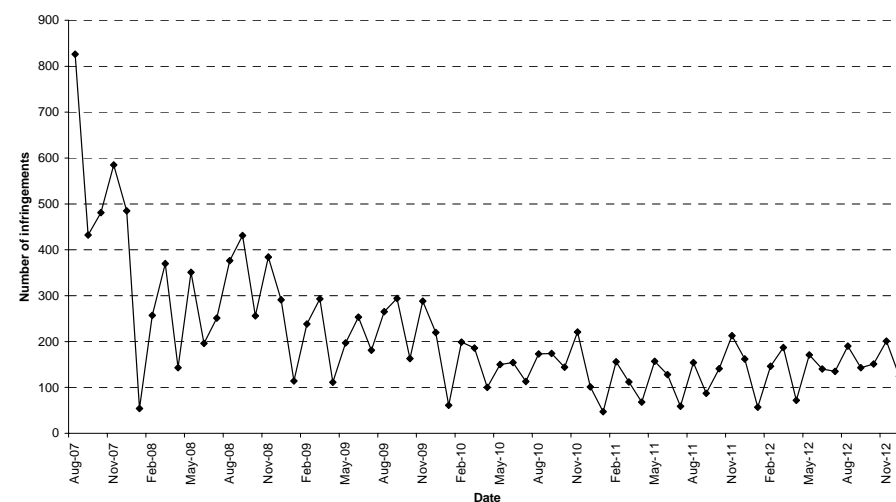
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

HUME HIGHWAY ASHFIELD





## Parramatta Road, Auburn

Location: Parramatta Road, between Harbord Street and Duck Street

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 15/05/2002

Status: **Effective**

### Current camera performance

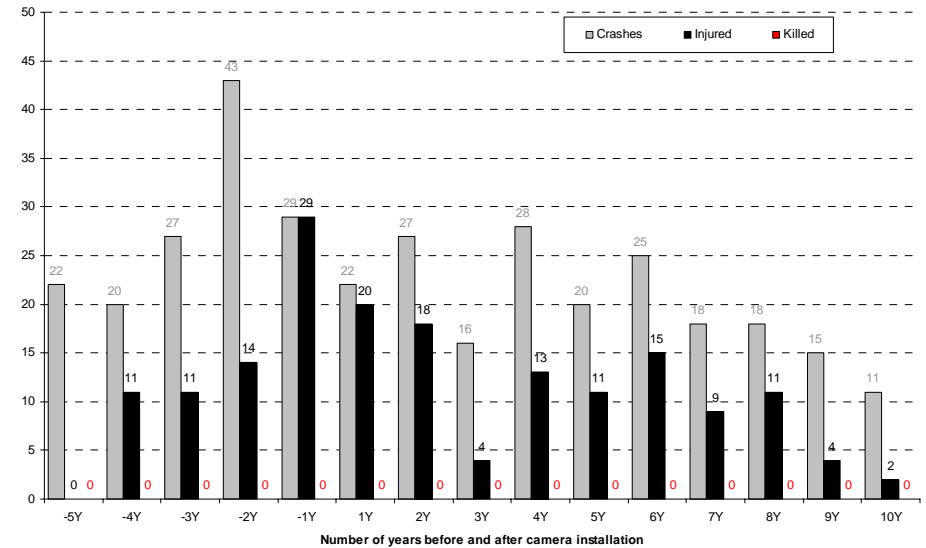
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	79	43	56%
Casualties	79	43	56%
Crashes	141	91	45%
Casualty Cost	\$10.74M	\$4.76M	56%

\*February 1997 to February 2002

- The current pre and post installation analysis shows that crashes have reduced at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 45 per cent reduction in the annual average number of crashes and a 56 per cent reduction in the annual average number of casualties.
- This has been a saving of \$5.98 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

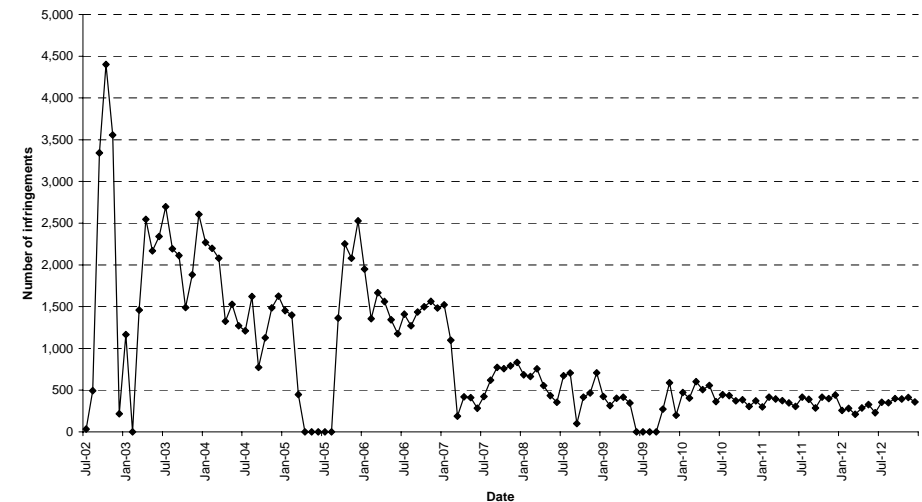
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PARRAMATTA ROAD AUBURN



## Hume Highway, Bankstown (school zone)

Location: Hume Highway, between Rookwood Road and Stacey Street

School zone: Bankstown North Public School, La Salle Catholic School

Length description: 120m east to 550m west of cameras

Total length: 670m patch to patch

Number of cameras: 2

Started infringing: 04/07/2007

Status: **Review**

### Current camera performance

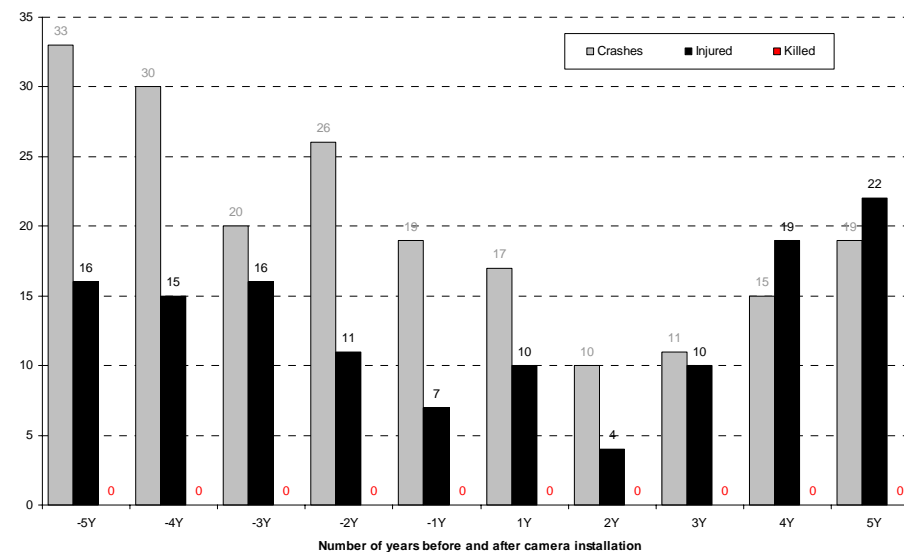
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	65	67	+3%
Casualties	65	67	+3%
Crashes	128	74	42%
Casualty Cost	\$8.84M	\$9.11M	+3%

\* April 2002 to April 2007

- The current pre and post installation analysis shows that crashes have reduced at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 42 per cent reduction in the annual average number of crashes however there has been a slight increase in the annual average number of casualties.
- This location is recommended for comprehensive safety review as there has been a gradual increase in casualties at this location since the cameras were installed.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

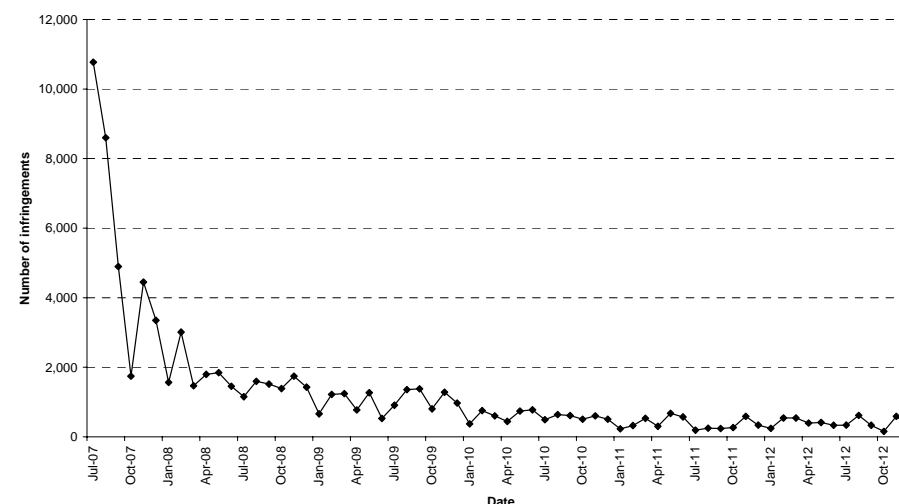
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

HUME HIGHWAY BANKSTOWN



### F3 Freeway, Bar Point

Location: F3 Freeway, between Jolls Bridge and Mt White Exit Ramp

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 10/04/2006

Status: **Effective**

#### Current camera performance

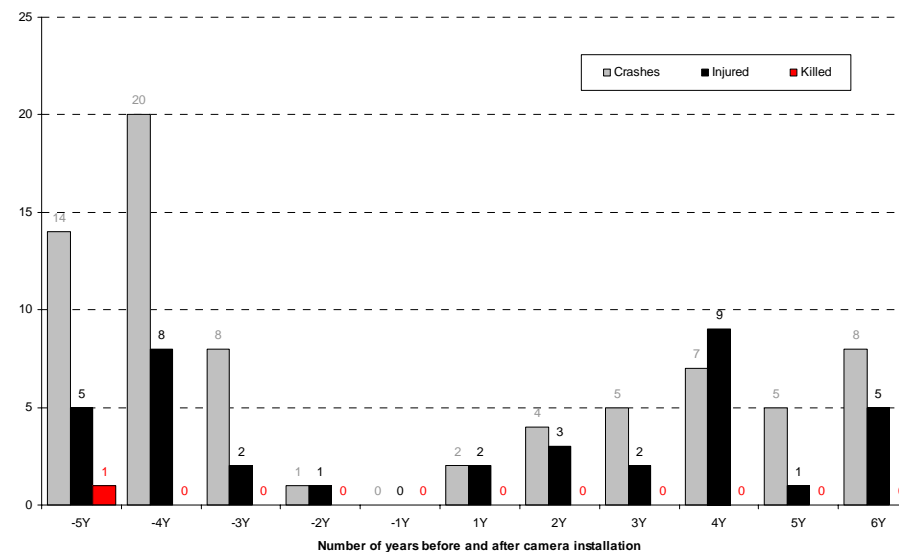
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	16	19	+19%
Casualties	17	19	+12%
Crashes	43	31	28%
Casualty Cost	\$8.51M	\$2.58M	70%

\* January 2001 to January 2006

- The current pre and post installation analysis shows that crashes have reduced at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 28 per cent reduction in the annual average number of crashes.
- There has been a 12 per cent increase in the annual average number of total casualties however given the reduction in fatalities from one to zero and also the reduction in crashes, this camera is delivering the expected road safety benefits.
- This has been a saving of \$5.93 million in costs to the community.
- The infringement graph details the trend in infringements at this location since June 2006. Infringement data before this date are not available. The graph shows there has been a consistent level of speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

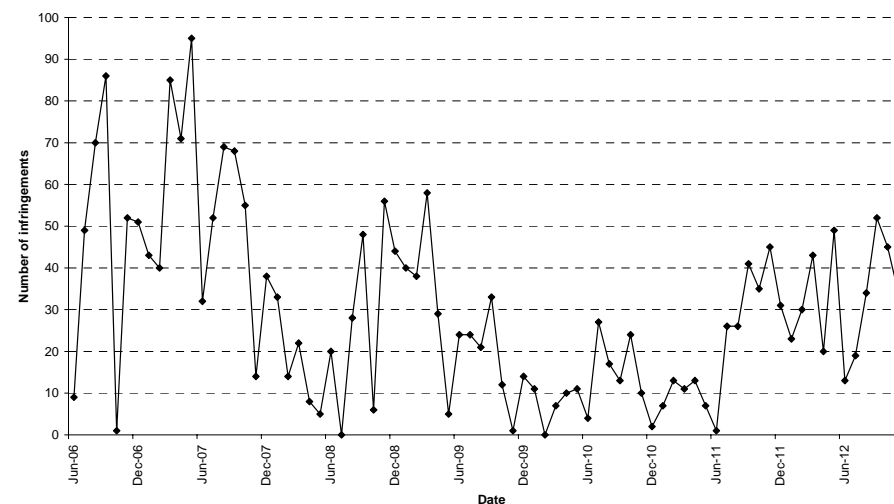
### Trend in road safety performance at camera location

Crashes and casualties



Infringements

F3 FREEWAY BAR POINT



### M5 Tunnel, Bardwell Park / Arncliffe (high risk location)

Location: M5 Tunnel, between Bexley Road and Marsh Street

Length description:

- Camera 1 (eastbound) 2190m east to 1785m west of camera
- Camera 2 (westbound) 960m east to 1775m west of camera

Total length:

- Camera 1 (eastbound) 3975m
- Camera 2 (westbound) 3965m

Number of cameras: 2

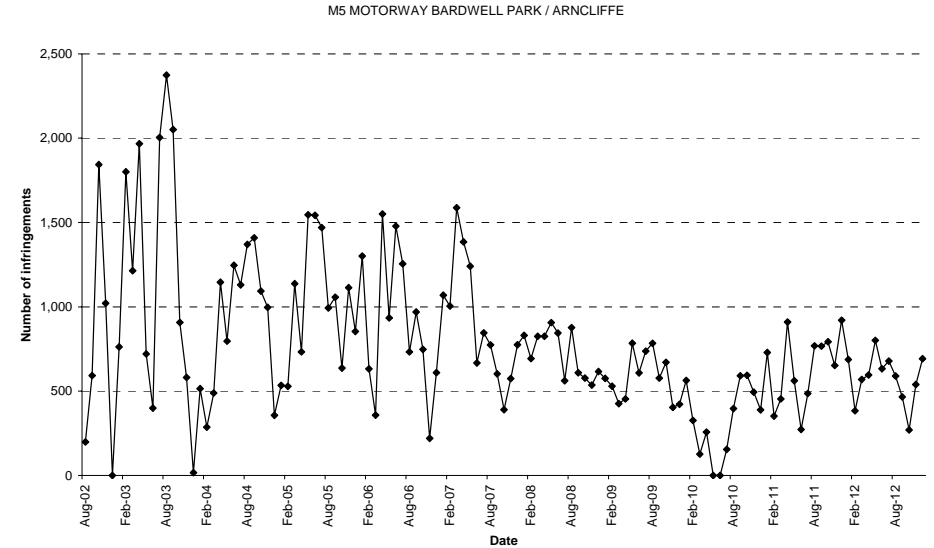
Started infringing: 01/08/2002

### Crash and casualty data – January 2012 to December 2012

	Eastbound	Westbound
Fatalities	0	0
Injuries	9	10
Casualties	9	10
Crashes	10	9

- This location is appropriate for fixed speed camera enforcement as it is a high risk location that is difficult for the NSW Police Force to enforce using traditional methods
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued

### Infringements at fixed speed camera location



## New England Highway, Ben Lomond

Location: New England Highway, between Ross Road and Ben Lomond Road

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 04/09/2003

Status: **Effective**

### Current camera performance

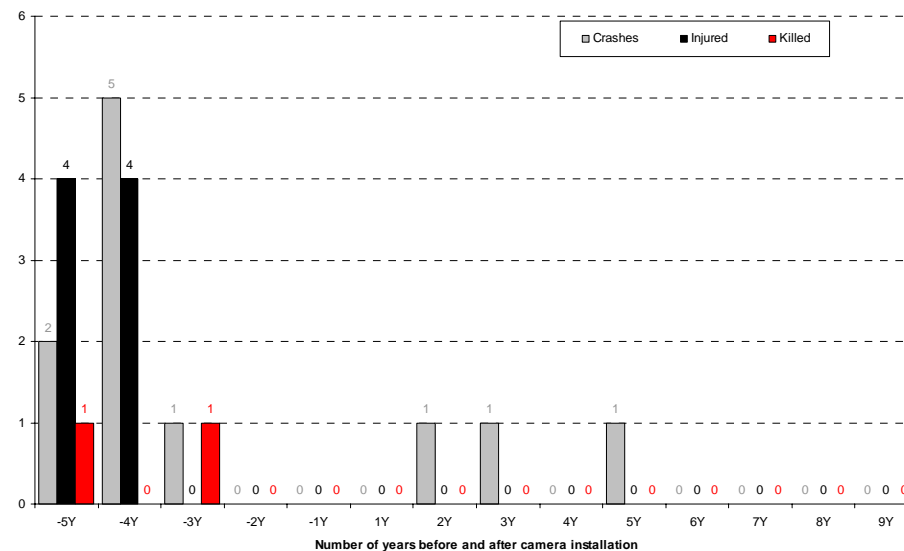
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	8	0	100%
Casualties	10	0	100%
Crashes	8	1	88%
Casualty Cost	\$13.76M	\$0M	100%

\*June 1998 to June 2003

- The current pre and post installation analysis shows that crashes have reduced at this location.
- When comparing the pre installation period to the most recent five year period, there has been an 88 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$13.76 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a consistent level of speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

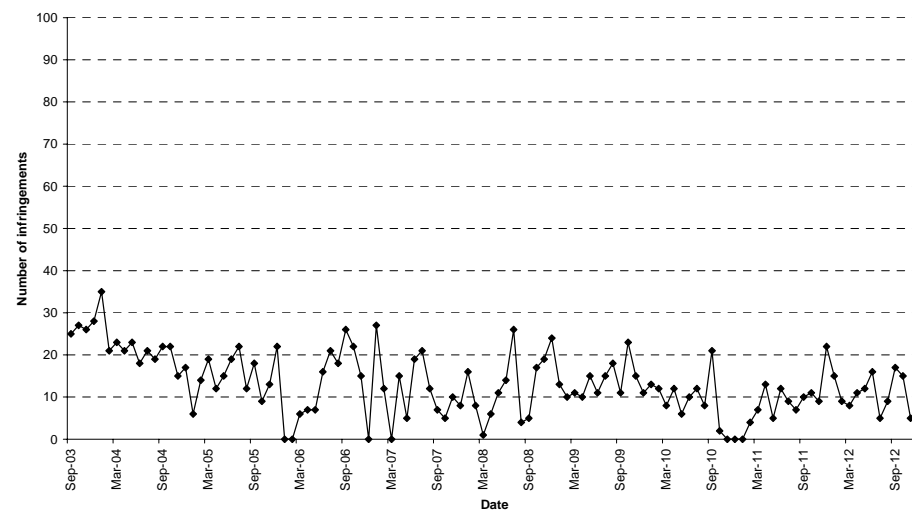
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

NEW ENGLAND HIGHWAY BEN LOMOND



## Richmond Road, Berkshire Park

Location: Richmond Road, between Llandilo Road and Sanctuary Drive

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 30/06/2000

Status: **Effective**

### Current camera performance

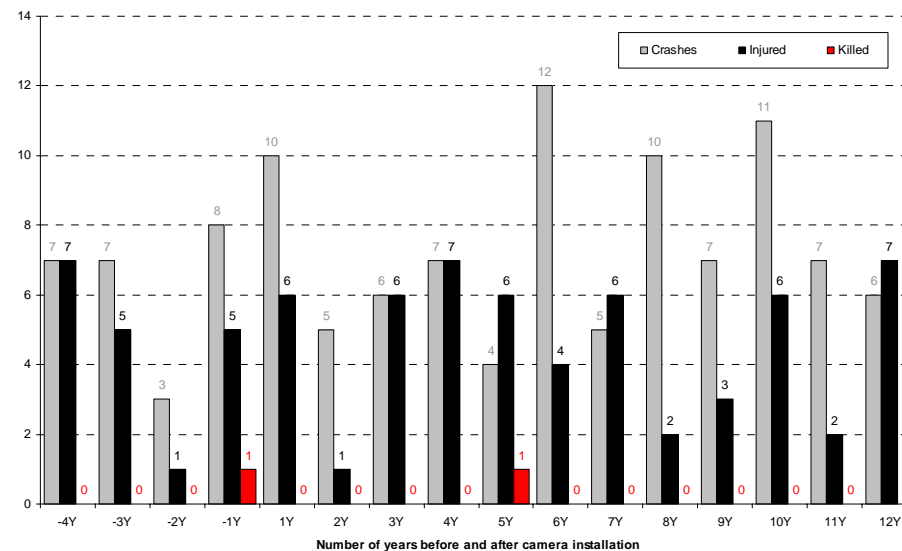
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	1	1.25	0	100%
Injuries	18	22.5	20	11%
Casualties	19	23.75	20	16%
Crashes	25	31.25	38	+22%
Casualty Cost	\$8.79M	\$10.98M	\$2.72M	75%

\*March 1996 to March 2000. No data available for 1995.

- The current pre and post installation analysis shows that crashes have increased at this location, however casualties have decreased.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 22 per cent increase in the annual average number of crashes however there has been a 16 per cent reduction in the annual average number of casualties. This includes a reduction in fatalities from one to zero therefore the camera at this location continues to deliver the expected road safety benefits.
- This has been a saving of \$8.26 million in costs to the community.
- The infringement graph details the trend in infringements at this location since August 2002. Infringement data before this date are not available. Roadworks and camera maintenance may influence the number of infringements issued.

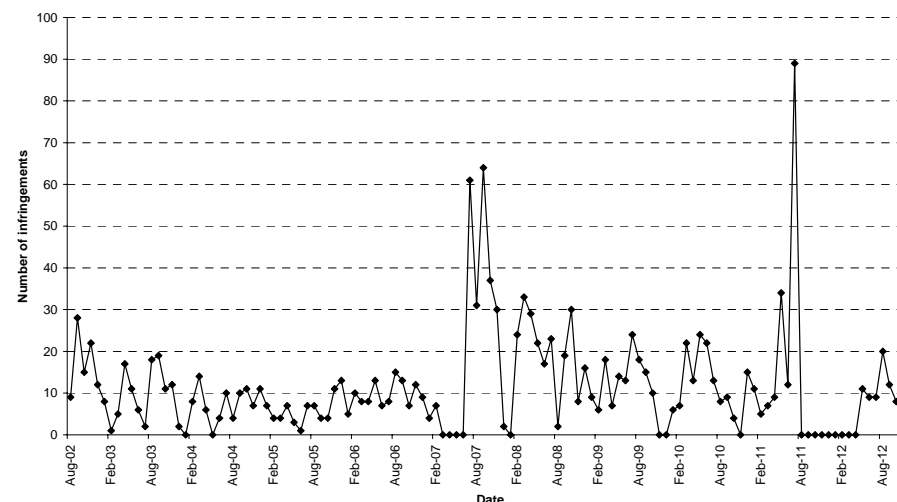
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

RICHMOND ROAD BERKSHIRE PARK



## Princes Highway, Berry

Location: Princes Highway, between Kangaroo Valley Road and Victoria Street

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 28/04/2003

Status: **Effective**

### Current camera performance

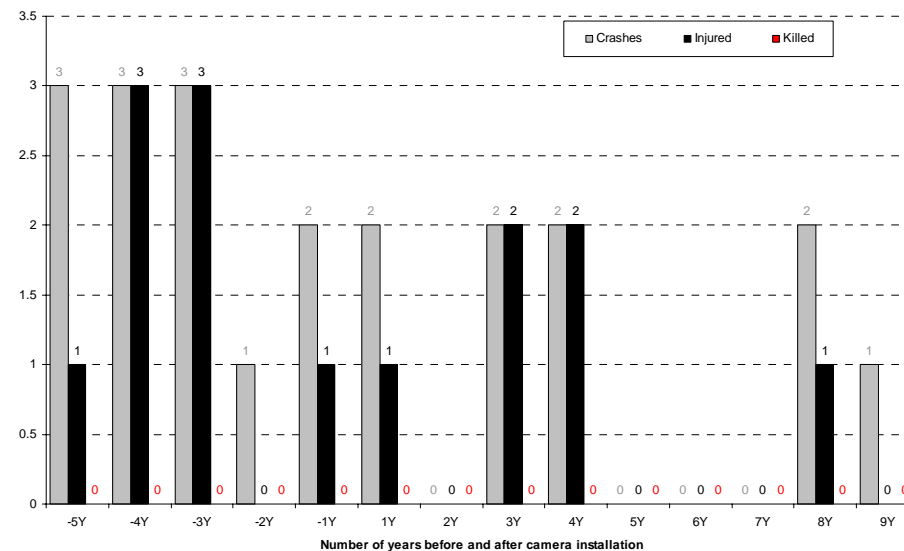
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	8	2	75%
Casualties	8	2	75%
Crashes	12	4	67%
Casualty Cost	\$1.09M	\$0.27M	75%

\* January 1998 to January 2003

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 67 per cent reduction in the annual average number of crashes and a 75 per cent reduction in the annual average number of casualties.
- This has been a saving of \$820,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since September 2003. Infringement data before this date are not available. The spike in infringements from May 2007 can be attributed to the speed limit change on this road from 60 km/h to 50 km/h. Since then, there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

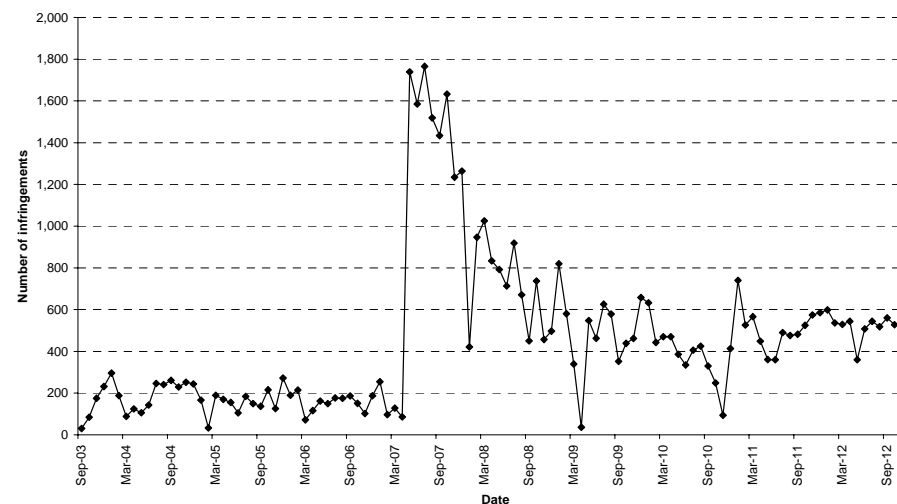
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PRINCES HIGHWAY BERRY



## Bexley Road, Bexley North

Location: Bexley Road, between Kingsland Road North and Miller Avenue

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 29/05/2006

Status: **Effective**

### Current camera performance

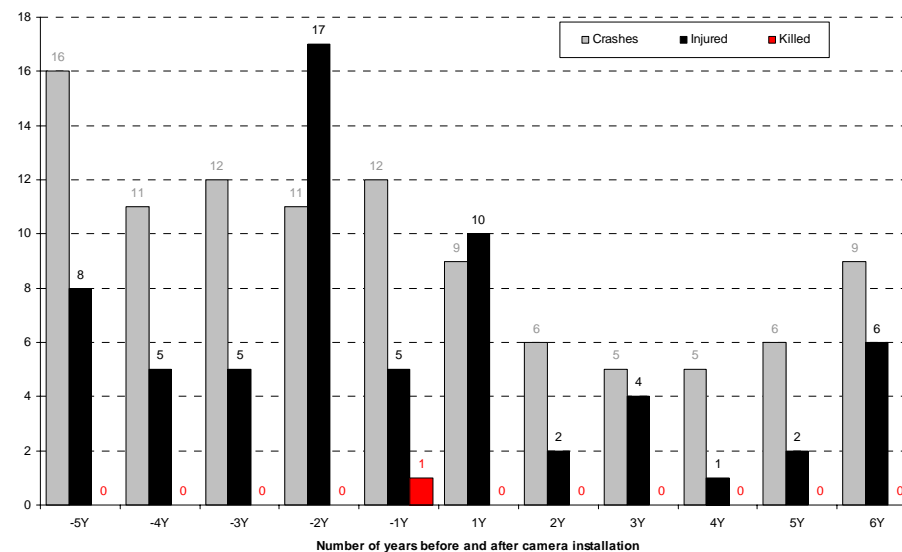
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	40	17	58%
Casualties	41	17	59%
Crashes	62	30	52%
Casualty Cost	\$11.78M	\$2.31M	80%

\* March 2001 to March 2006

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 52 per cent reduction in the annual average number of crashes and a 59 per cent reduction in the annual average number of casualties.
- This has been a saving of \$9.47 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph show there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued. These data

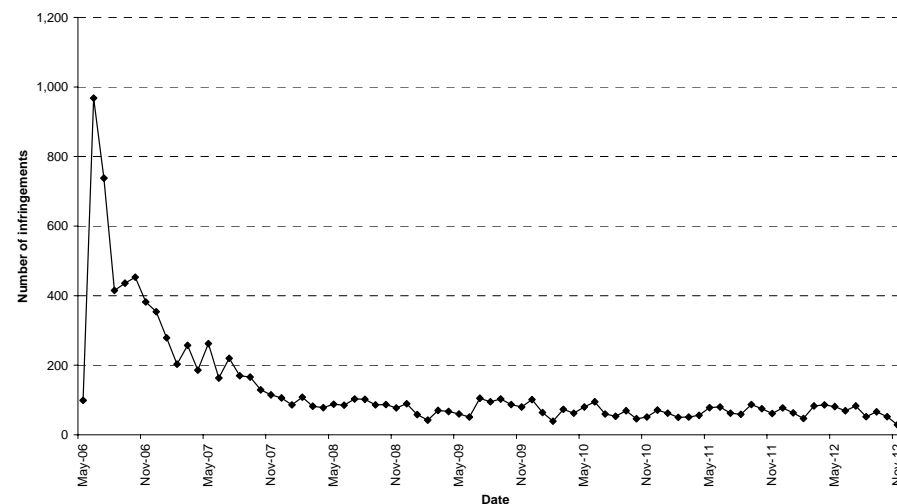
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

BEXLEY ROAD BEXLEY NORTH





## King Georges Road, Beverly Hills (school zone)

Location: King Georges Road, between Stoney Creek Road and Edgbaston Road

School zone: Beverly Hills Girls High School

Length description: 480m south to 560m north of cameras

Total length: 1040m patch to patch

Number of cameras: 2

Started infringing:

- Camera 1 (northbound) 09/07/2007
- Camera 2 (southbound) 20/07/2007

Status: **Effective**

### Current camera performance

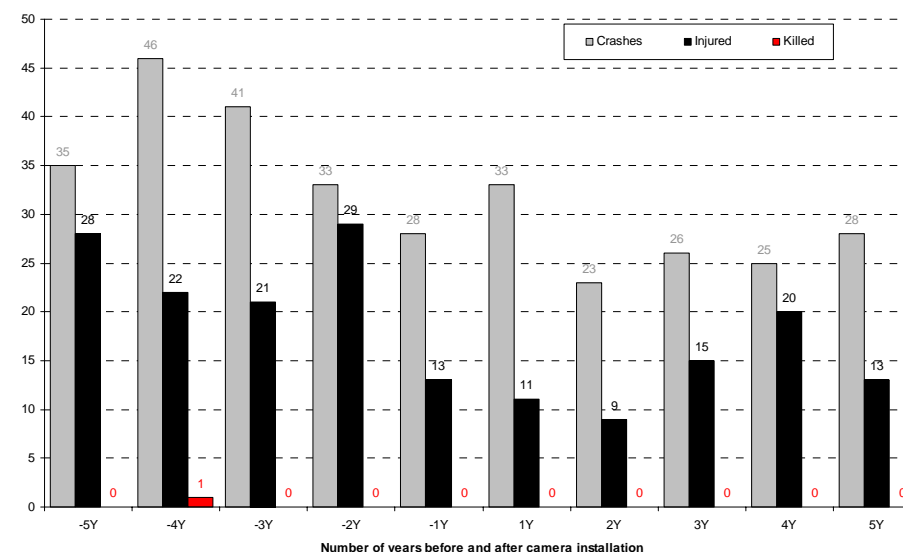
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	113	67	41%
Casualties	114	67	41%
Crashes	183	131	28%
Casualty Cost	\$21.71M	\$9.11M	58%

\* April 2002 to April 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 28 per cent reduction in the annual average number of crashes and a 41 per cent reduction in the annual average number of casualties.
- This has been a saving of \$12.60 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

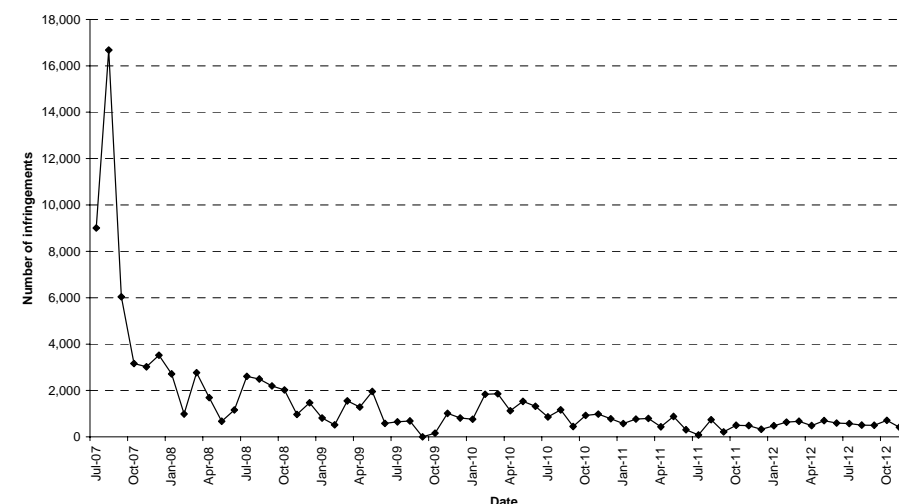
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

KING GEORGES ROAD BEVERLY HILLS



## New England Highway, Blandford

Location: New England Highway, between Hayles Street and Mills Street

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 10/04/2002

Status: **Effective**

### Current camera performance

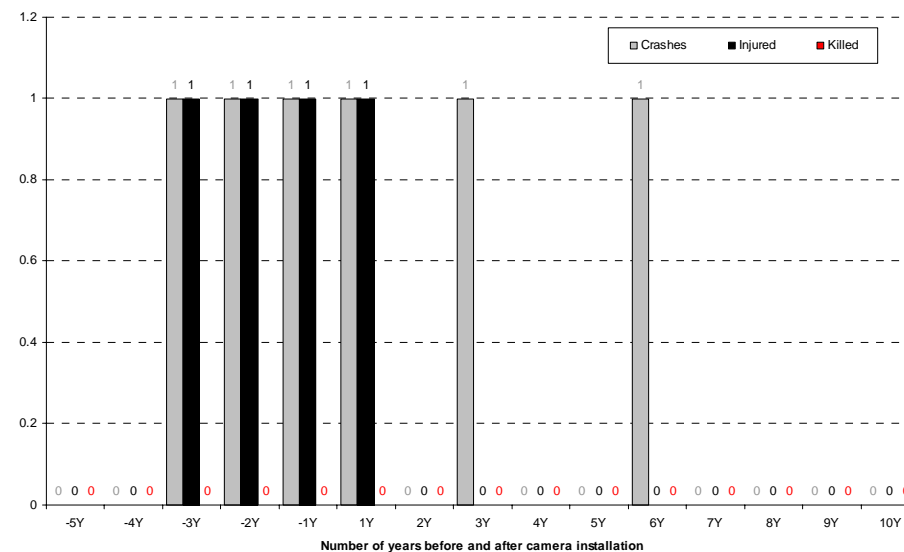
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	3	0	100%
Casualties	3	0	100%
Crashes	3	1	67%
Casualty Cost	\$0.41M	\$0M	100%

\*January 1997 to January 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 67 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$410,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since April 2003. Infringement data before this date are not available. Roadworks and camera maintenance may influence the number of infringements issued.

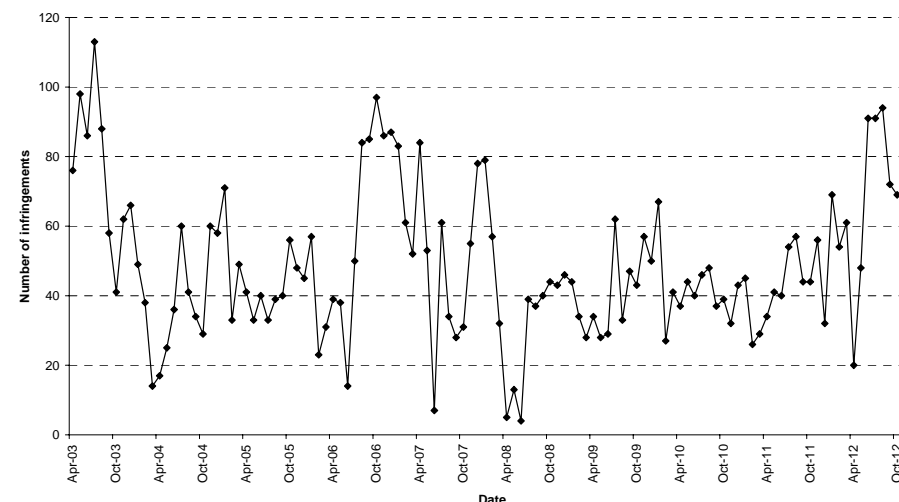
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

NEW ENGLAND HIGHWAY BLANDFORD



## Bolong Road, Bomaderry

Location: Bolong Road, between Beinda Street and Coomea Street

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 31/03/2003

Status: **Effective**

### Current camera performance

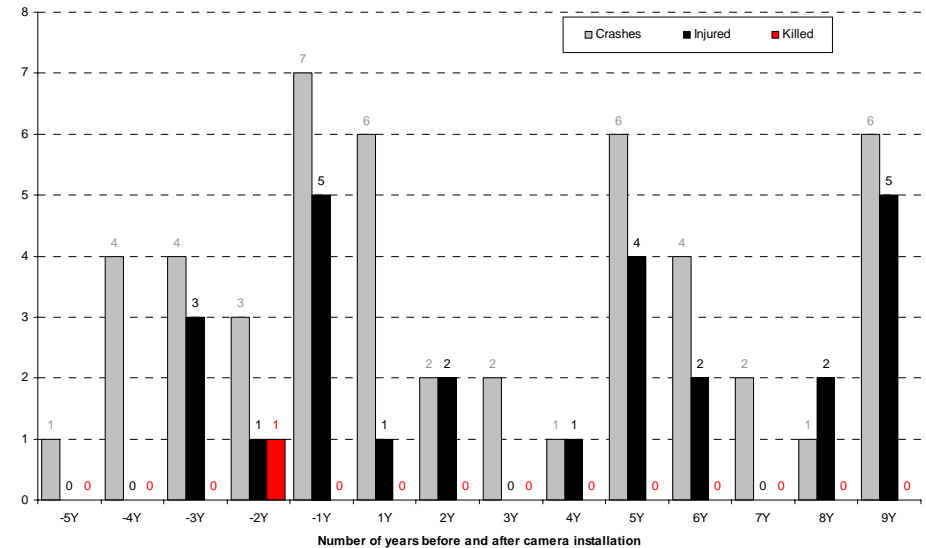
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	9	9	0%
Casualties	10	9	10%
Crashes	19	14	26%
Casualty Cost	\$7.56M	\$1.22M	84%

\* December 1997 to December 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 26 per cent reduction in the annual average number of crashes and a 10 per cent reduction in the annual average number of casualties.
- This has been a saving of \$6.34 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

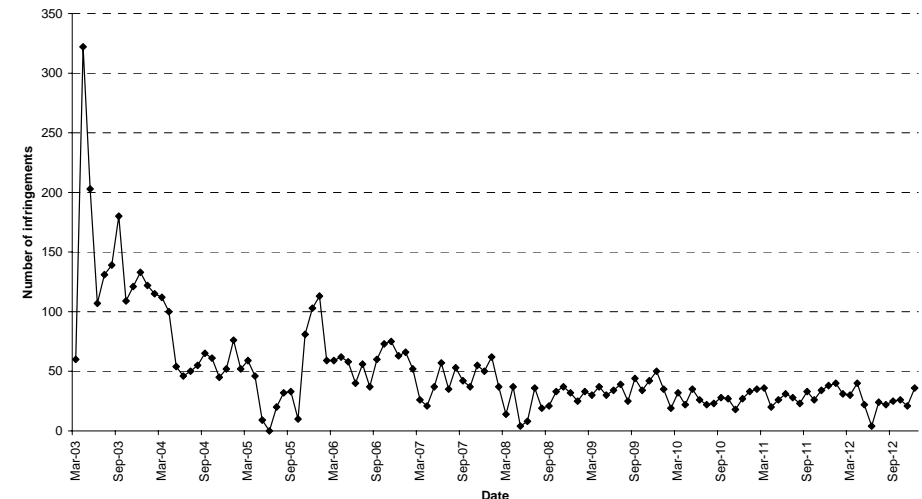
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

BOLONG ROAD BOMADERRY



## Elizabeth Drive, Bonnyrigg

Location: Elizabeth Drive, between Brown Road and Humphries Road

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 07/07/2000

Status: **Effective**

### Current camera performance

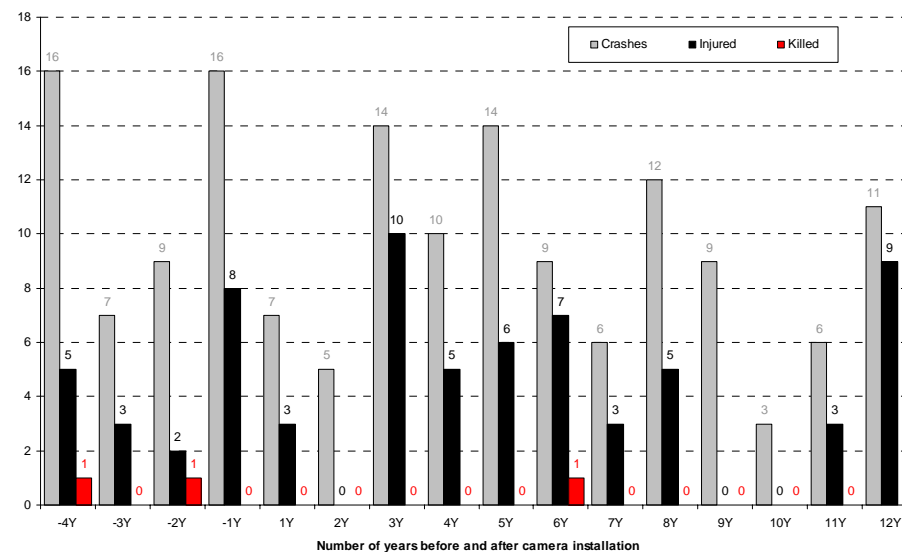
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	2	2.50	0	100%
Injuries	18	3.50	19	16%
Casualties	20	6	19	24%
Crashes	48	21	39	35%
Casualty Cost	\$15.12M	\$16.32	\$2.58M	86%

\*April 1996 to April 2000. No data available for 1995

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 35 per cent reduction in the annual average number of crashes and a 24 per cent reduction in the annual average number of casualties.
- This has been a saving of \$13.74 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The spike in infringements from July 2007 can be attributed to the camera commencing speed enforcement of both directions of traffic where it previously enforced one direction. Since then, there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

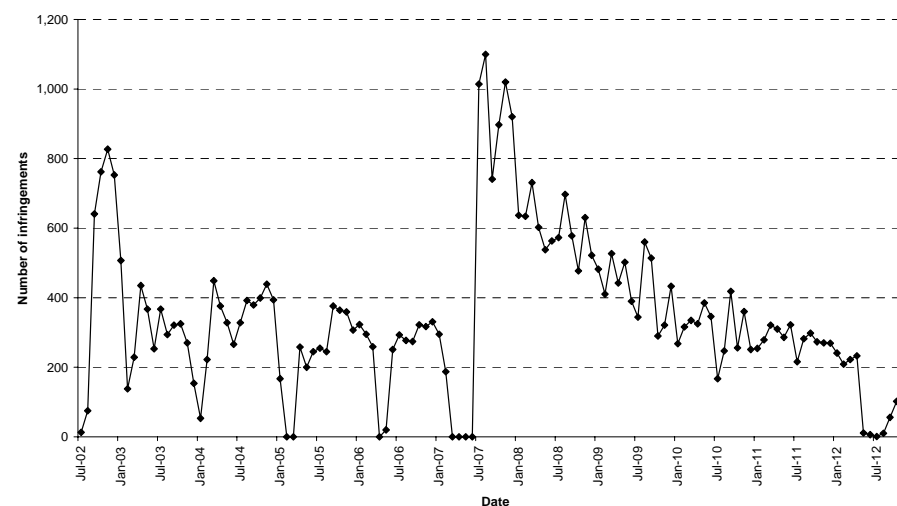
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

ELIZABETH DRIVE BONNYRIGG



## Cabramatta Road, Bonnyrigg (school zone)

Location: Cabramatta Road, between Katinka Street and Tarlington Parade  
 School zone: Bonnyrigg High School and Our Lady of Mt Carmel Primary School  
 Length description: 645m east to 335m west of camera  
 Total length: 1000m (patch to patch)  
 Number of cameras: 1  
 Started infringing: 17/10/2007  
 Status: **Effective**

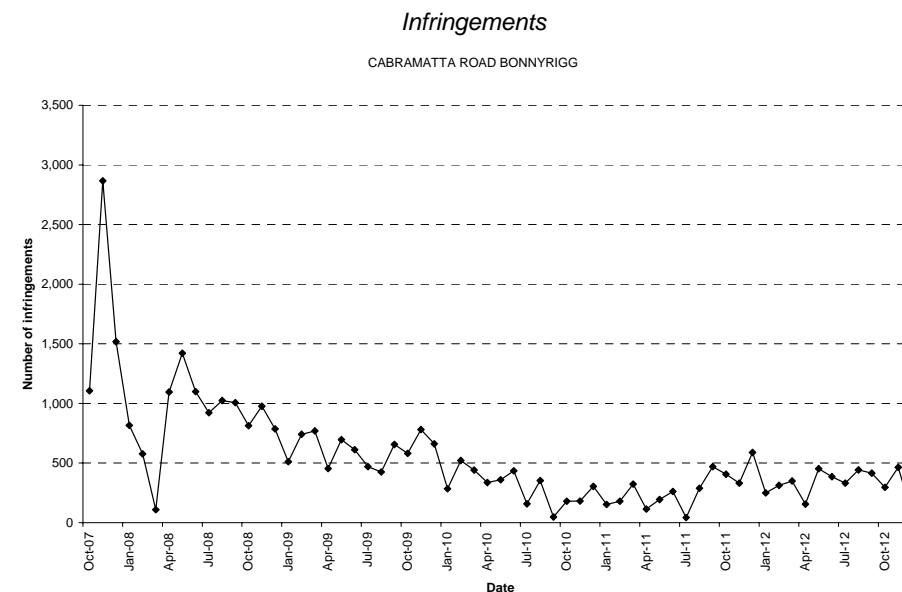
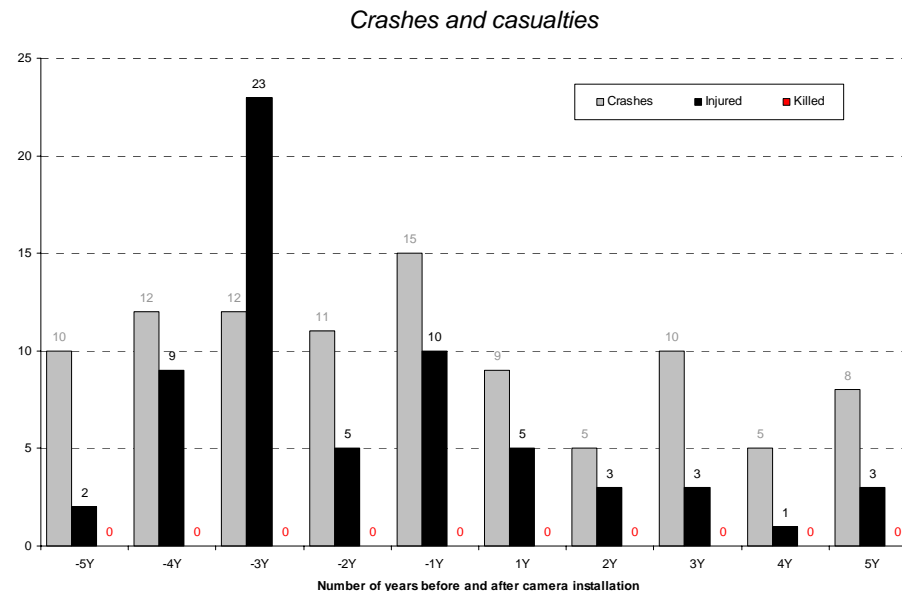
### Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	49	13	73%
Casualties	49	13	73%
Crashes	60	35	42%
Casualty Cost	\$6.66M	\$1.79M	73%

\* August 2002 to August 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 42 per cent reduction in the annual average number of crashes and a 73 per cent reduction in the annual average number of casualties.
- This has been a saving of \$4.87 million in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

## Trend in road safety performance at camera location



## Pine Creek Way, Bonville

Location: Pine Creek Way, between Bonville Creek and Bonville Station Road

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 16/12/2005

Status: **Effective**

### Current camera performance

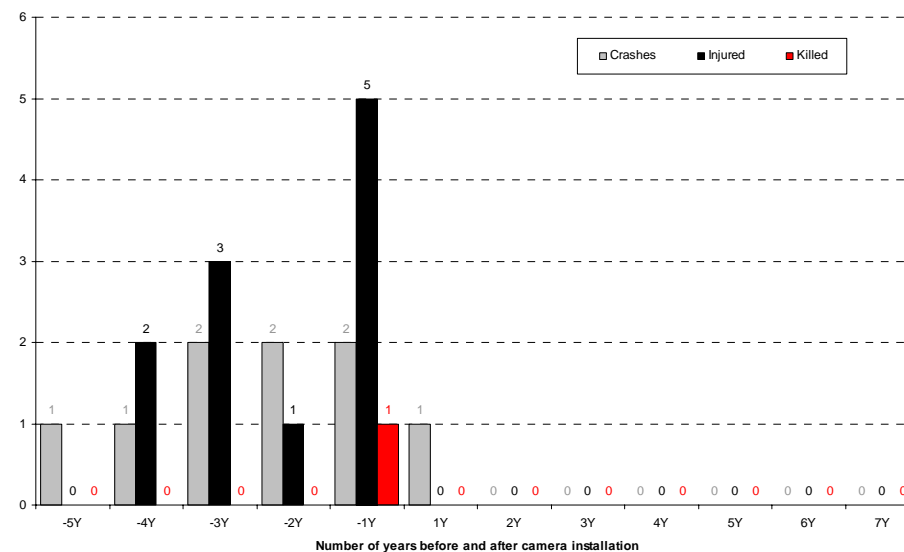
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	11	0	100%
Casualties	12	0	100%
Crashes	8	0	100%
Casualty Cost	\$7.83M	\$0M	100%

\*September 2000 to September 2005

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 100 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$7.83 million in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

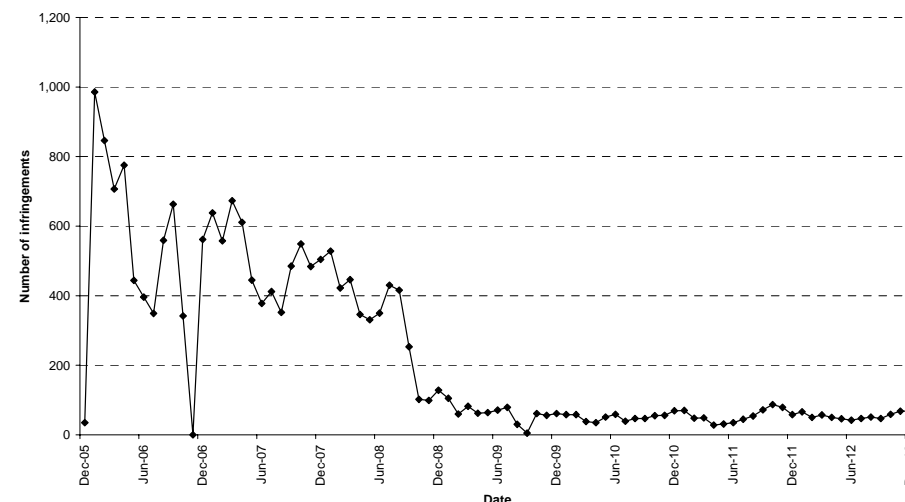
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PINE CREEK WAY BONVILLE



## Princes Highway, Brogo

Location: Princes Highway, between Pioneer Close and Brogo River

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 02/05/2003

Status: **Effective**

### Current camera performance

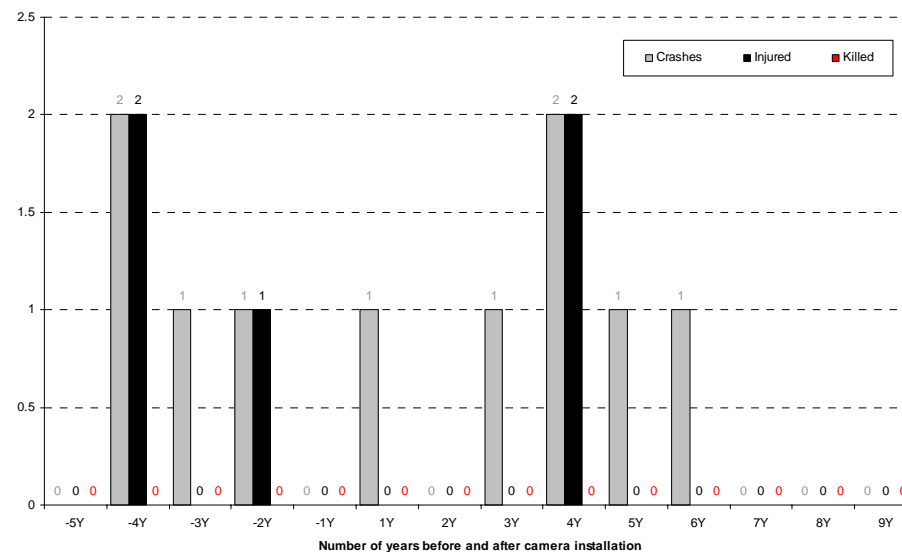
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	3	0	100%
Casualties	3	0	100%
Crashes	4	1	75%
Casualty Cost	\$0.41M	\$0M	100%

\*February 1998 to February 2003

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 75 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$410,000 in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

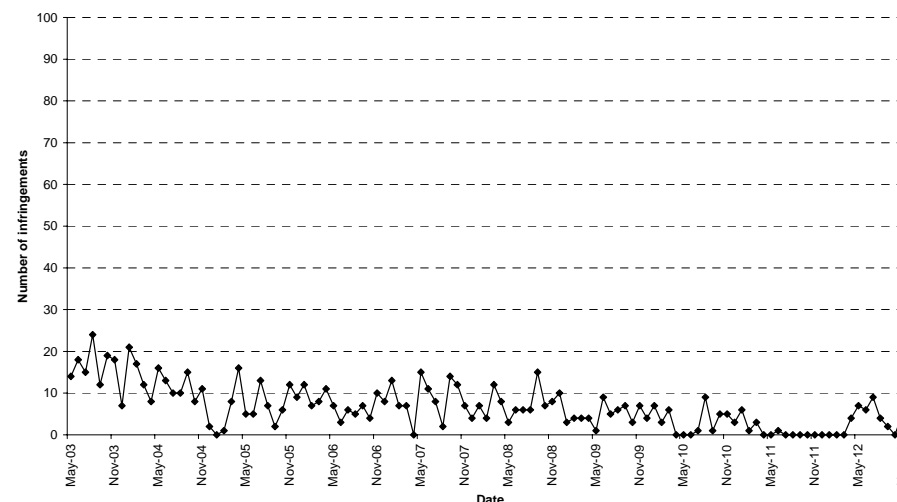
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PRINCES HIGHWAY BROGO



## Princes Highway, Bulli

Location: Princes Highway, between Grevillea Park Road and Black Diamond Place

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 04/12/2001

Status: **Effective**

### Current camera performance

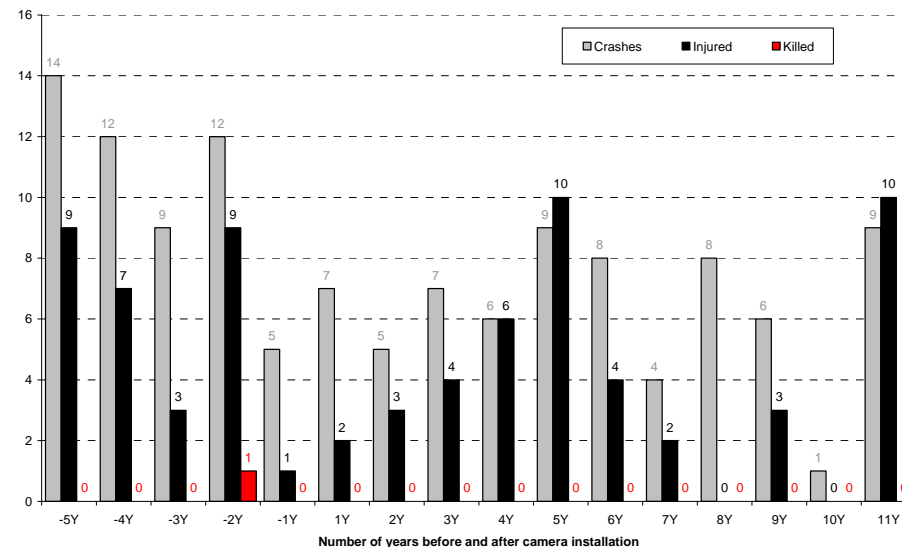
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	29	15	48%
Casualties	30	15	50%
Crashes	52	30	42%
Casualty Cost	\$10.28M	\$2.04M	50%

\* September 1996 to September 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 42 per cent reduction in the annual average number of crashes and a 50 per cent reduction in the annual average number of casualties.
- This has been a saving of \$8.24 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The spike in infringements from July 2006 may be attributed to the camera commencing speed enforcement of both directions of traffic where it previously enforced one direction. Since then, there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

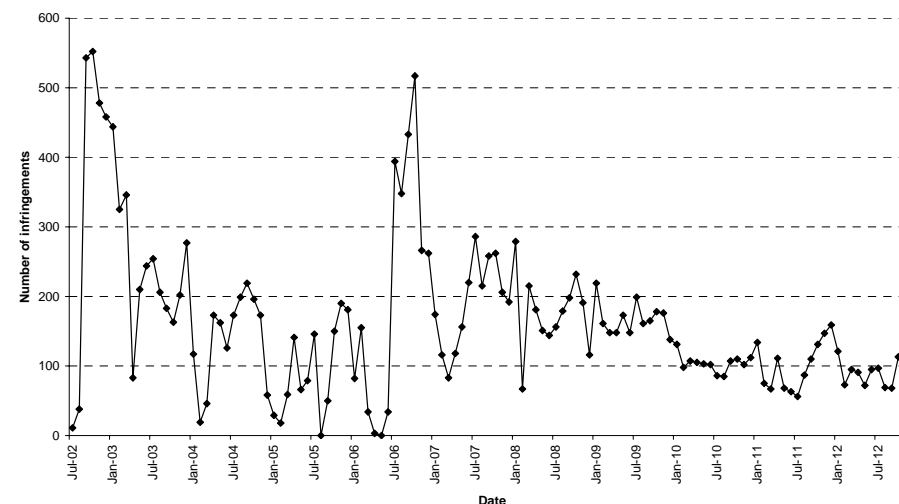
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PRINCES HIGHWAY BULLI





## Tweed Valley Way, Burringbar

Location: Tweed Valley Way, between Blakeney's Road and Cooradilla Road

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 02/04/1999

Status: **Effective**

### Current camera performance

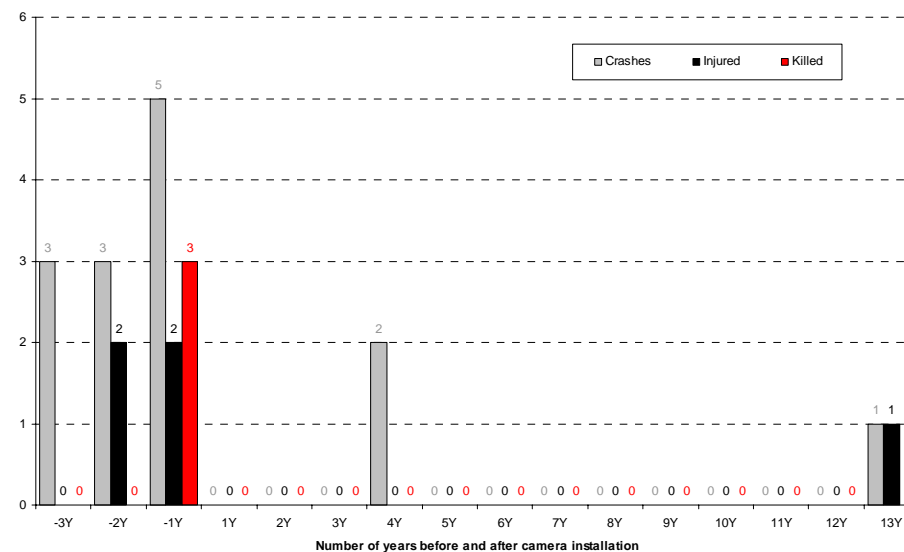
	Three years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	3	5	0	100%
Injuries	4	6.67	2	70%
Casualties	7	11.67	2	83%
Crashes	11	18.33	2	89%
Casualty Cost	\$19.56M	\$32.59M	\$0.27M	99%

\* January 1996 to January 1999. No data available prior to 1995.

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 100 per cent reduction in the annual average number of crashes and an 89 per cent reduction in the annual average number of casualties.
- This has been a saving of \$32.32 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. Roadworks and camera maintenance may influence the number of infringements issued.

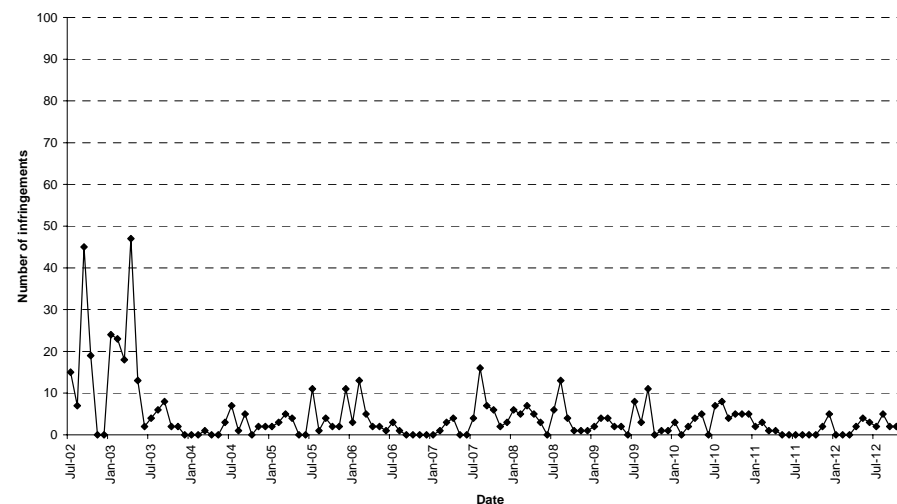
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

TWEED VALLEY WAY BURRINGBAR



## Hume Highway, Burwood Heights

Location: Hume Highway, between Kelso Street and Appian Way

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 05/12/2001

Status: **Effective**

### Current camera performance

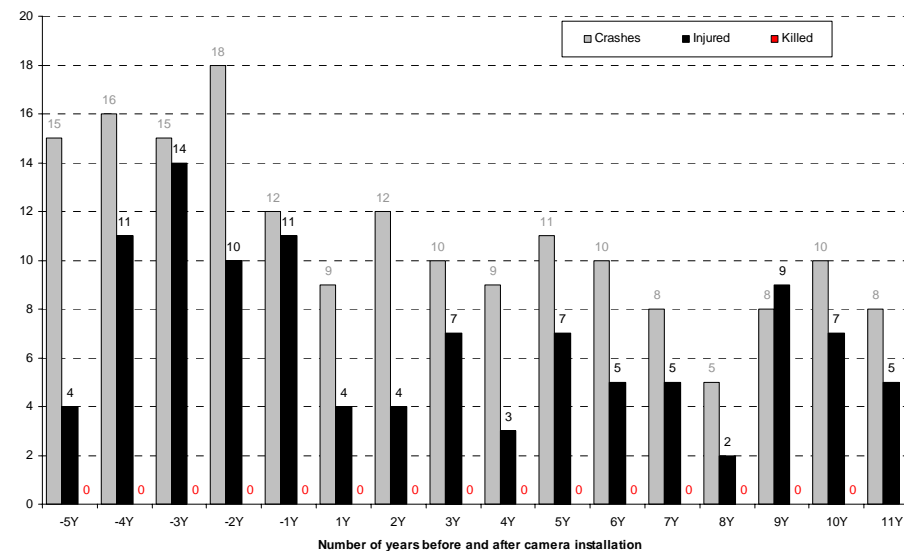
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	50	27	46%
Casualties	50	27	46%
Crashes	76	39	49%
Casualty Cost	\$6.80M	\$3.67M	46%

\* September 1996 to September 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 49 per cent reduction in the annual average number of crashes and a 46 per cent reduction in the annual average number of casualties.
- This has been a saving of \$3.13 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

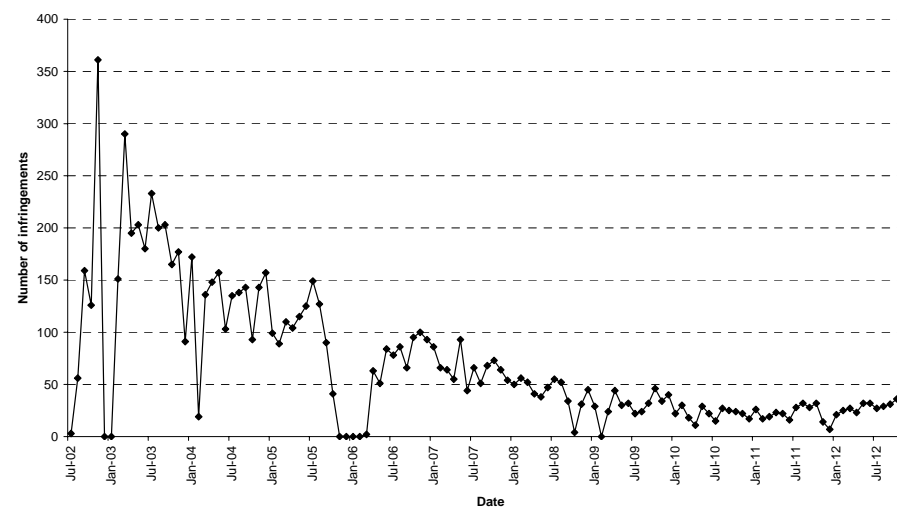
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

HUME HIGHWAY BURWOOD HEIGHTS



## James Ruse Drive, Camellia

Location: James Ruse Drive, between Victoria Road and Grand Avenue North

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 06/12/2001

Status: **Effective**

### Current camera performance

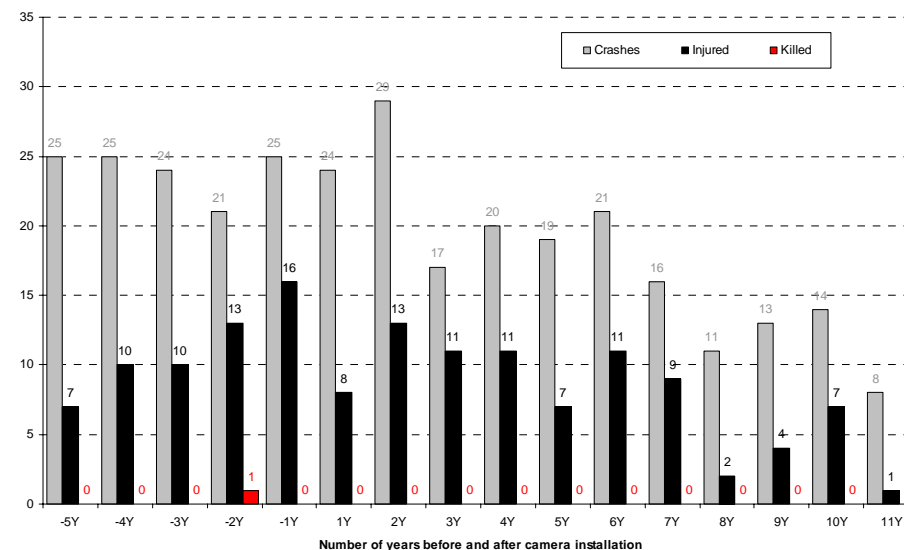
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	56	23	59%
Casualties	57	23	60%
Crashes	120	62	48%
Casualty Cost	\$13.95M	\$3.13M	78%

\* September 1996 to September 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 48 per cent reduction in the annual average number of crashes and a 60 per cent reduction in the annual average number of casualties.
- This has been a saving of \$10.82 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. These graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

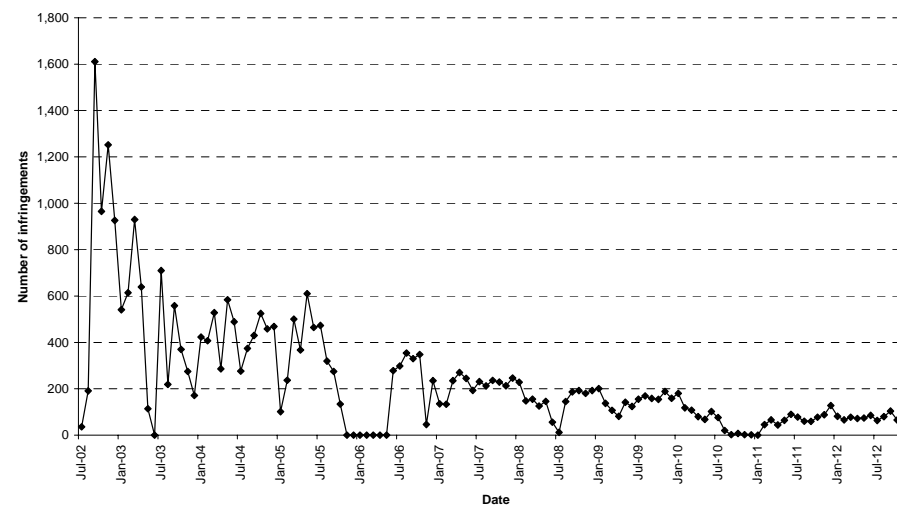
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

JAMES RUSE DRIVE CAMELLIA



## Canterbury Road, Canterbury

Location: Canterbury Road, between Gould Street and Jeffrey Street

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 19/04/2001

Status: **Effective**

### Current camera performance

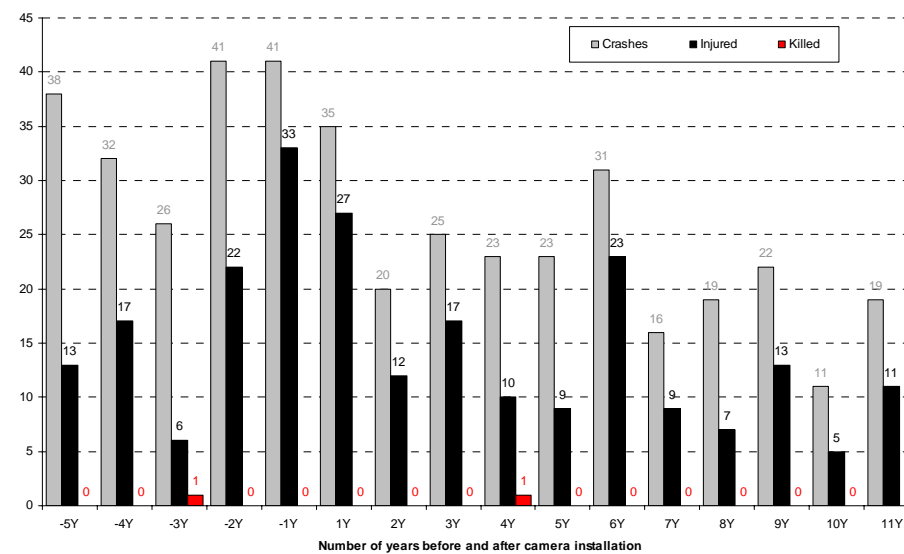
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	91	46	49%
Casualties	92	46	50%
Crashes	178	88	51%
Casualty Cost	\$18.71M	\$6.26M	67%

\* January 1996 to January 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 51 per cent reduction in the annual average number of crashes and a 50 per cent reduction in the annual average number of casualties.
- This has been a saving of \$12.45 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

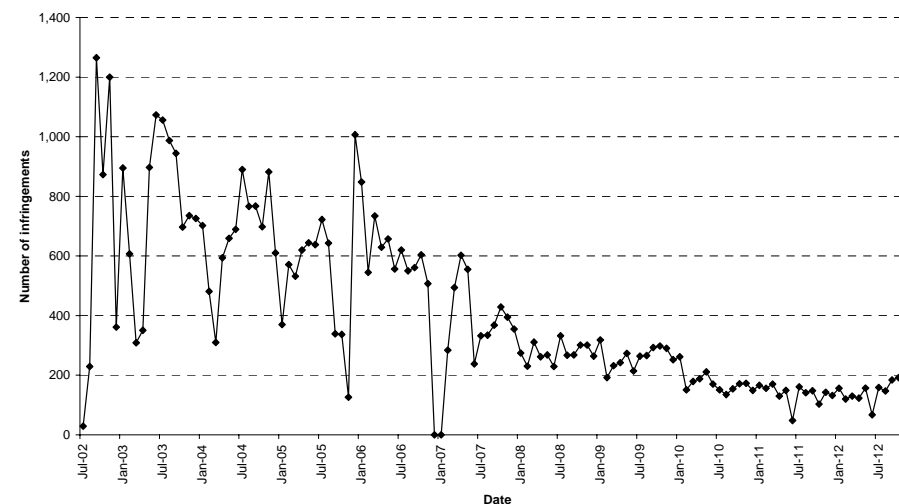
## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements

CANTERBURY ROAD CANTERBURY



## Captain Cook Drive, Caringbah

Location: Captain Cook Drive, between Cawarra Road and Gannons Road

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 12/04/2001

Status: **Effective**

### Current camera performance

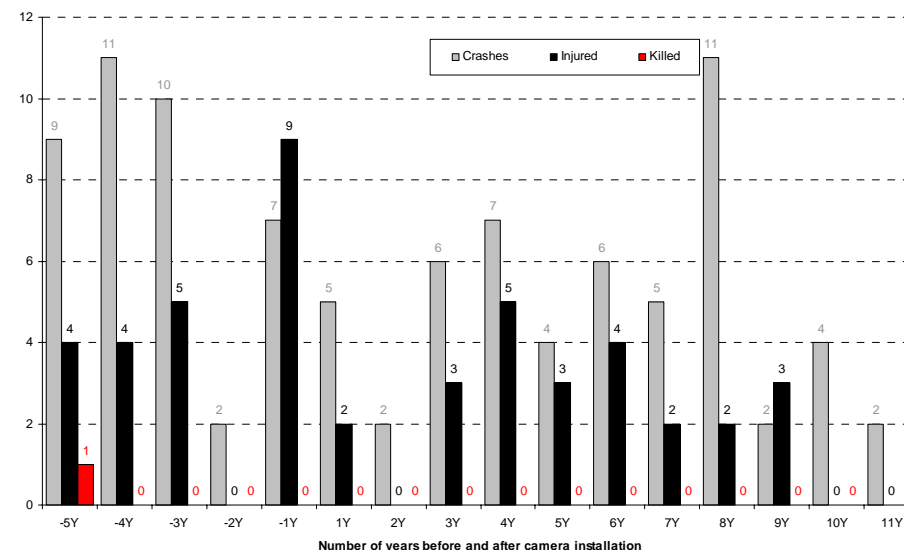
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	22	7	68%
Casualties	23	7	70%
Crashes	39	24	38%
Casualty Cost	\$9.33M	\$0.95M	90%

\* January 1996 to January 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 38 per cent reduction in the annual average number of crashes and a 70 per cent reduction in the annual average number of casualties.
- This has been a saving of \$8.38 million in costs to the community.
- The infringement graph details the trend in infringements at this location since August 2002. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. No infringements were recorded at this location from November 2010 to May 2011 as a replacement camera was installed.

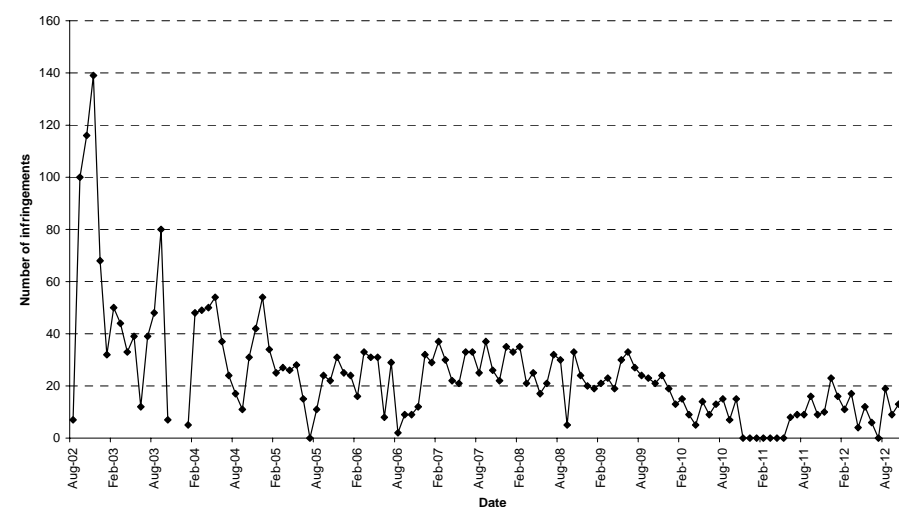
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

CAPTAIN COOK DRIVE CARINGBAH



## Pennant Hills Road, Carlingford

Location: Pennant Hills Road, between Evans Road and Coleman Avenue

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 16/08/2002

Status: **Effective**

### Current camera performance

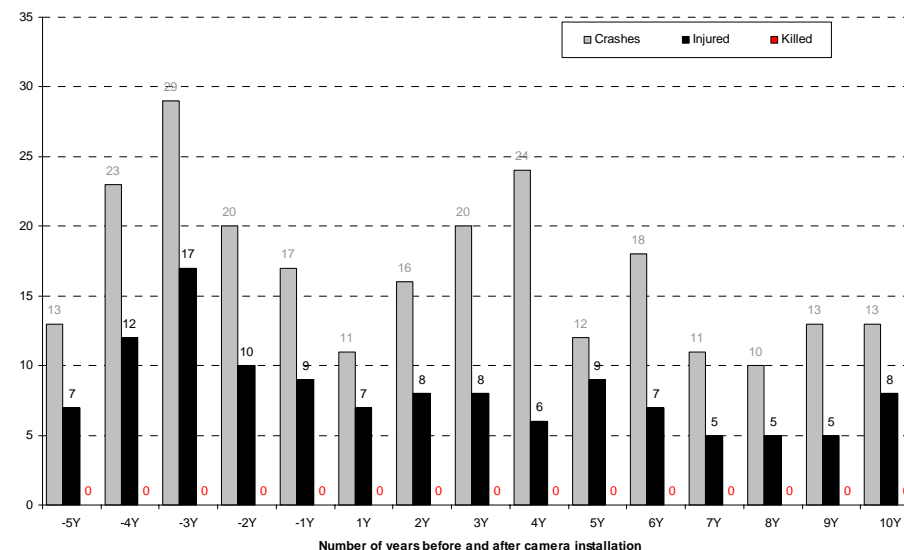
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	55	29	47%
Casualties	55	29	47%
Crashes	102	63	38%
Casualty Cost	\$7.48M	\$3.94M	47%

\* May 1997 to May 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 38 per cent reduction in the annual average number of crashes and a 47 per cent reduction in the annual average number of casualties.
- This has been a saving of \$3.54 million in costs to the community.
- The infringement graph details the trend in infringements at this location since August 2002. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

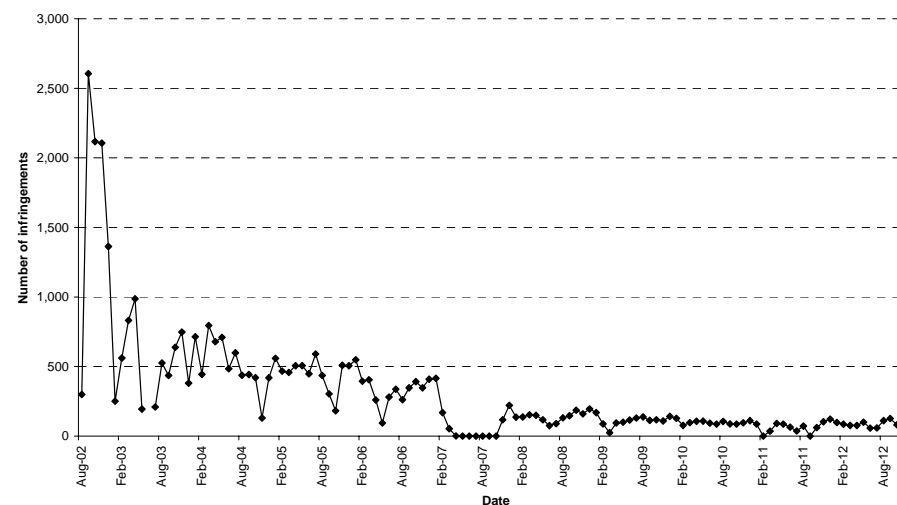
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PENNANT HILLS ROAD CARLINGFORD



## Old Northern Road, Castle Hill (school zone)

Location: Old Northern Road, between Telfer Road and Brisbane Road

School zone: St Bernadette's Primary School

Length description: 150m east to 280m west of camera

Total length: 430m patch to patch

Number of cameras: 1

Started infringing: 18/05/2007

Status: **Effective**

### Current camera performance

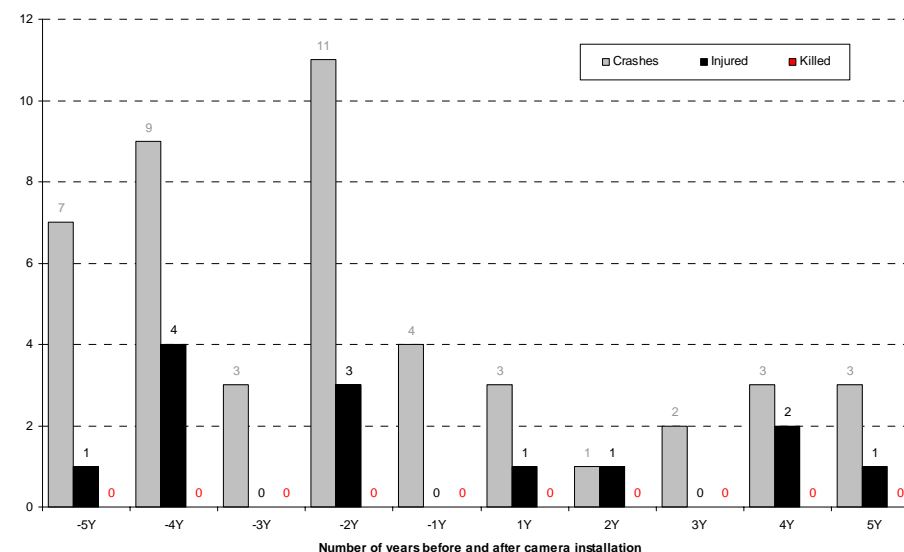
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	8	5	38%
Casualties	8	5	38%
Crashes	34	11	68%
Casualty Cost	\$1.09M	\$0.68M	38%

\*February 2002 to February 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 68 per cent reduction in the annual average number of crashes and a 38 per cent reduction in the annual average number of casualties.
- This has been a saving of \$410,000 in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

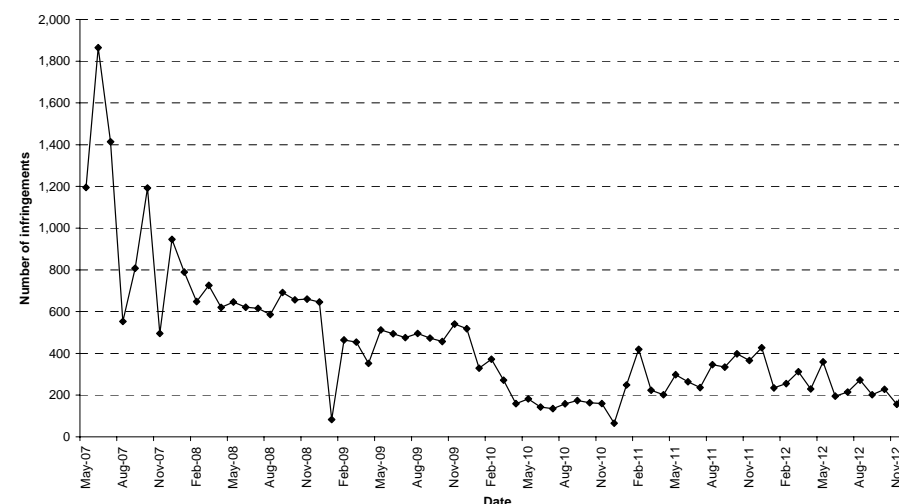
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

OLD NORTHERN ROAD CASTLE HILL



## Pacific Highway, Charmhaven

Location: Pacific Highway, between Wallarah Creek and Lowana Avenue

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 10/04/2007

Status: **Effective**

### Current camera performance

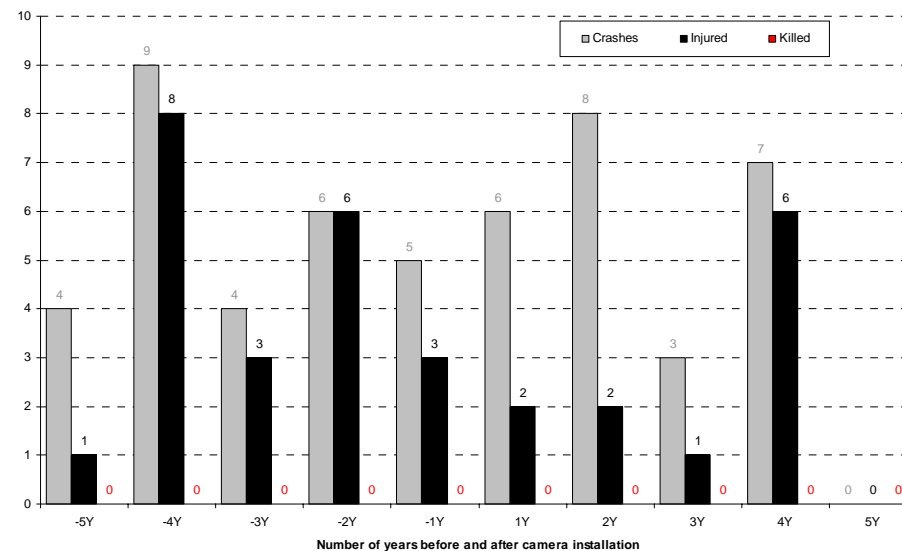
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	21	13	38%
Casualties	21	13	38%
Crashes	28	24	14%
Casualty Cost	\$2.86M	\$1.77M	38%

\* January 2002 to January 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 14 per cent reduction in the annual average number of crashes and a 38 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.09 million in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

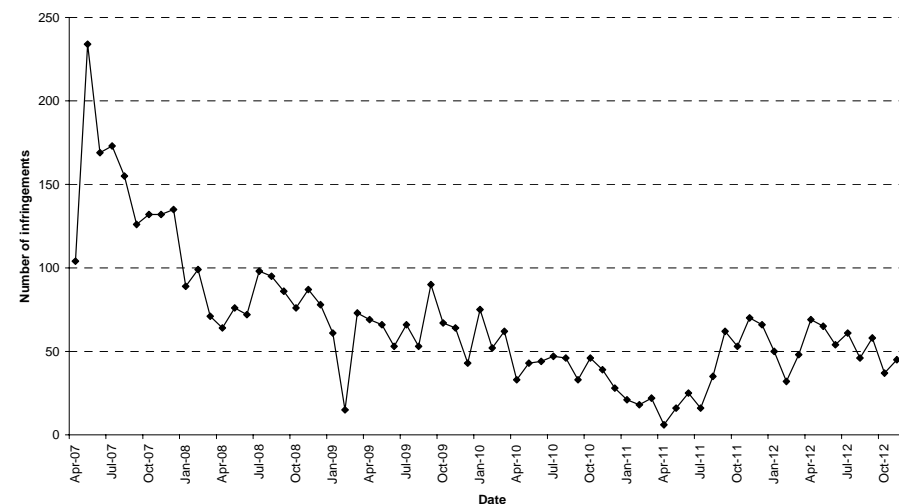
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY CHARMHAVEN





## Concord Road, Concord West

Location: Concord Road, between Nirranda Street and Mepunga Street

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Starting infringing: 24/07/2000

Status: **Effective**

### Current camera performance

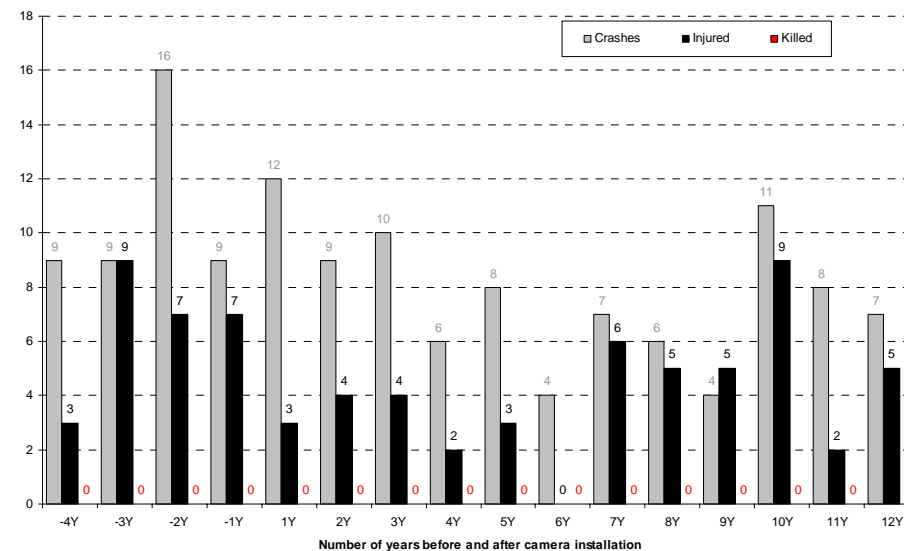
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	0	0	0	-
Injuries	26	32.5	26	20%
Casualties	26	32.5	26	20%
Crashes	43	53.75	36	33%
Casualty Cost	\$3.54M	\$4.42M	\$3.54M	20%

\* April 1995 to April 2000. No data available prior to 1995.

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 33 per cent reduction in the annual average number of crashes and a 20 per cent reduction in the annual average number of casualties.
- This has been a saving of \$880,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The period of camera downtime at this location from October 2009 to July 2010 was due to extensive road resurfacing works.

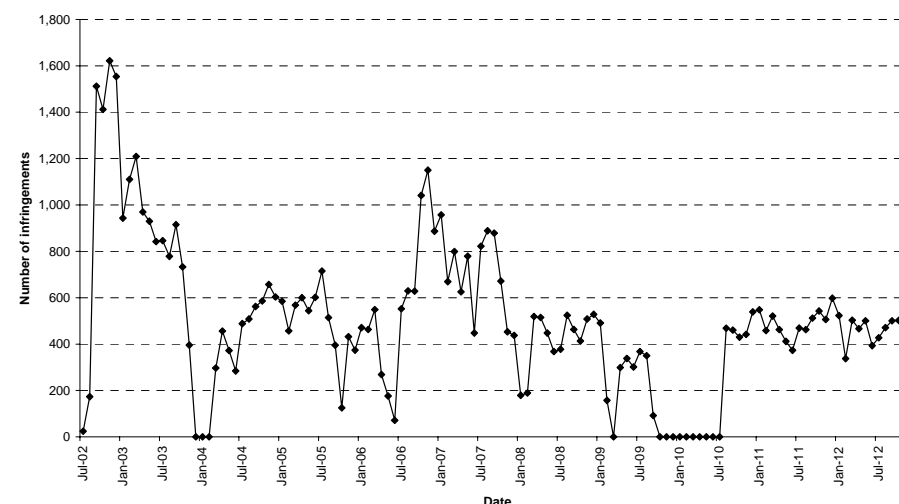
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

CONCORD ROAD CONCORD WEST



## Edgar Street, Condell Park (school zone)

Location: Edgar Street, between Augusta Street and Upper Railway Parade

School zone: Condell Park Primary School

Length description: 150m south to 90m north of camera

Total length: 240m patch to patch

Number of cameras: 1

Started infringing: 24/10/2007

Status: **Effective**

### Current camera performance

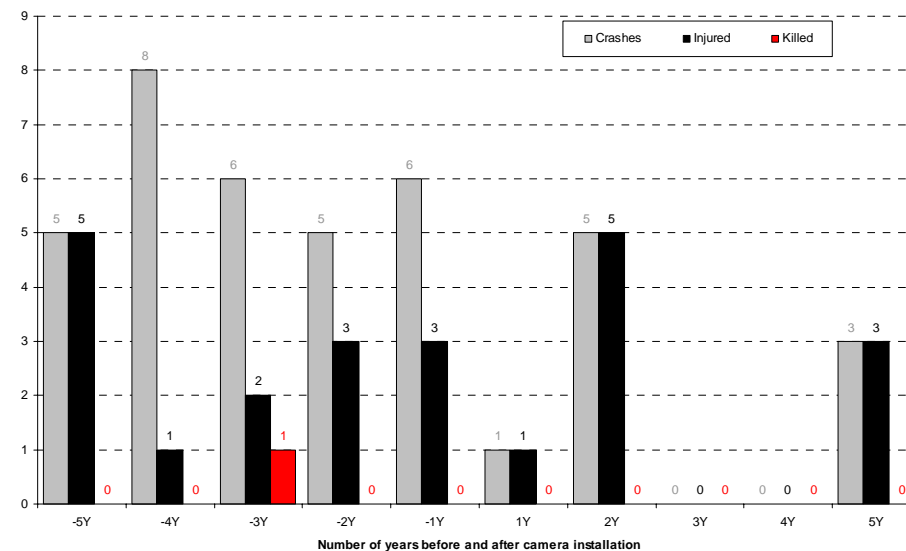
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	14	7	50%
Casualties	15	7	53%
Crashes	30	7	77%
Casualty Cost	\$8.24M	\$0.95M	88%

\* July 2002 to July 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 77 per cent reduction in the annual average number of crashes and a 53 per cent reduction in the annual average number of casualties.
- This has been a saving of \$7.29 million in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

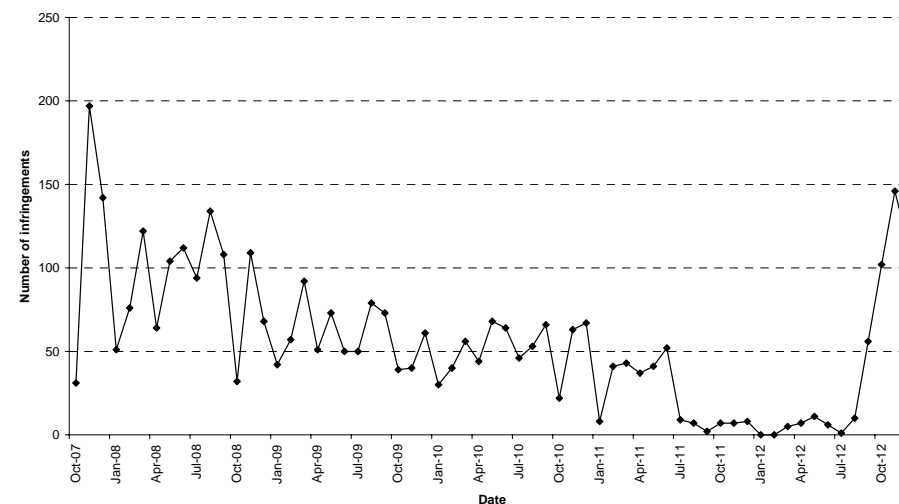
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

EDGAR STREET CONDELL PARK



## Northern Distributor (Memorial Drive), Corrimal

Location: Northern Distributor, between Towradgi Road and Railway Street

Length description: 500m south to 500m north of cameras

Total length: 1000m

Number of cameras: 2

Started infringing:

- Camera 1 (northbound) 11/07/2002
- Camera 2 (southbound) 25/07/2002

Status: **Retained based on 2012 comprehensive safety review**

### Current camera performance

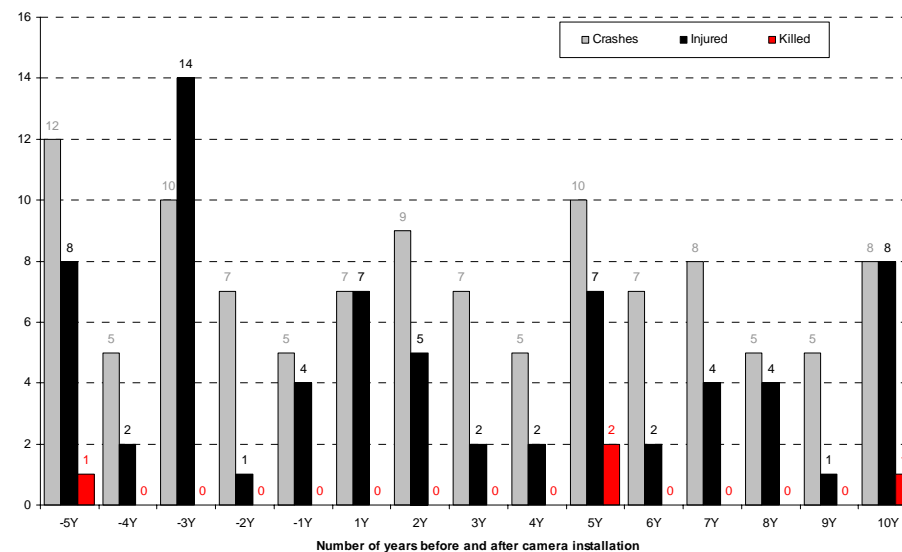
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	1	0%
Injuries	29	22	24%
Casualties	30	23	23%
Crashes	39	35	10%
Casualty Cost	\$10.28M	\$9.33M	9%

\* July 2002 to July 2007

- The current pre and post installation analysis shows that crashes have decreased at this location. This location was reviewed in 2012 due to concerns about the increase in fatalities in recent years. The review found no evidence that the recent fatalities, which occurred at an adjacent intersection, were speed-related and it is unlikely that the speed camera would have reduced these crashes. Further, the 2012 annual review found significant casualty reductions at this location therefore the camera was found to be effective.
- When comparing the pre installation period to the most recent five year period, there has been a 10 per cent reduction in the annual average number of crashes and a 23 per cent reduction in the annual average number of casualties.
- This has been a saving of \$950,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph indicates a reduction in speeding at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

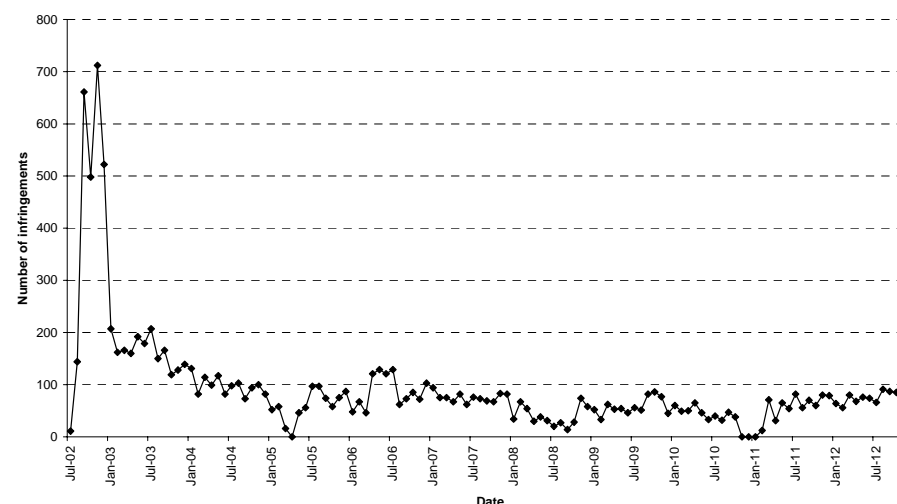
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

NORTHERN DISTRIBUTOR (MEMORIAL DRIVE) CORRIMAL



## Eastern Distributor, Darlinghurst

Location: Eastern Distributor, between Oxford Street and William Street

Length description: 450m north to 1195m south of camera

Total length: 1645m

Number of cameras: 2

Started infringing:

- Camera 1 (southbound) 06/06/2000
- Camera 2 (northbound) 30/11/2000

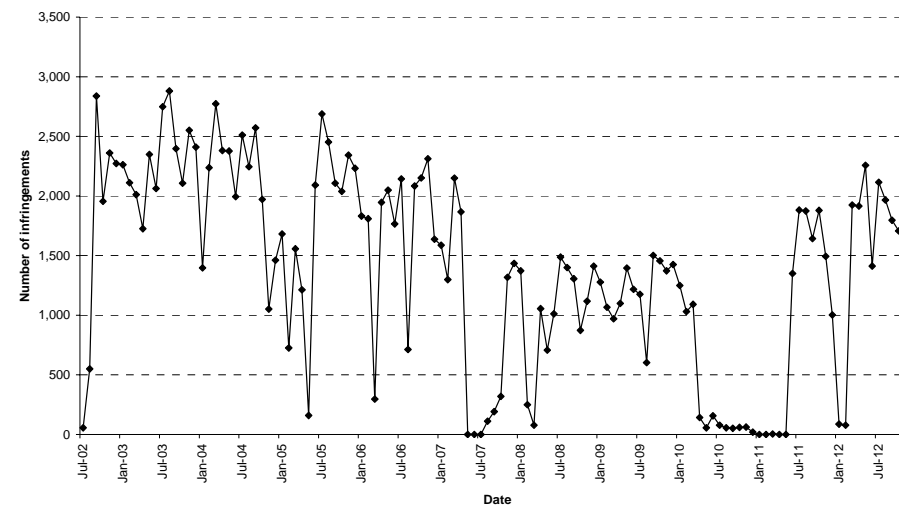
### Crash and casualty data – January 2012 to December 2012

	Southbound	Northbound
Fatalities	0	0
Injuries	4	2
Casualties	4	2
Crashes	4	3

- This location is appropriate for fixed speed camera enforcement as it is a high risk location that is difficult for the NSW Police Force to enforce using traditional methods.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. Roadworks and camera maintenance may influence the number of infringements issued.

## Infringements at fixed speed camera location

EASTERN DISTRIBUTOR DARLINGHURST



## Bunnerong Road, East Gardens/ Maroubra (school zone)

Location: Bunnerong Road, between Fitzgerald Avenue and Smith Street

School zone: Marist College Pagewood

Length description: 220m south to 150m north of cameras

Total length: 370m (patch to patch)

Number of cameras: 2

Started infringing: 20/06/2007

Status: **Effective**

### Current camera performance

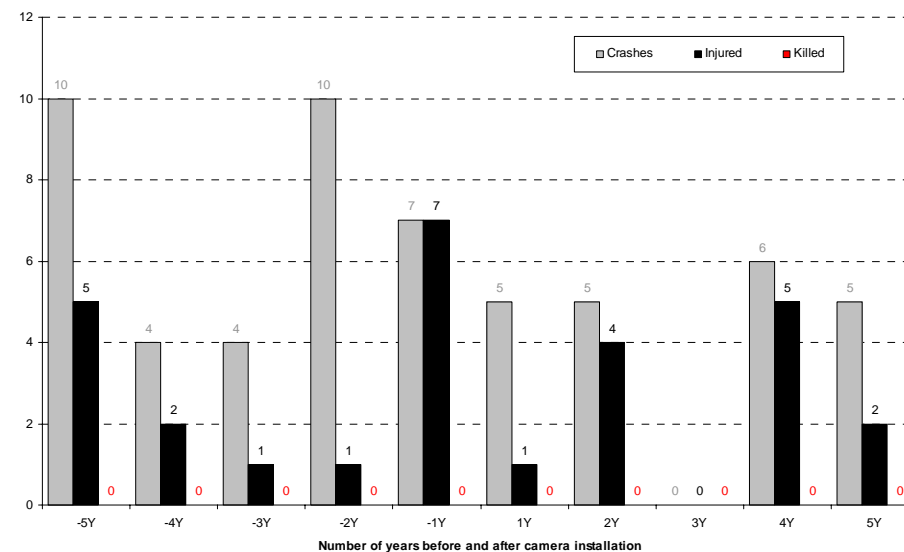
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	16	11	31%
Casualties	16	11	31%
Crashes	35	21	40%
Casualty Cost	\$2.176M	\$1.496M	31%

\* March 2002 to March 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 40 per cent reduction in the annual average number of crashes and a 31 per cent reduction in the annual average number of casualties.
- This has been a saving of \$680,000 in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

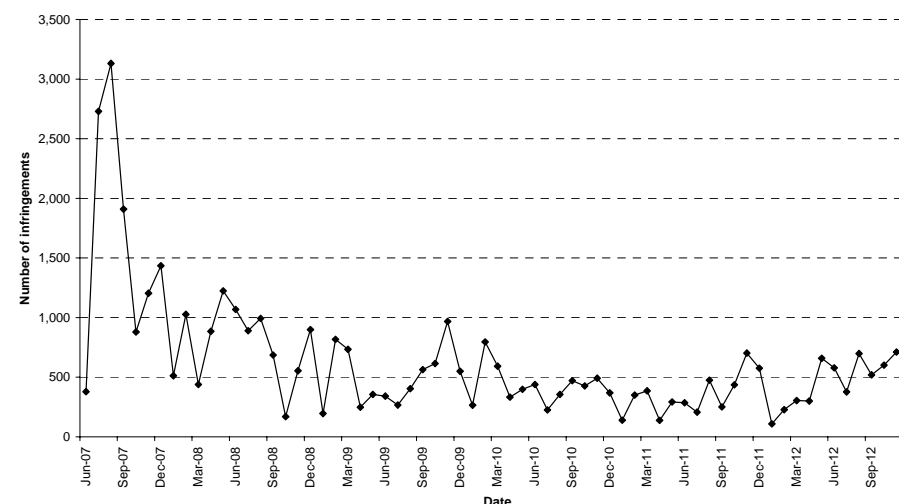
## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements

BUNNERONG ROAD EASTGARDENS/MAROUBRA



## New South Head Road, Edgecliff

Location: New South Head Road, between Waratah Street and New Beach Road

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 07/12/2001

Status: **Retained based on 2012 comprehensive safety review**

### Current camera performance

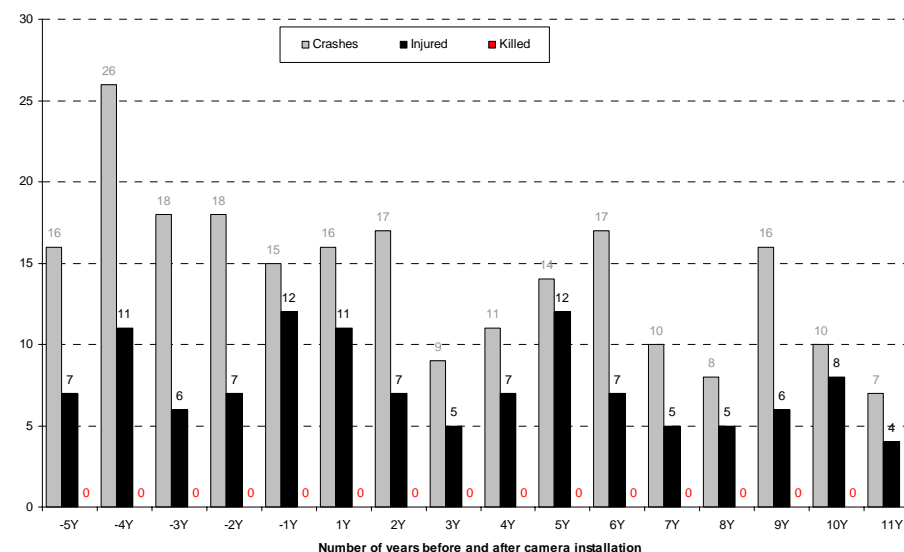
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	43	27	37%
Casualties	43	27	37%
Crashes	93	49	47%
Casualty Cost	\$5.85M	\$3.67M	37%

\*September 1996 to September 2001

- The current pre and post installation analysis shows that crashes have decreased at this location. This location was reviewed in 2012 due to concerns that crashes and casualties at this location had increased. The comprehensive review found that the camera only has an impact on the eastbound direction of traffic because the camera only enforces in this direction and there is a very wide median at the camera location. Therefore the camera was found to be effective and this crash analysis looks only at the eastbound carriageway of New South Head Road.
- When comparing the pre installation period to the most recent five year period, there has been a 47 per cent reduction in the annual average number of crashes and a 37 per cent reduction in the annual average number of casualties.
- This has been a saving of \$2.18 million in costs to the community.
- The infringement graph details the trend in infringements at the location since July 2002. Infringement data before this date are unavailable. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

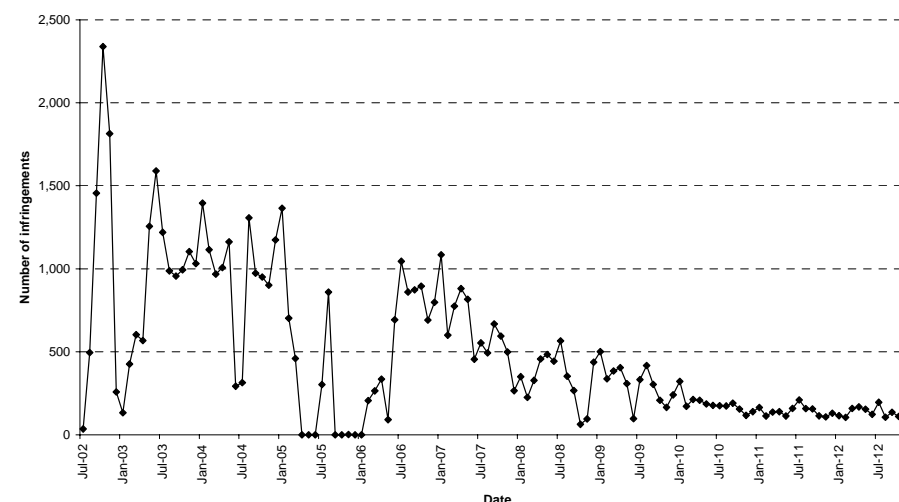
## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements

NEW SOUTH HEAD ROAD EDGECLIFF



## Pacific Highway, Ewingsdale

Location: Pacific Highway, between St Helena Road and Ewingsdale Road.

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Starting infringing: 22/09/2006

Status: **Effective**

### Current camera performance

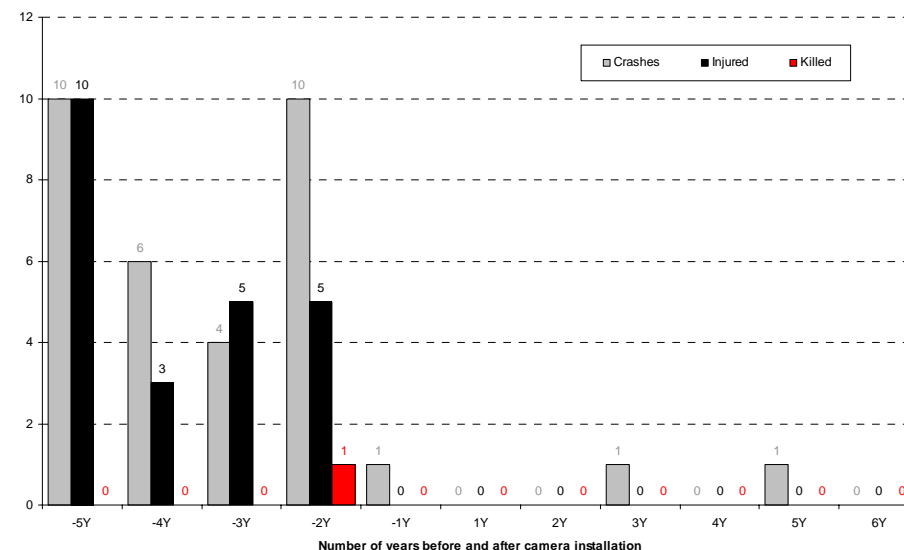
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	23	0	100%
Casualties	24	0	100%
Crashes	31	2	94%
Casualty Cost	\$9.47M	\$0M	100%

\*June 2001 to June 2006

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 94 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$9.47 million in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. The graph indicates a consistent level of speeding has been recorded at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

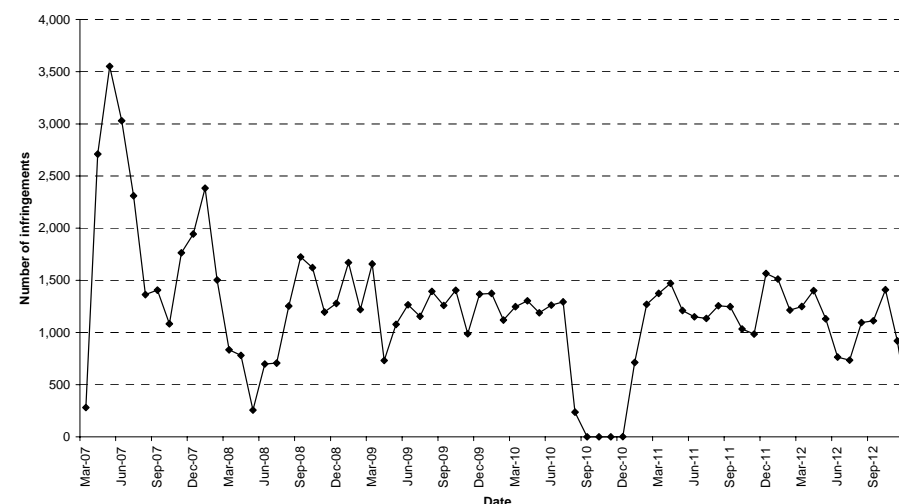
## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements

PACIFIC HIGHWAY EWINGSDALE



## Fairfield Street, Fairfield East

Location: Fairfield Street, between Scott Street and Mandarin Street

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 04/07/2002

Status: **Review**

### Current camera performance

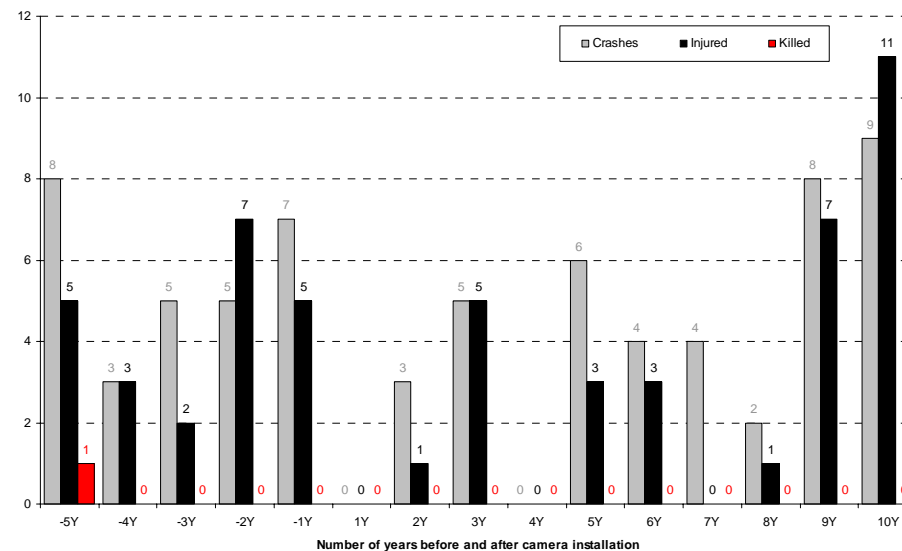
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	22	21	5%
Casualties	23	21	9%
Crashes	28	25	11%
Casualty Cost	\$9.33M	\$2.86M	69%

\*April 1997 to April 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been an 11 per cent reduction in the annual average number of crashes and a 9 per cent reduction in the annual average number of casualties.
- This has been a saving of \$6.47 million in costs to the community.
- This location is recommended for comprehensive safety review as there has been an increase in casualties at this location in the most recent five year period.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

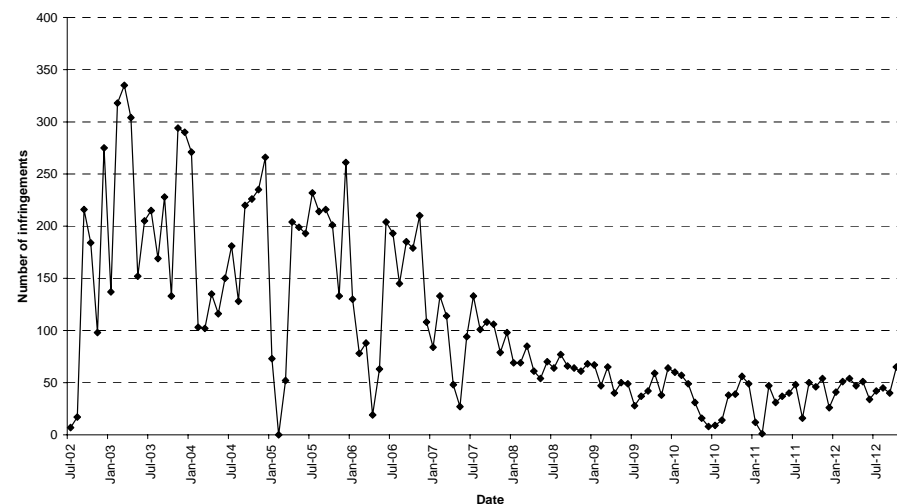
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

FAIRFIELD STREET FAIRFIELD EAST





## Princes Highway, Foxground

Location: Princes Highway, between Foxground Road and Broughton Creek

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 9/05/2003

Status: **Effective**

### Current camera performance

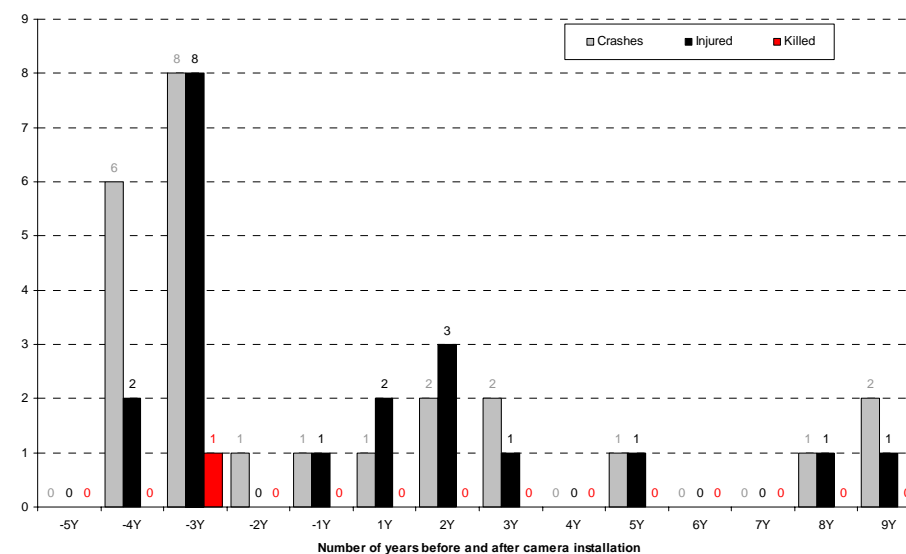
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	11	3	73%
Casualties	12	3	75%
Crashes	16	4	75%
Casualty Cost	\$7.83M	\$0.41M	95%

\*February 1998 to February 2003

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 75 per cent reduction in the annual average number of crashes and a 75 per cent reduction in the annual average number of casualties.
- This has been a saving of \$7.42 million in costs to the community.
- The infringement graph details the trend in infringements at this location since November 2003. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

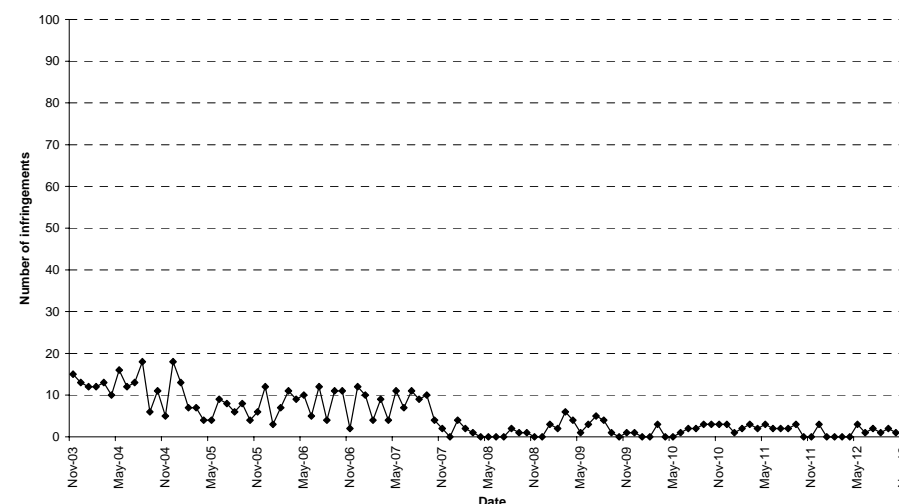
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PRINCES HIGHWAY FOXGROUND



## Pacific Highway, Gateshead (school zone)

Location: Pacific Highway, between Sydney Street and Macquarie Avenue  
 School zone: Hunter Sports High School, Gateshead Public School, St Mary's High School

Length description: 460m north to 360m south of camera

Total length: 820m (patch to patch)

Number of cameras: 1

Started infringing: 30/05/2000

Status: **Effective**

### Current camera performance

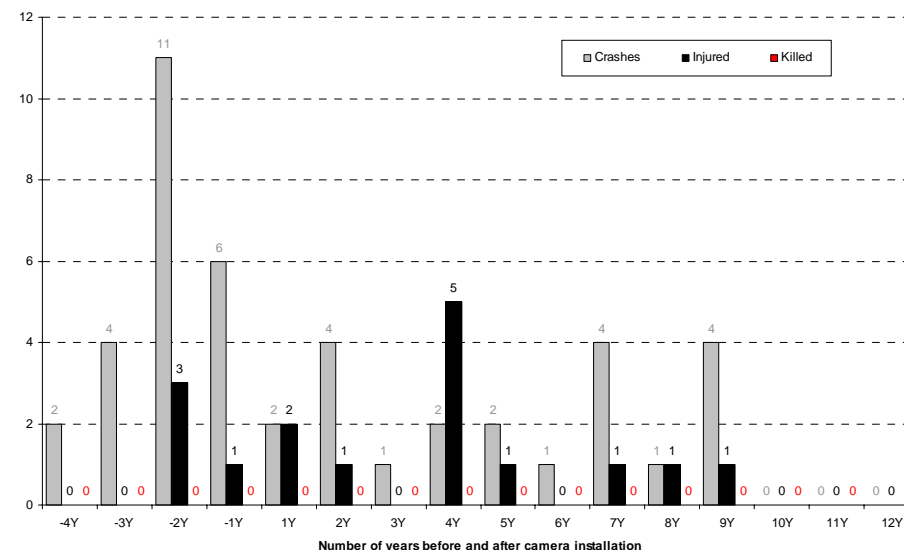
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	0	0	0	-
Injuries	4	5	2	60%
Casualties	4	5	2	60%
Crashes	23	28.75	5	83%
Casualty Cost	\$0.54M	\$0.68M	\$0.27M	60%

\*March 1996 to March 2000. No data available for 1995.

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five years, there has been an 83 per cent reduction in the annual average number of crashes and a 60 per cent reduction in the annual average number of casualties.
- This has been a saving of \$410,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since August 2003. Infringement data before this date are not available. The graph indicates a consistent level of speeding has been recorded at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

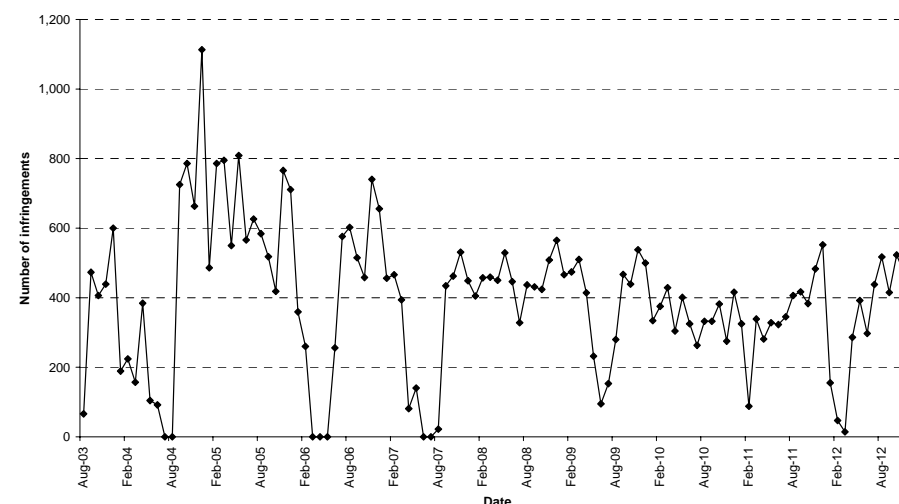
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY GATESHEAD



## Greystanes Road, Greystanes

Location: Greystanes Road, between Merrylands Road and Old Prospect Road

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 30/11/2001

Status: **Effective**

### Current camera performance

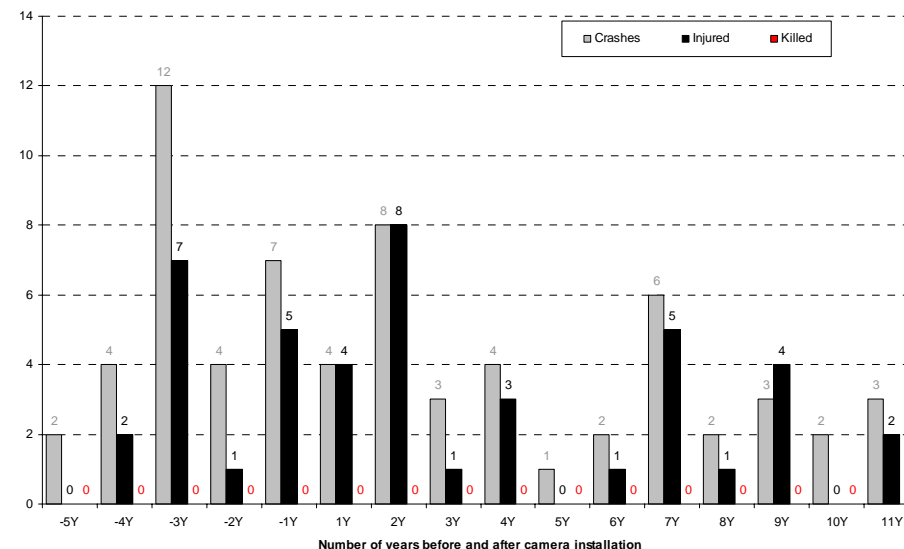
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	15	10	33%
Casualties	15	10	33%
Crashes	29	15	48%
Casualty Cost	\$2.04M	\$1.36M	33%

\*August 1996 to August 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 48 per cent reduction in the annual average number of crashes and a 33 per cent reduction in the annual average number of casualties.
- This has been a saving of \$680,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since August 2002. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

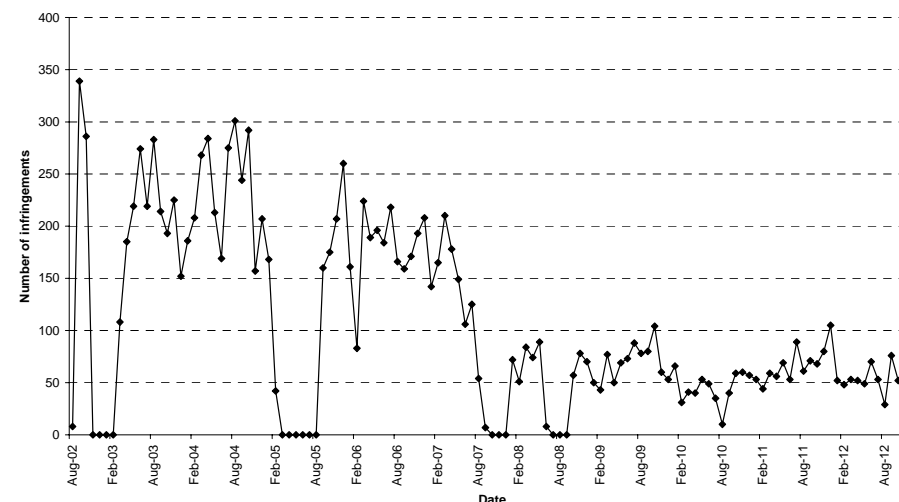
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

GREYSTANES ROAD GREYSTANES



## Woodville Road, Guildford (school zone)

Location: Woodville Road, between Kenelda Avenue and Osgood Street

School zone: Granville South Public School

Length description: 220m north to 280m south of cameras

Total length: 500m (patch to patch)

Number of cameras: 2

Started infringing: 16/05/2007

Status: **Effective**

### Current camera performance

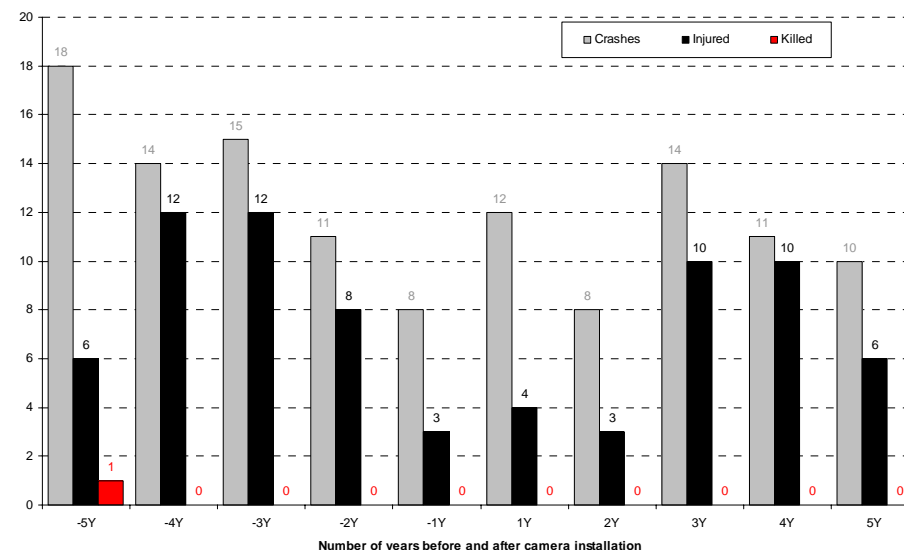
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	41	33	20%
Casualties	42	33	21%
Crashes	66	52	21%
Casualty Cost	\$11.91M	\$4.49M	62%

\*February 2002 to February 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 21 per cent reduction in the annual average number of crashes and a 21 per cent reduction in the annual average number of casualties.
- This has been a saving of \$7.42 million in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

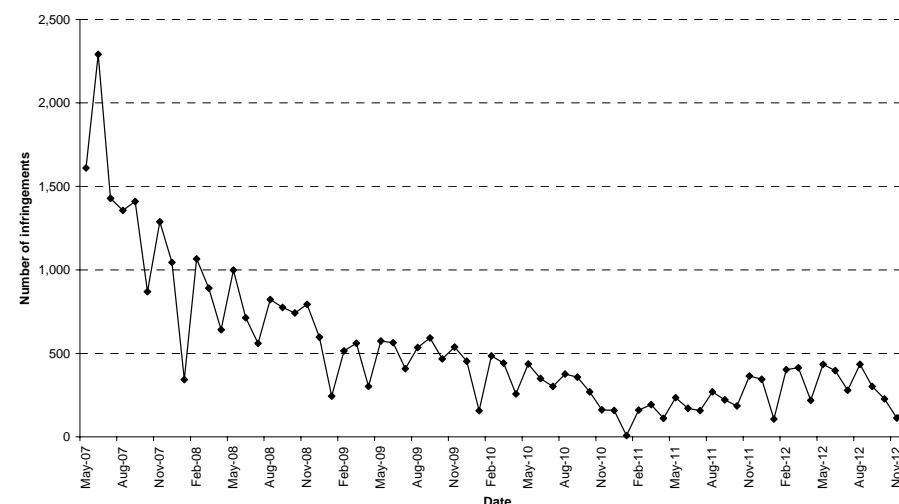
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

WOODVILLE ROAD GUILFORD



## Southern Freeway, Gwynneville (northbound)

Location: Southern Freeway, between Northern Distributor Overpass and Gipps Road Overpass (northbound)

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 07/08/2003

Status: **Effective**

### Current camera performance

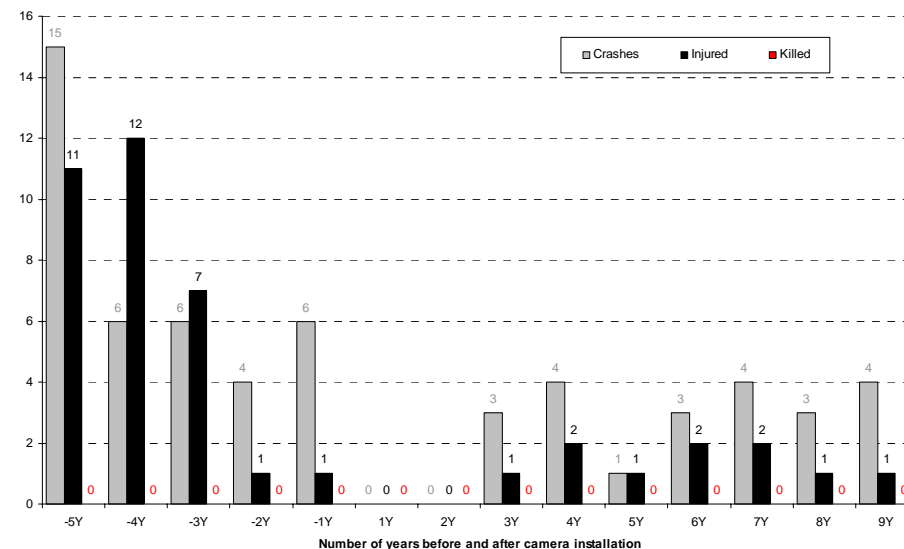
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	32	7	78%
Casualties	32	7	78%
Crashes	37	15	59%
Casualty Cost	\$4.35M	\$0.95M	78%

\*May 1998 to May 2003

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 59 per cent reduction in the annual average number of crashes and a 78 per cent reduction in the annual average number of casualties.
- This has been a saving of \$3.4 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

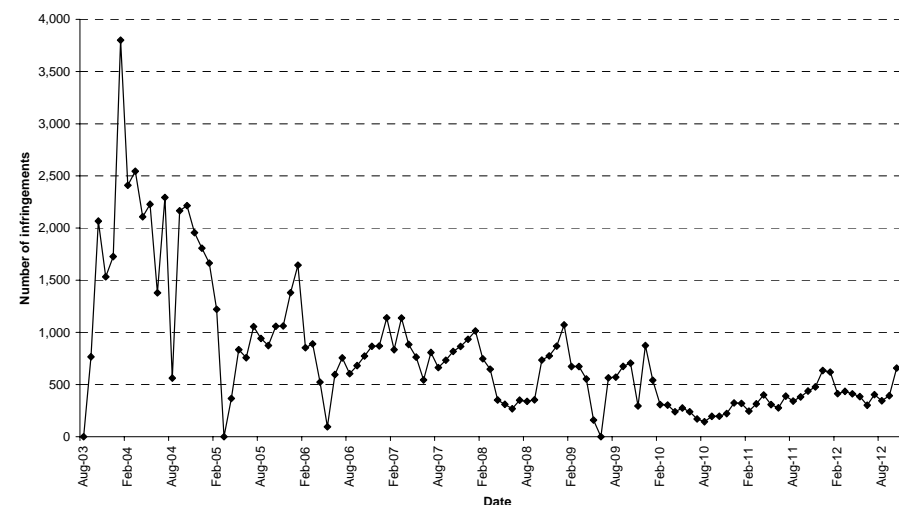
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

F6 SOUTHERN FREEWAY GWYNNEVILLE NORTHBOUND



## Southern Freeway, Gwynneville (southbound)

Location: Southern Freeway, University Avenue Overpass and Mount Ousley Road (southbound)

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 07/08/2003

Status **Effective**

### Current camera performance

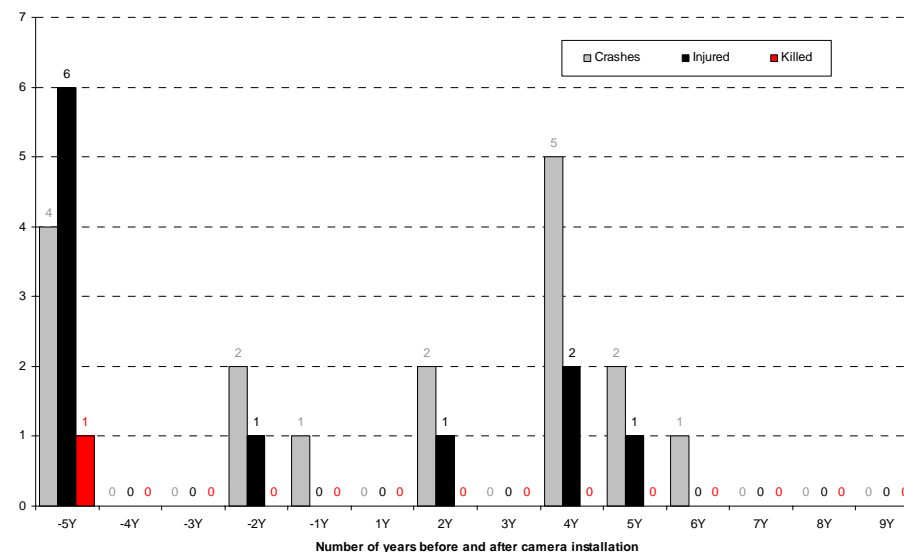
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	7	1	86%
Casualties	8	1	88%
Crashes	7	4	43%
Casualty Cost	\$7.29M	\$0.14M	98%

\*May 1998 to May 2003

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 43 per cent reduction in the annual average number of crashes and an 88 per cent reduction in the annual average number of casualties.
- This has been a saving of \$7.15 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

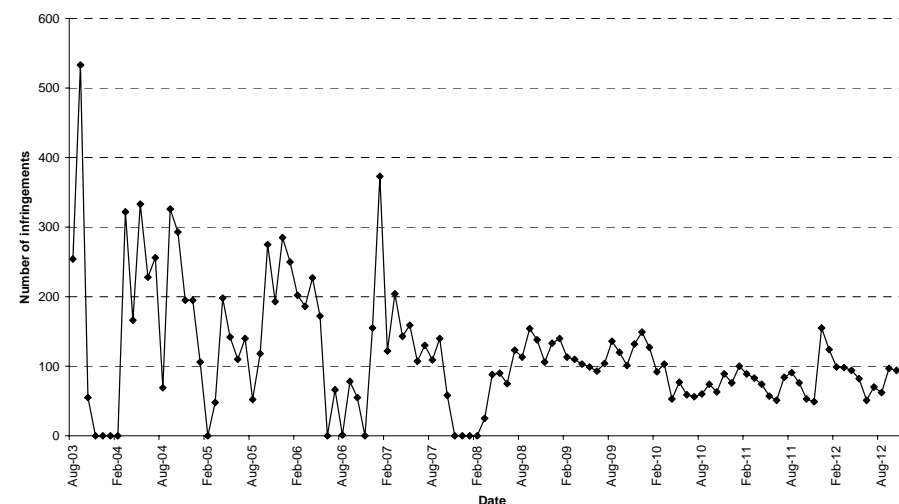
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

F6 SOUTHERN FREEWAY GWYNNEVILLE SOUTHBOUND



## Great Western Highway, Hartley

Location: Great Western Highway, between Mid Hartley Road and Blackmans Creek Road

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 06/12/2000

Status: **Effective**

### Current camera performance

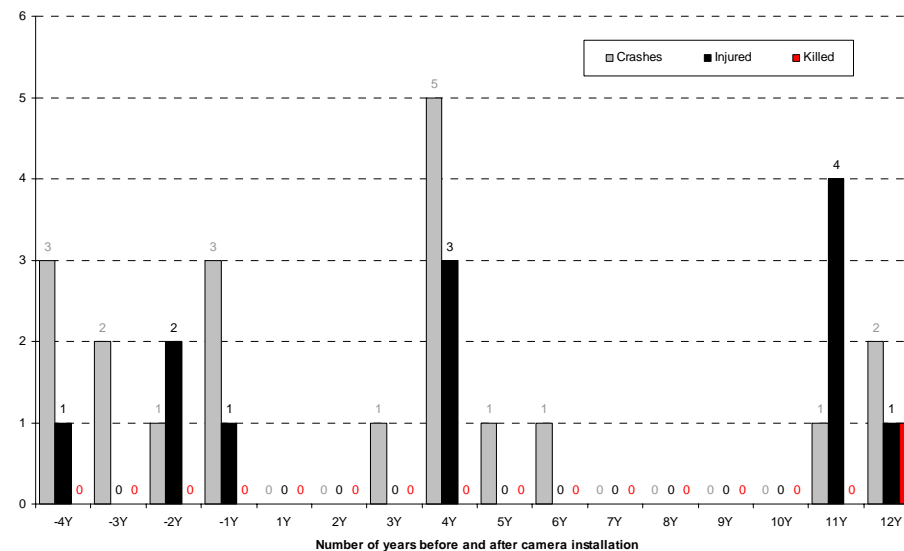
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	0	0	1	Increase from 0 to 1
Injuries	4	5	7	+40%
Casualties	4	5	8	+60%
Crashes	9	11.25	4	64%
Casualty Cost	\$0.54M	\$0.68M	\$7.29M	+972%

\* September 1996 to September 2000. No data available for 1995.

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 64 per cent reduction in the annual average number of crashes however there has been a 60 per cent increase in the annual average number of casualties.
- There was one fatality at this location which occurred in February 2012. Since then, there have been a number of treatments at this location to further improve road safety including a speed limit reduction from 90km/h to 80km/h from July 2012. There is also planned implementation of a point-to-point enforcement length along this section of the Great Western Highway therefore it is recommended that the camera is retained until the length is installed.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The spike in infringements from July 2012 can be attributed to the speed limit change on this road. Roadworks and camera maintenance may influence the number of infringements issued.

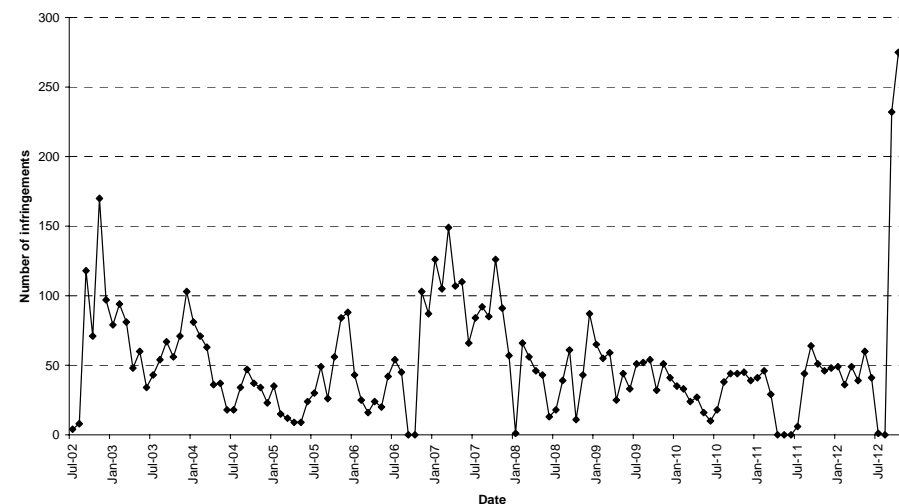
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

GREAT WESTERN HIGHWAY HARTLEY



## Pacific Highway, Hungry Head (Valla)

Location: Pacific Highway, between Boundary Road and Ballards Road

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 25/11/2002

Status: **Retained based on 2012 comprehensive safety review**

### Current camera performance

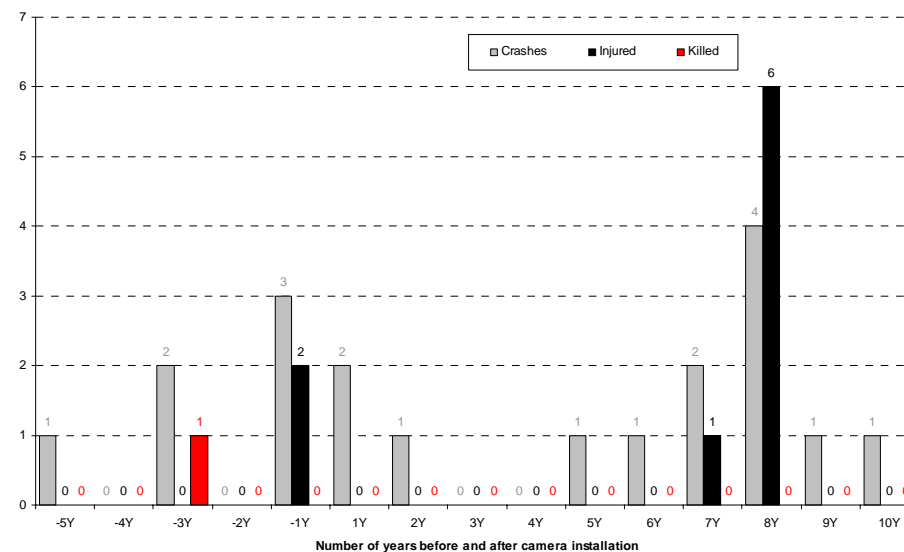
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	2	7	+250%
Casualties	3	7	+133%
Crashes	6	9	+50%
Casualty Cost	\$6.61M	\$0.95M	86%

\*August 1997 to August 2002

- The current pre and post installation analysis shows that crashes and casualties have increased at this location. This location was reviewed in 2012 due to concerns that crashes and casualties at this location had increased. This speed camera is also located on a section of the Pacific highway which is yet to be upgraded. The comprehensive review indicated that a number of safety improvements have been made along this section of the highway (following several crashes in 2010) including the recent installation of wire rope barrier. The wire rope barrier has been hit a number of times and should the speed camera be removed, it is likely that traffic speeds would increase which would be likely to result in any impacts with the wire rope barrier being more extensive than at present.
- As there are difficulties conducting speed enforcement using other means at this location, and to maintain the safety benefits of the wire rope barrier, it was recommended that the camera be retained until the road is bypassed as part of the Pacific Highway upgrade.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there is a very low infringement rate at this location over time. Roadworks have prevented the operation of the camera during 2011.

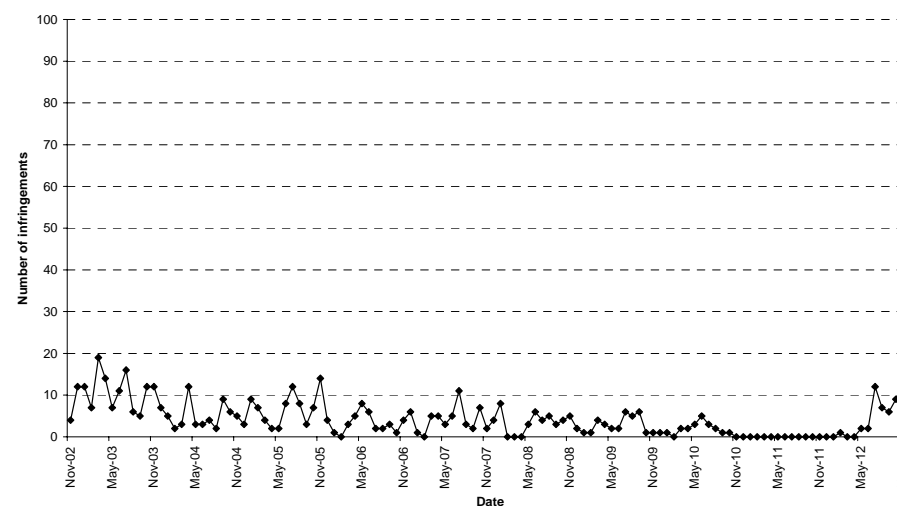
## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements

PACIFIC HIGHWAY HUNGRY HEAD (VALLA)





## Forest Road, Hurstville (school zone)

Location: Forest Road, between Lily Street and Cronulla Street  
 School zone: Bethany College, Sydney Technical High School, Hurstville Boys High School and Hurstville Primary School  
 Length description: 190m south to 520m north of camera  
 Total length: 710m (patch to patch)  
 Number of cameras: 1  
 Started infringing: 17/10/2007  
 Status: **Effective**

### Current camera performance

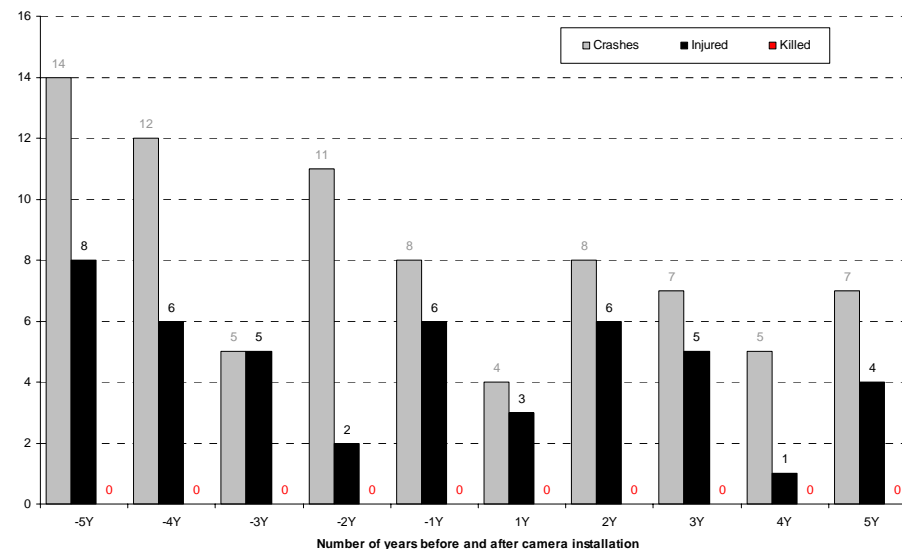
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	27	20	26%
Casualties	27	20	26%
Crashes	50	33	34%
Casualty Cost	\$3.67M	\$2.72M	26%

\*July 2002 to July 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 34 per cent reduction in the annual average number of crashes and a 26 per cent reduction in the annual average number of casualties.
- This has been a saving of \$950,000 in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

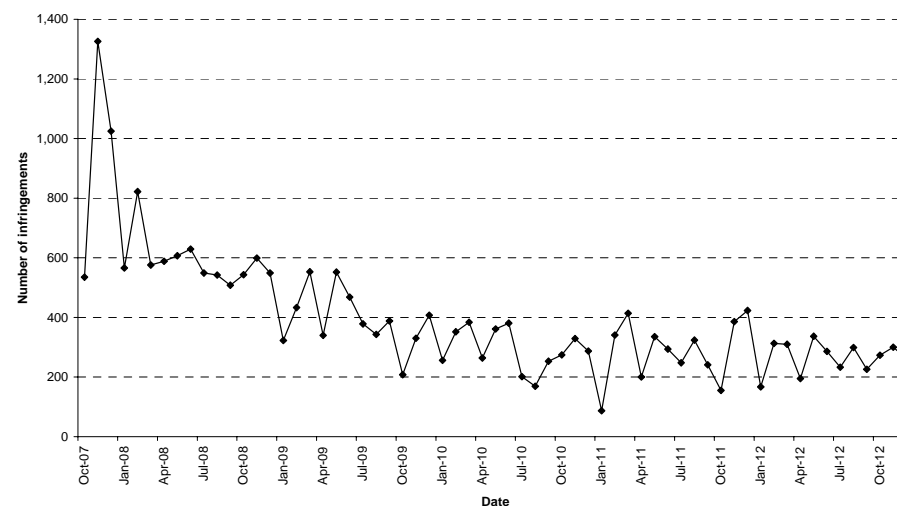
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

FOREST ROAD HURSTVILLE



## Parker Street, Kingswood (school zone)

Location: Parker Street, between Copeland Street and Gascoigne Street

School zone: St Dominics College

Length description: 220m south to 120m north of cameras

Total length: 340m (patch to patch)

Number of cameras: 2

Started infringing: 28/01/2009

Status: **Effective**

### Current camera performance

	Five years before installation*	Most recent three years and 338 day period	Percentage reduction**
Fatalities	0	0	-
Injuries	28	17	23%
Casualties	28	17	23%
Crashes	28	20	9%
Casualty Cost	\$3.81M	\$2.31M	23%

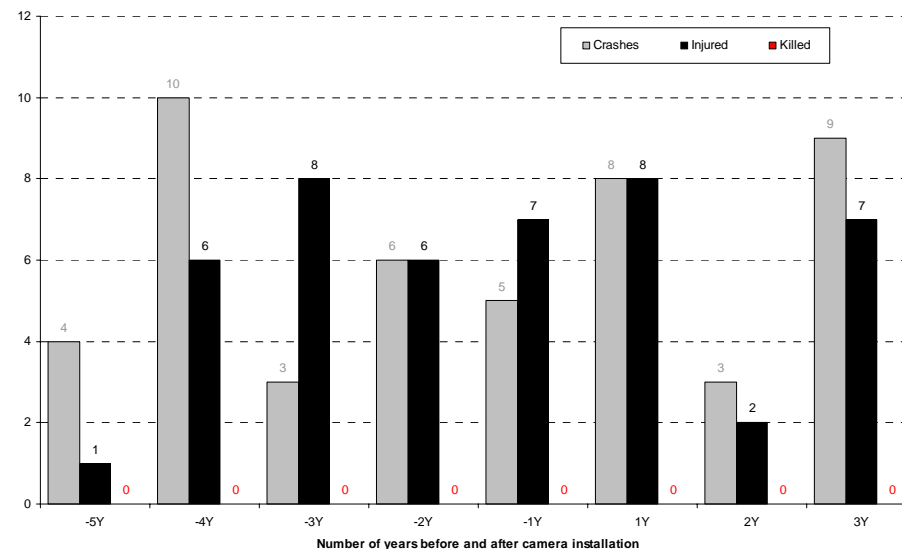
\*October 2003 to October 2008

\*\*The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent three years and 338 day period, there has been a 9 per cent reduction in the annual average number of crashes and a 23 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.50 million in costs to the community.
- The infringement graph details the trend in infringements at the location since the camera began operation. The graph indicates a consistent level of speeding has been recorded at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

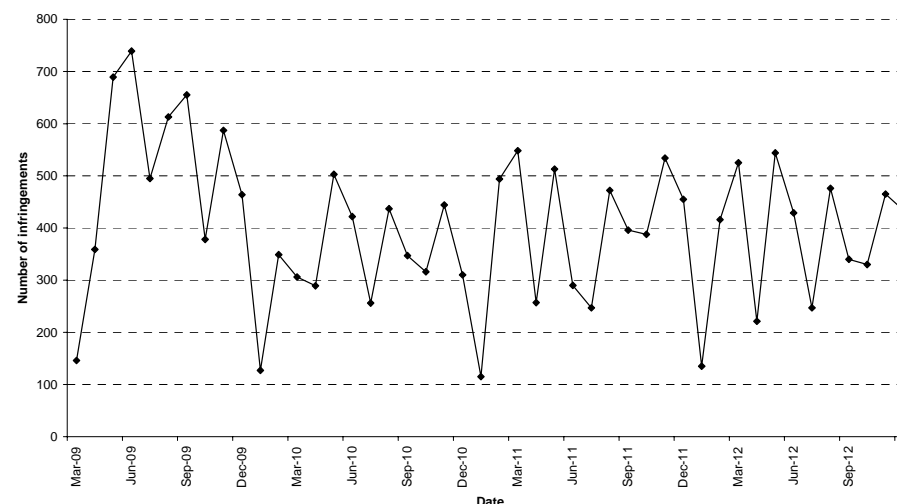
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PARKER STREET KINGSWOOD



## Princes Highway, Kogarah (school zone)

Location: Princes Highway, between Gray Street and President Avenue  
 School zone: St Patricks Primary School, Bethany College, James Cook Boys High School, Moorefield Girls High School, Kogarah Public School  
 Length description: 190m south to 800m north of cameras  
 Total length: 990m (patch to patch)  
 Number of cameras: 2  
 Started infringing: 15/07/2003  
 Status: **Effective**

### Current camera performance

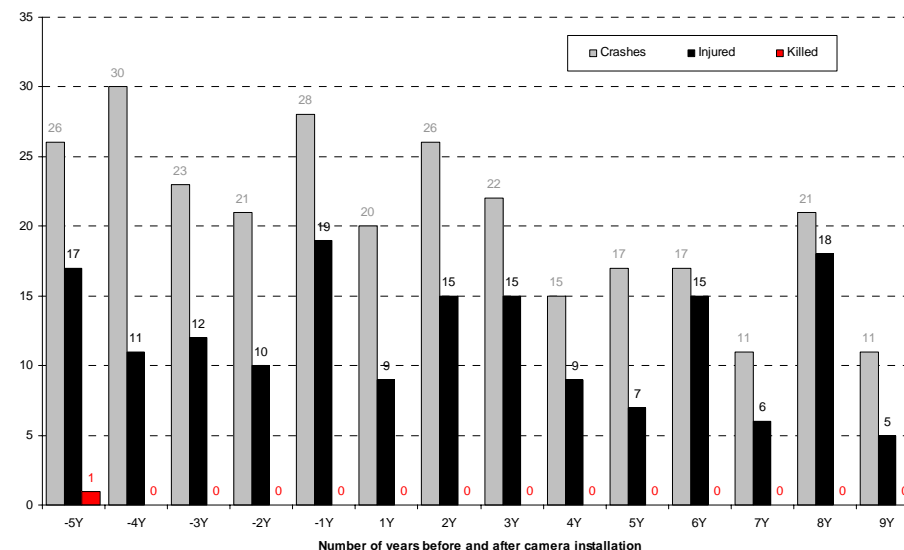
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	69	53	23%
Casualties	70	53	24%
Crashes	128	78	39%
Casualty Cost	\$15.72M	\$7.21M	54%

\*April 1998 to April 2003

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 39 per cent reduction in the annual average number of crashes and a 24 per cent reduction in the annual average number of casualties.
- This has been a saving of \$8.51 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

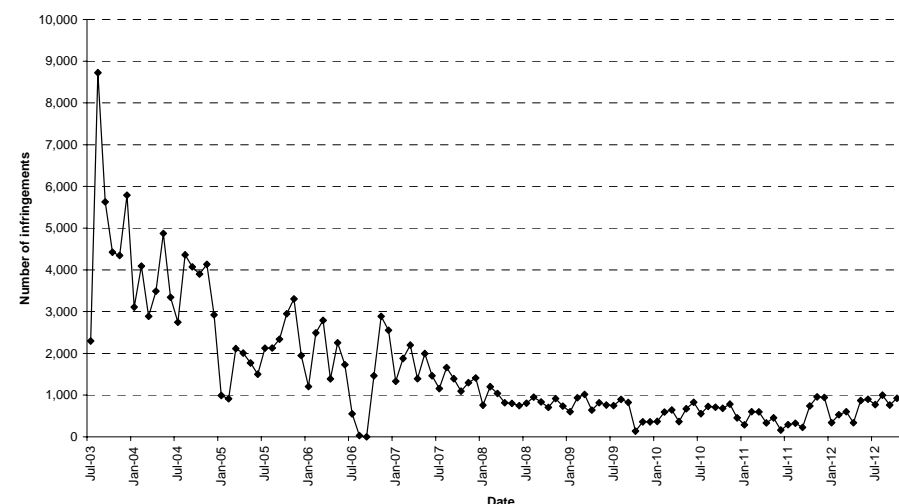
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PRINCES HIGHWAY KOGARAH



## Pacific Highway, Korora

Location: Pacific Highway, between Bruxner Park Road and Korora Basin Road

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 20/02/2003

Status: **Effective**

### Current camera performance

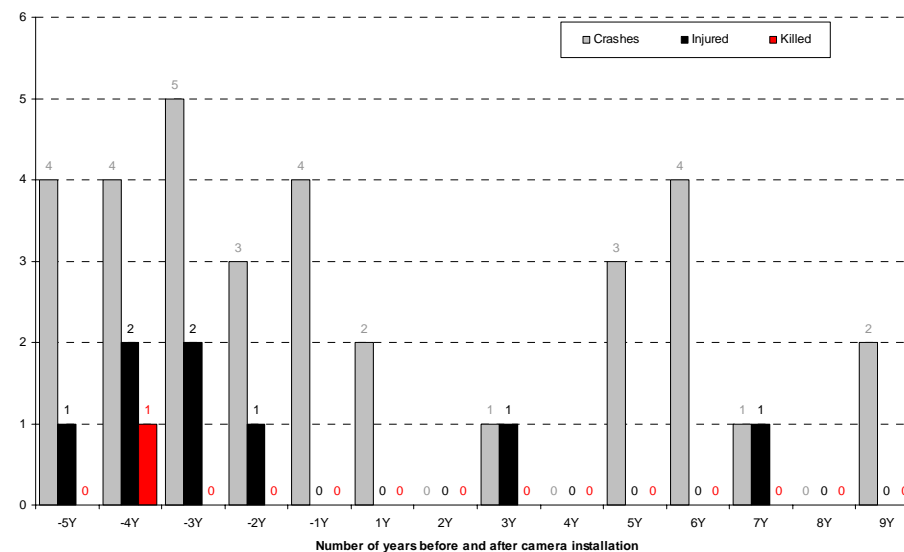
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	6	3	50%
Casualties	7	3	57%
Crashes	20	9	55%
Casualty Cost	\$7.15M	\$0.41M	94%

\*November 1997 to November 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 55 per cent reduction in the annual average number of crashes and a 57 per cent reduction in the annual average number of casualties.
- This has been a saving of \$6.74 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The spike in infringements in July 2012 can be attributed to a speed limit change from 100km/h to 80km/h. Roadworks and camera maintenance may influence the number of infringements issued.

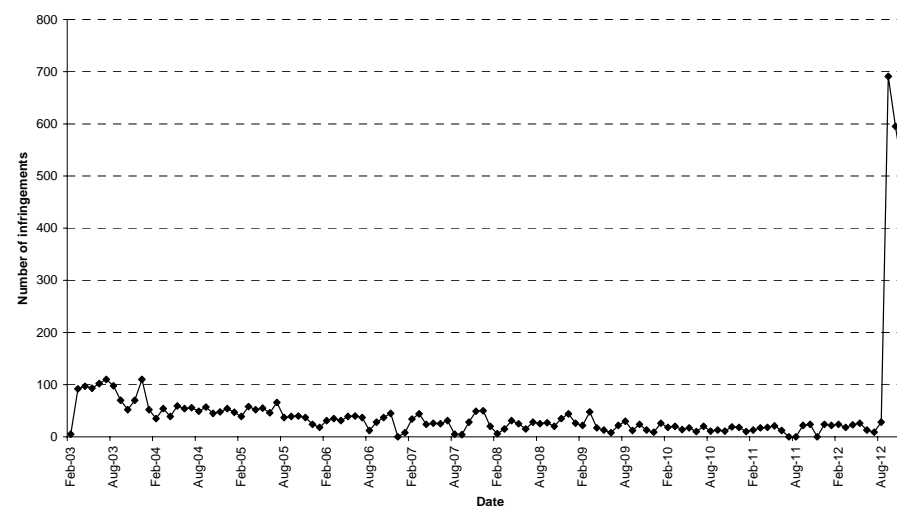
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY KORORA



## Bells Line of Road, Kurrajong

Location: Bells Line of Road, between Queen Street and Bellbird Avenue

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 22/05/2000

Status: **Effective**

### Current camera performance

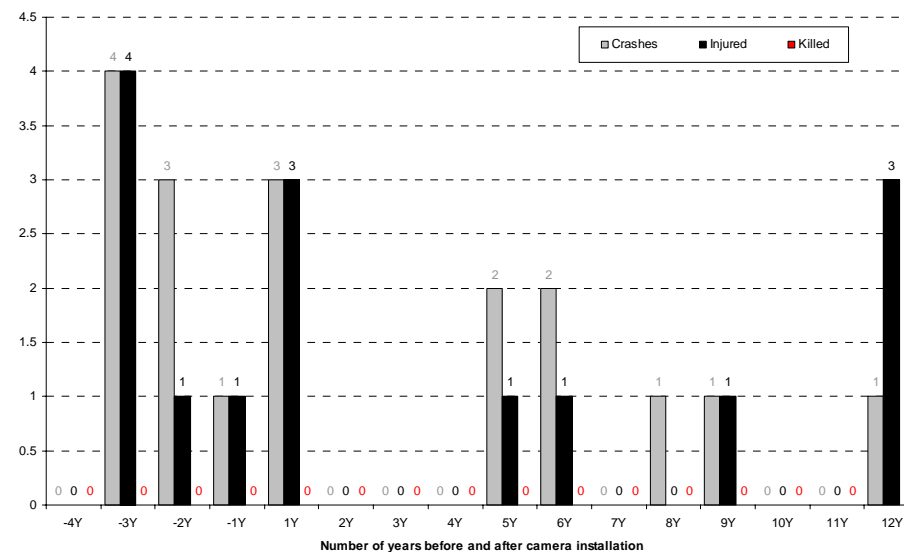
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	0	0	0	-
Injuries	6	7.5	4	47%
Casualties	6	7.5	4	47%
Crashes	8	10	2	80%
Casualty Cost	\$0.82M	\$1.02M	\$0.54M	47%

\*February 1996 to February 2000. No data available for 1995.

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been an 80 per cent reduction in the annual average number of crashes and a 47 per cent reduction in the annual average number of casualties.
- This has been a saving of \$480,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The graph indicates a consistent level of speeding has been recorded at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

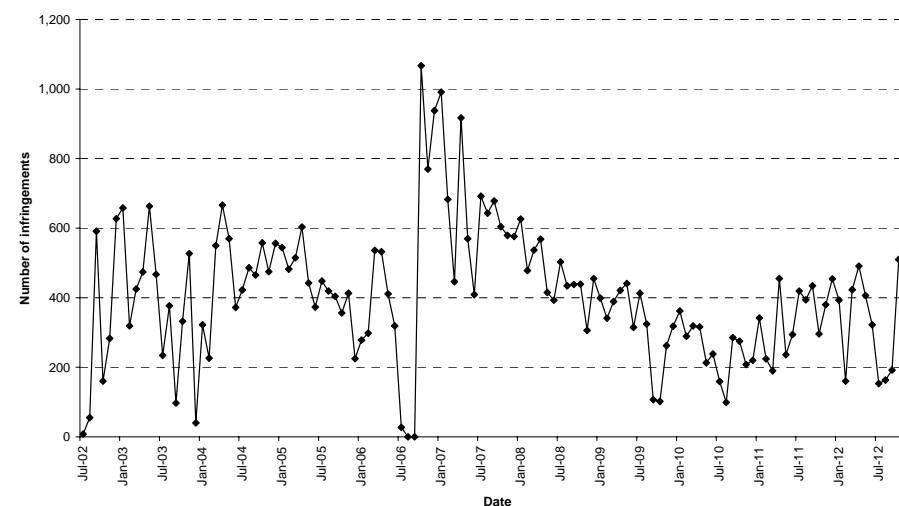
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

BELLS LINE OF ROAD KURRAJONG



## Centennial Avenue, Lane Cove

Location: Centennial Avenue, between Gentle Street and Figtree Street

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 10/12/2001

Status: **Effective**

### Current camera performance

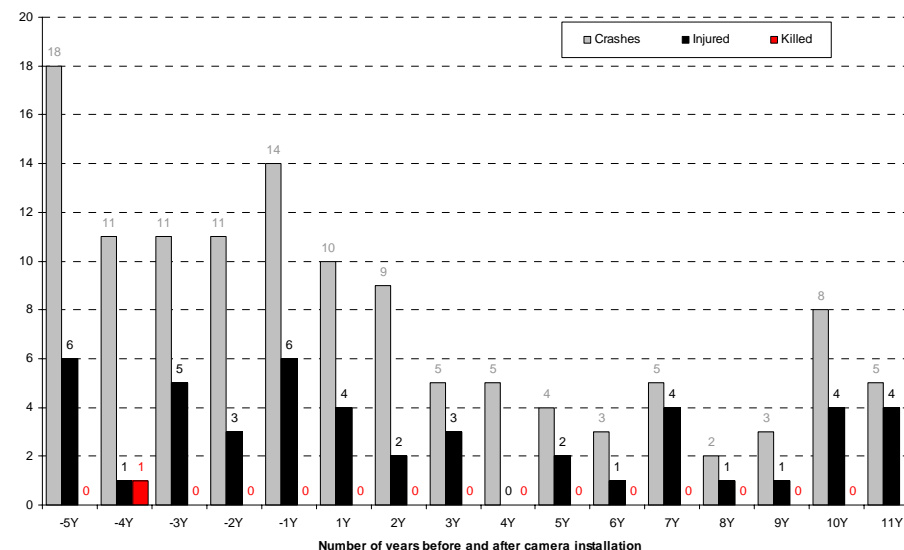
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	21	14	33%
Casualties	22	14	36%
Crashes	65	22	66%
Casualty Cost	\$9.19M	\$1.90M	79%

\*September 1996 to September 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been an 66 per cent reduction in the annual average number of crashes and a 36 per cent reduction in the annual average number of casualties.
- This has been a saving of \$7.29 million in costs to the community.
- The infringement graph details the trend in infringements at this location since August 2002. Infringement data before this date are not available. These data show there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

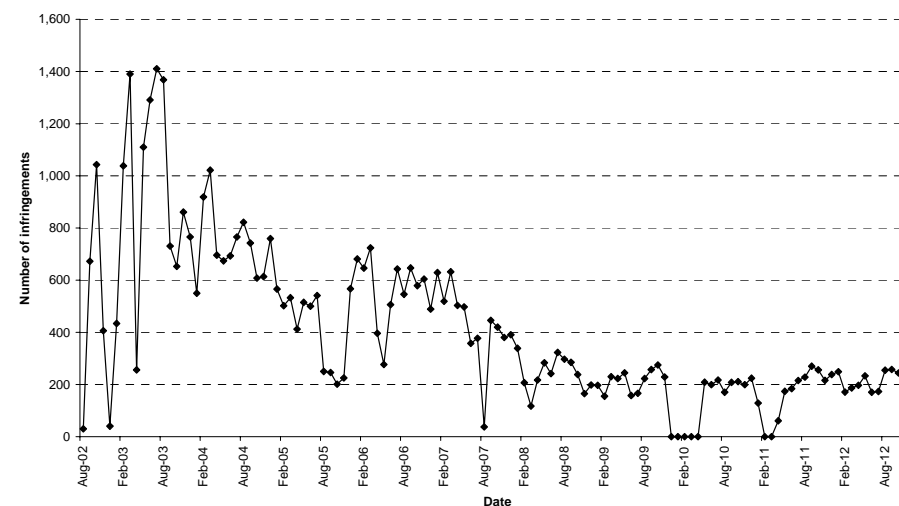
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

CENTENNIAL AVENUE LANE COVE



## Lane Cove Tunnel, Lane Cove Tunnel (high risk location)

Length description:

- Camera 1 (eastbound) 2650m east to 960m west of camera
- Camera 2 (westbound) 2665m east to 950m west of camera

Total length:

- Camera 1 (eastbound) 3610m
- Camera 2 (westbound) 3615m

Number of cameras: 2

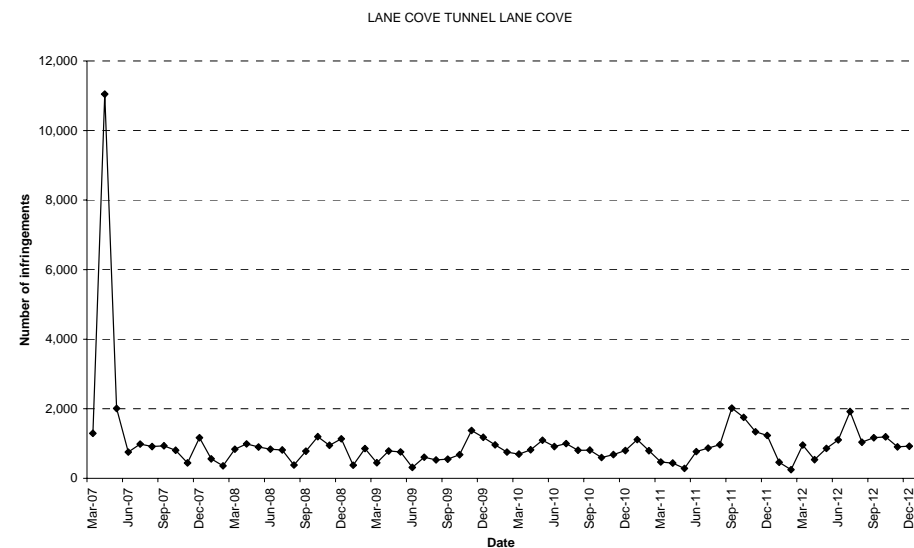
Started infringing: 25/03/2007

### Crash and casualty data – January 2012 to December 2012

	Eastbound	Westbound
Fatalities	0	0
Injuries	0	0
Casualties	0	0
Crashes	0	2

- This location is appropriate for fixed speed camera enforcement as it is a high risk location that is difficult for the NSW Police Force to enforce using traditional methods.
- The infringement graph details the trend in infringements at this location since the cameras began operation. Roadworks and camera maintenance may influence the number of infringements issued.

## Infringements at fixed speed camera location



## Hume Highway, Lansvale

Location: Hume Highway, between Henry Lawson Drive and Knight Street

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 05/12/2001

Status: **Effective**

### Current camera performance

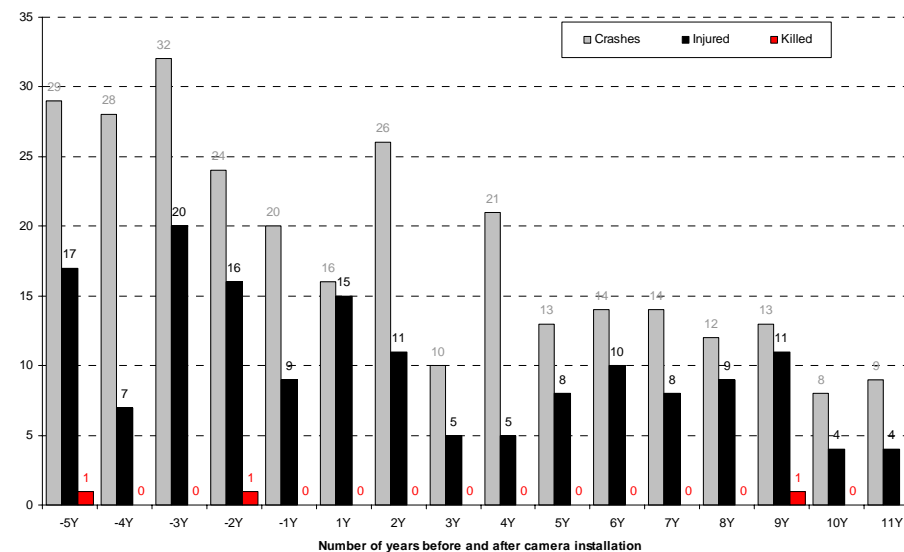
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	1	50%
Injuries	69	42	39%
Casualties	71	43	39%
Crashes	133	60	55%
Casualty Cost	\$22.06M	\$12.05M	45%

\*September 1996 to September 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 55 per cent reduction in the annual average number of crashes and a 39 per cent reduction in the annual average number of casualties.
- This has been a saving of \$10.01 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

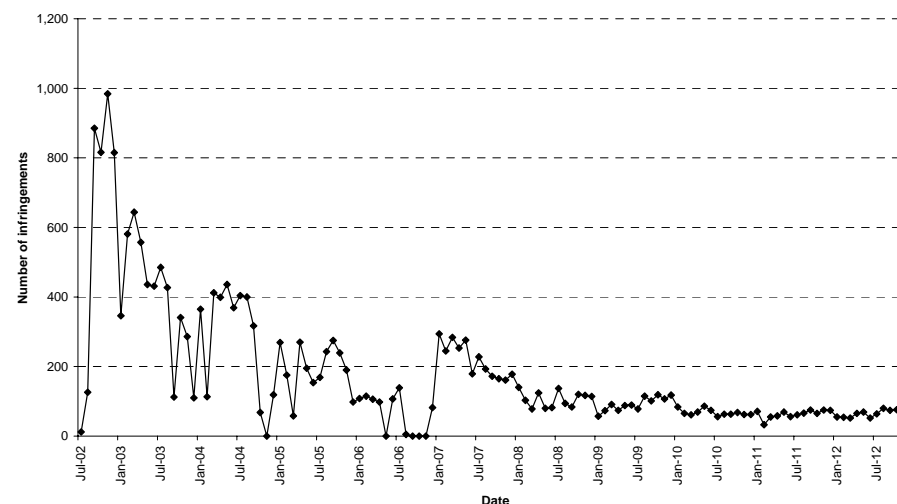
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

HUME HIGHWAY LANSVALE





## Pacific Highway, Lindfield (school zone)

Location: Pacific Highway, between Eton Road and Gladstone Parade

School zone: Lindfield Primary School

Length description: 190m south to 290m north of camera

Total length: 480m (patch to patch)

Number of cameras: 2

Started infringing: 9/07/2007

Status: **Effective**

### Current camera performance

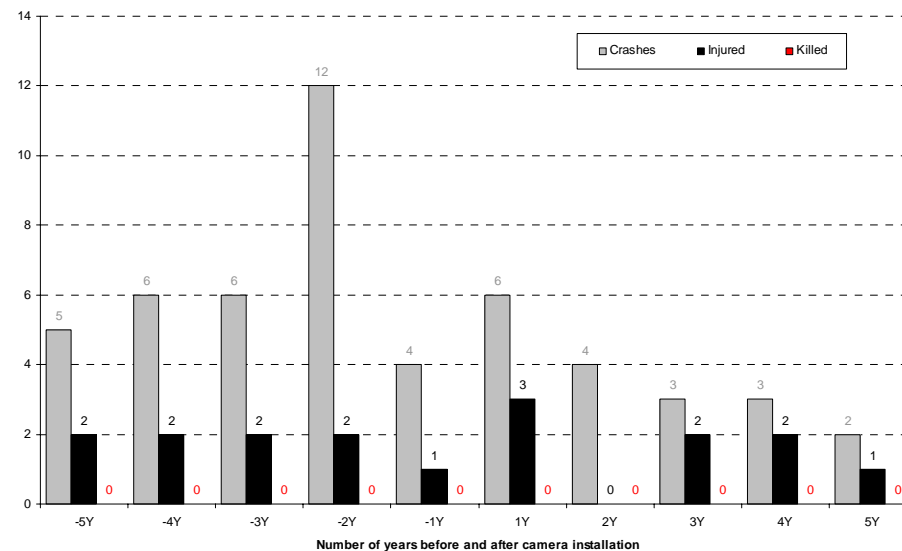
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	9	8	11%
Casualties	9	8	11%
Crashes	33	18	45%
Casualty Cost	\$1.22M	\$1.09M	11%

\*April 2002 to April 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 45 per cent reduction in the annual average number of crashes and an 11 per cent reduction in the annual average number of casualties.
- This has been a saving of \$130,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

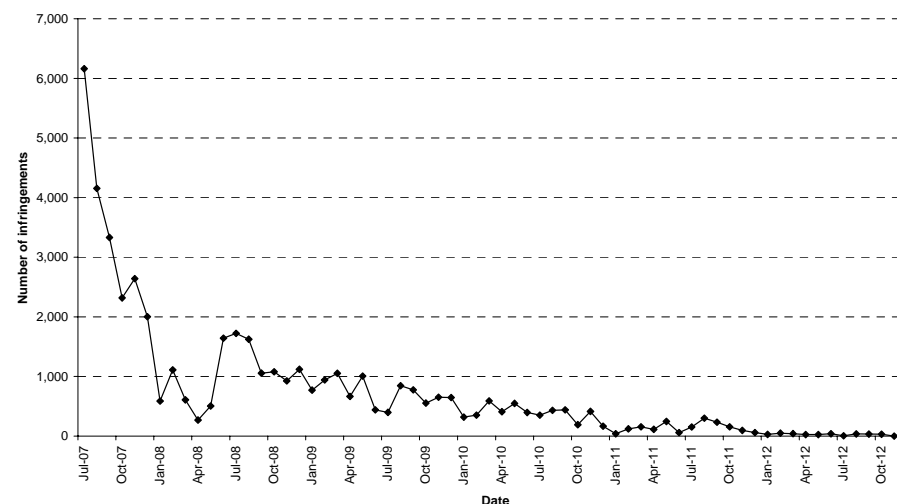
## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements

PACIFIC HIGHWAY LINDFIELD



## Bigge Street, Liverpool (school zone)

Location: Bigge Street, between Elizabeth Drive and Campbell Street  
 School zone: All Saints Catholic Primary School, All Saints Catholic Girls College, All Saints Catholic Boys College  
 Length description: 150m north to 210m south of camera  
 Total length: 360m (patch to patch)  
 Number of cameras: 1  
 Started infringing: 14/11/2007  
 Status: **Effective**

### Current camera performance

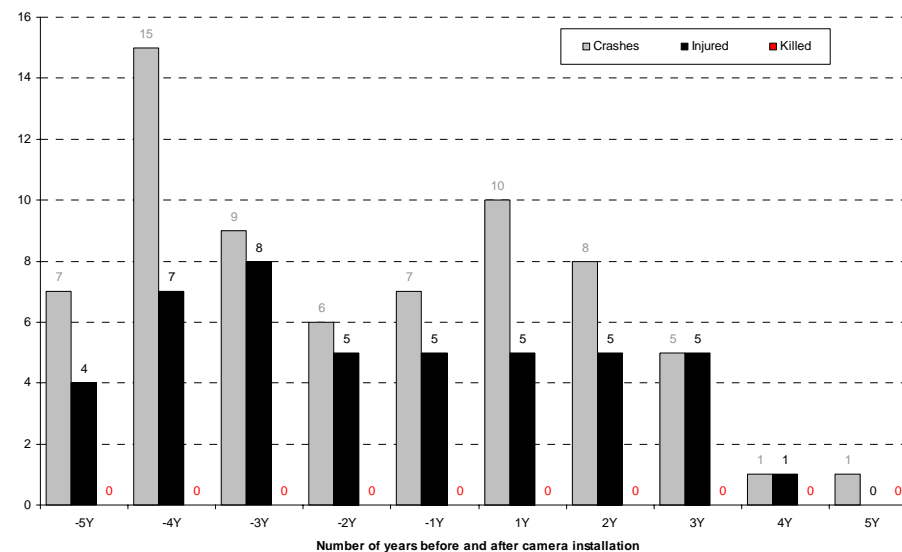
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	29	16	45%
Casualties	29	16	45%
Crashes	44	24	45%
Casualty Cost	\$3.94M	\$2.18M	45%

\*August 2002 to August 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 45 per cent reduction in the annual average number of crashes and a 45 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.76 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

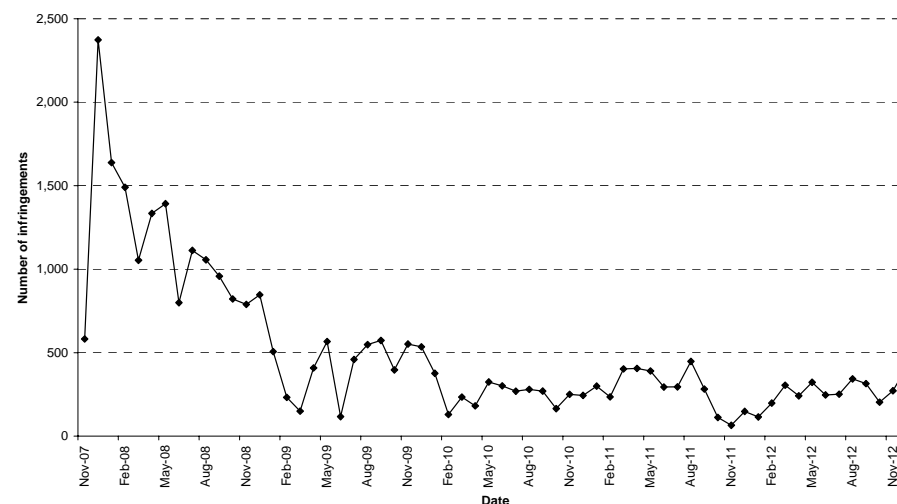
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

BIGGE STREET LIVERPOOL



## New England Highway, Lochinvar (school zone)

Location: New England Highway, between Robert Road and Station Lane  
 School zone: Lochinvar Public School, St Patrick's Primary School, All Saint's College – St Joseph's Campus  
 Length description: 150m east to 850m west of camera  
 Total length: 1000m (patch to patch)  
 Number of cameras: 1  
 Started infringing: 09/05/2000  
 Status: **Retained based on 2012 comprehensive safety review**

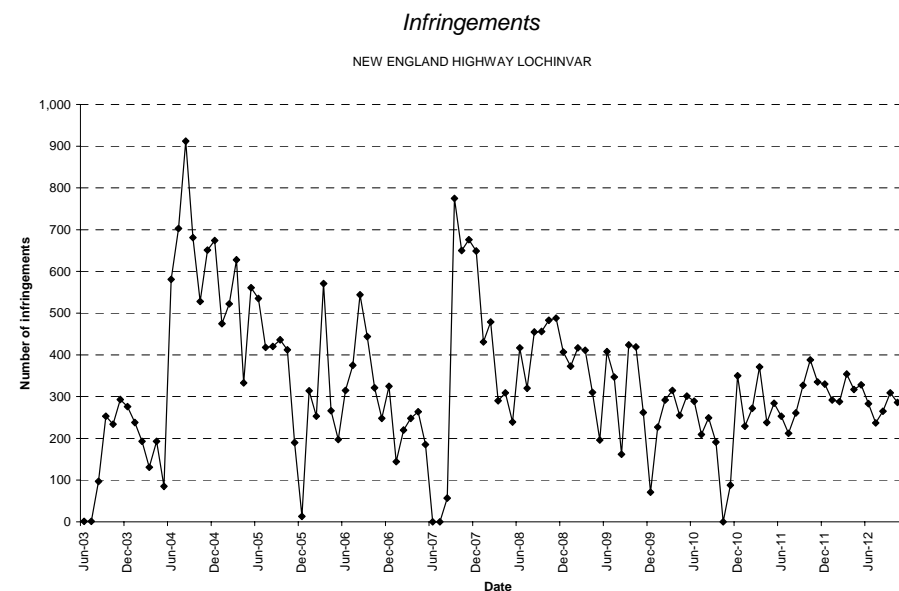
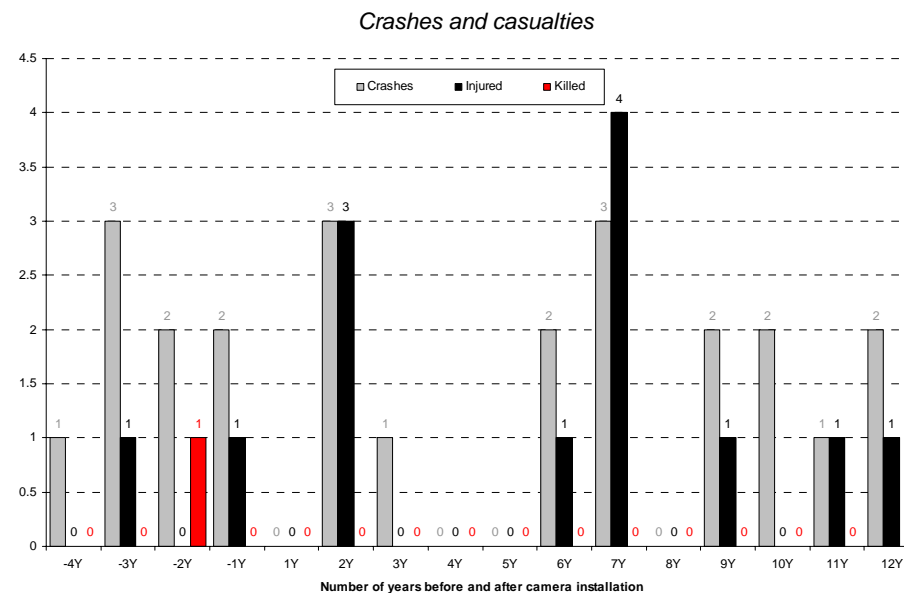
### Current camera performance

	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	1	1.25	0	100%
Injuries	2	2.50	3	+20%
Casualties	3	3.75	3	20%
Crashes	8	10	7	30%
Casualty Cost	\$6.61M	\$8.26M	\$0.41M	95%

\*February 1996 to February 2000. No data available for 1995.

- The current adjusted five year pre installation and post installation analysis shows that crashes have decreased at this location. This location was reviewed in 2012 due to concerns that casualties had increased slightly. The comprehensive safety review found that since the speed camera was installed, traffic volumes had increased significantly due to mining activities in the Hunter region. Given the increase in traffic volume, the adjusted casualty rate indicated that the speed camera has been effective in reducing casualties. Further, there was strong community support for the retention of the speed camera due to its location in a school zone where safety is a high priority. Therefore the speed camera at this location was found to be effective.
- With one fatality prior to the speed camera being installed, and no fatalities since installation, there has been a saving of \$6.201 million in costs to the community.
- The infringement graph details the trend in infringements at this location since June 2003. Infringement data before this date are not available. The spike in infringements from September 2007 was due to the camera commencing speed enforcement of both directions of traffic where it previously enforced one direction.

## Trend in road safety performance at camera location



## M2 Tunnel, M2 Motorway (high risk location)

Location: M2 Tunnel, between Tery Creek and Norfolk Road

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

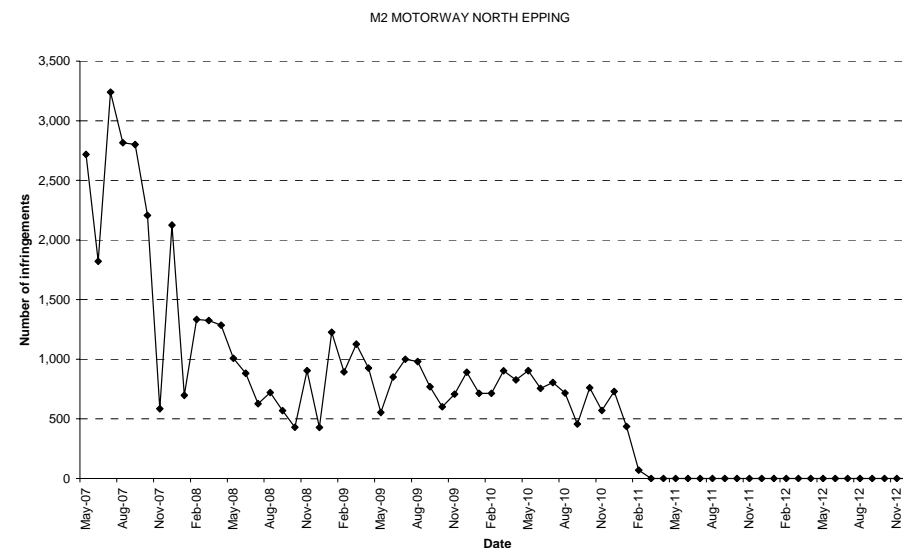
Started infringing: 11/05/2007

### Crash and casualty data – January 2012 to December 2012

	Westbound
Fatalities	0
Injuries	0
Casualties	0
Crashes	0

- The fixed speed camera in the M2 Tunnel, M2 Motorway was installed in May 2007 however the camera is not currently installed due to roadworks.
- This location is appropriate for fixed speed camera enforcement as it is a high risk location that is difficult for the NSW Police Force to enforce using traditional methods.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

## Infringements at fixed speed camera location



## Pacific Highway, Macksville

Location: Pacific Highway, between Florence Wilmont Drive and Watt Creek

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 03/03/2003

Status: **Effective**

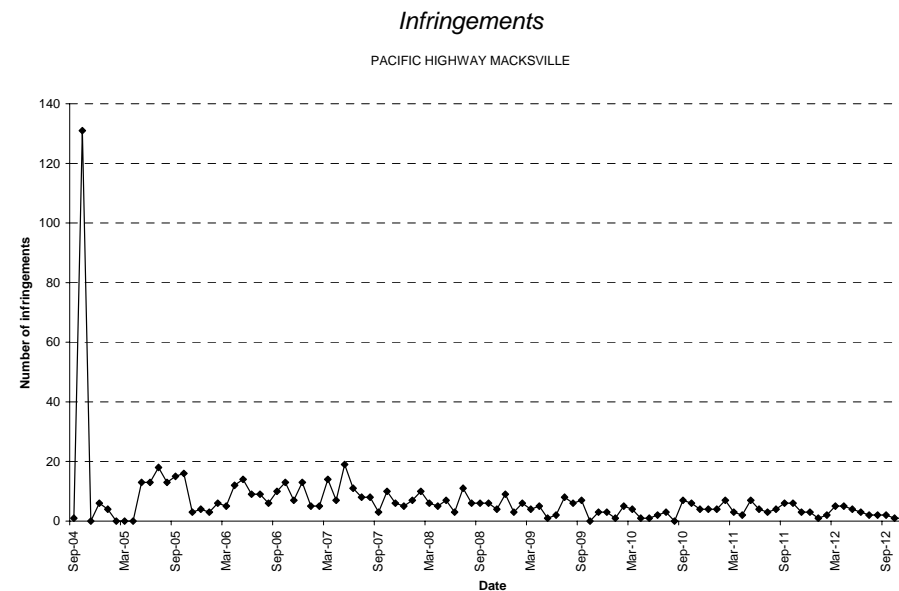
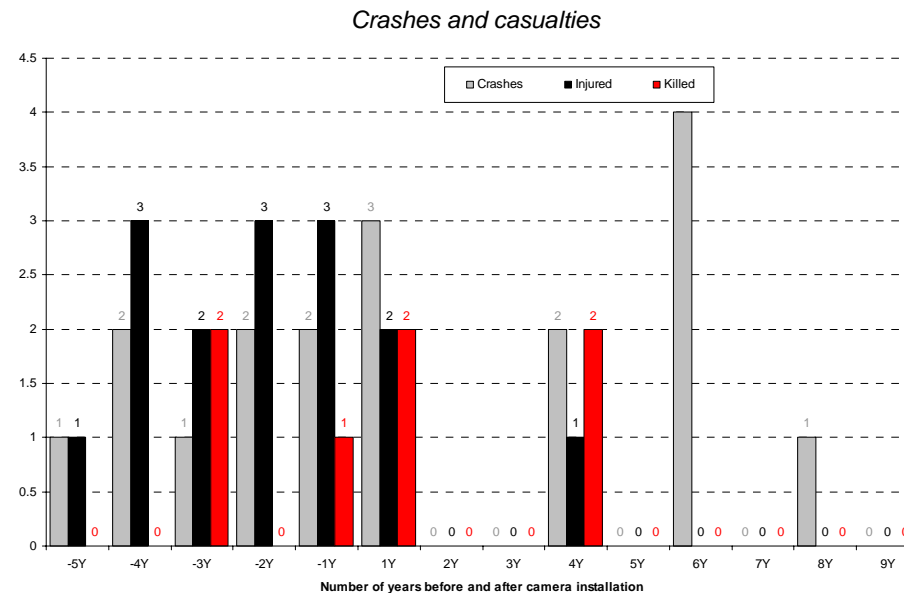
### Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	3	0	100%
Injuries	12	0	100%
Casualties	15	0	100%
Crashes	8	5	38%
Casualty Cost	\$20.64M	\$0M	100%

\*December 1997 to December 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 38 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$20.64 million in costs to the community.
- The infringement graph details the trend in infringements at this location since September 2004. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

## Trend in road safety performance at camera location



## Malabar Road, Maroubra (school zone)

Location: Malabar Road, between Mons Avenue and Duncan Street

School zone: St Mary and St Joseph's Primary, Maroubra Bay

Length description: 170m south to 510m north of camera

Total length: 680m (patch to patch)

Number of cameras: 2

Started infringing: 20/06/2007

Status: **Effective**

### Current camera performance

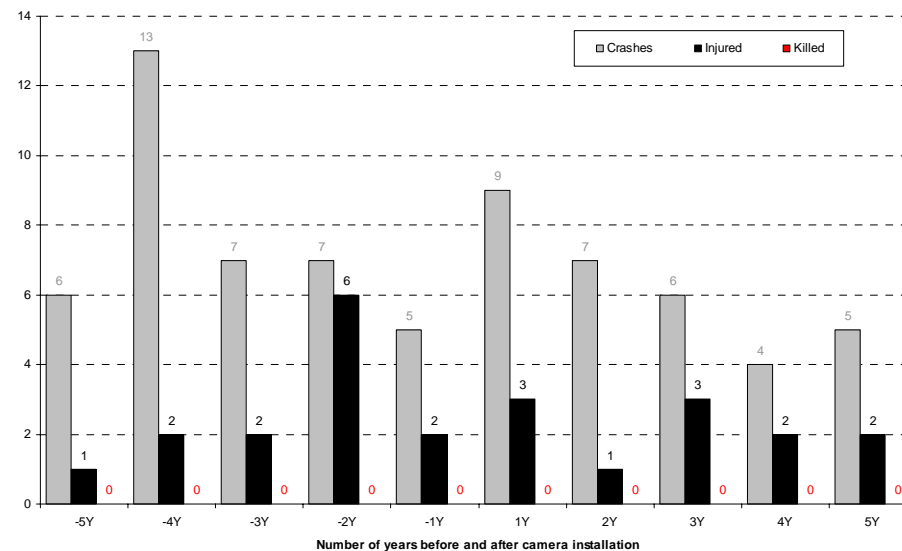
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	13	8	38%
Casualties	13	8	38%
Crashes	38	24	37%
Casualty Cost	\$1.77M	\$1.09M	38%

\*March 2002 to March 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 38 per cent reduction in the annual average number of crashes and a 37 per cent reduction in the annual average number of casualties.
- This has been a saving of \$680,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

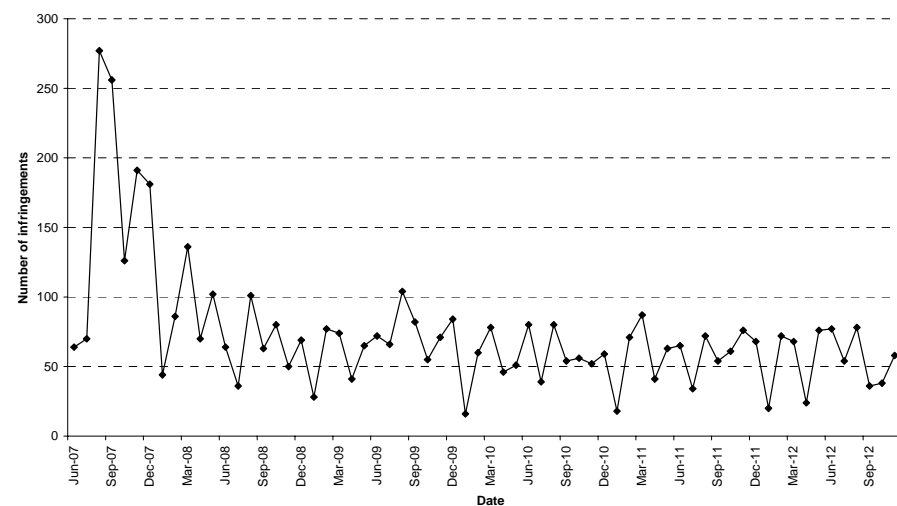
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

MALABAR ROAD MAROUBRA



## Pacific Highway, Mayfield West

Location: Pacific Highway, between Werribee Street and Tourle Street

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 23/12/2002

Status: **Effective**

### Current camera performance

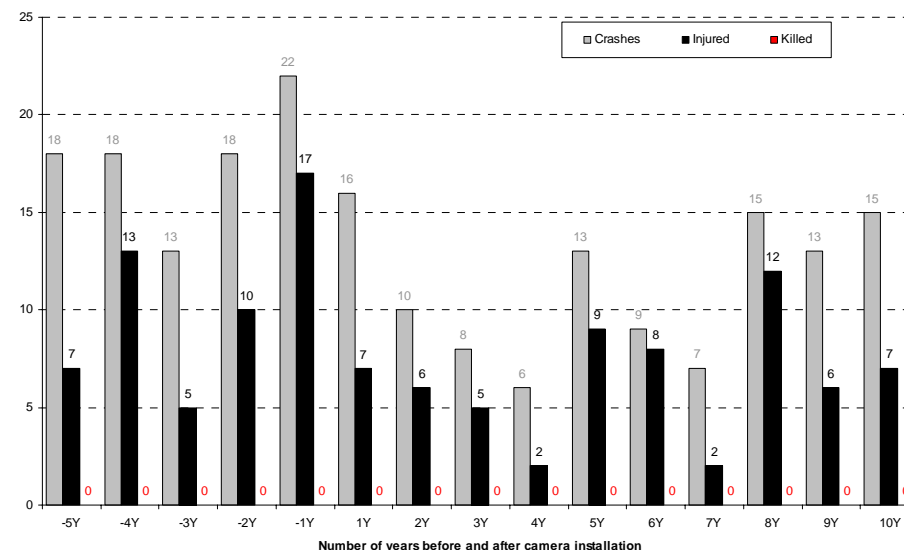
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	52	35	33%
Casualties	52	35	33%
Crashes	89	59	34%
Casualty Cost	\$7.07M	\$4.76M	33%

\*September 1997 to September 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 34 per cent reduction in the annual average number of crashes and a 33 per cent reduction in the annual average number of casualties.
- This has been a saving of \$2.31 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

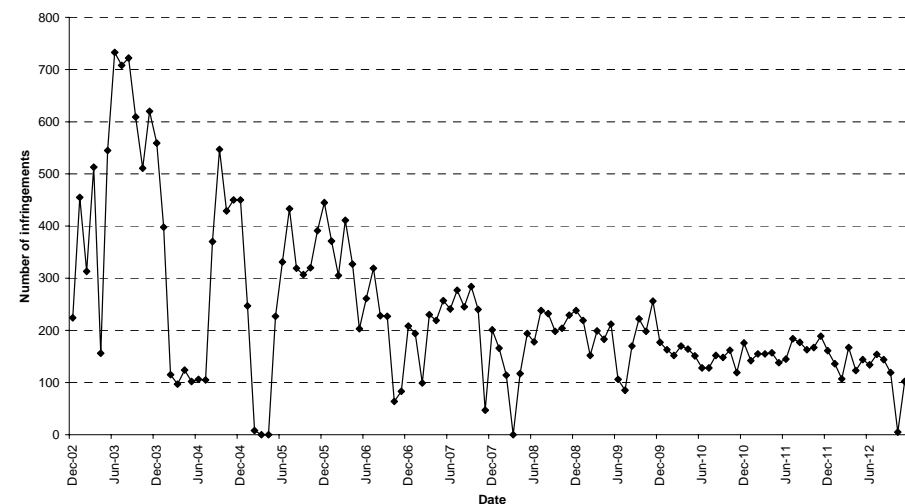
## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements

PACIFIC HIGHWAY MAYFIELD WEST



## Merrylands Road, Merrylands (school zone)

Location: Merrylands Road, between Chetwynd Road and Davies Street

School zone: St Margaret Mary's Primary School

Length description: 120m east to 100m west of camera

Total length: 220m (patch to patch)

Number of cameras: 1

Started infringing: 16/05/2007

Status: **Effective**

### Current camera performance

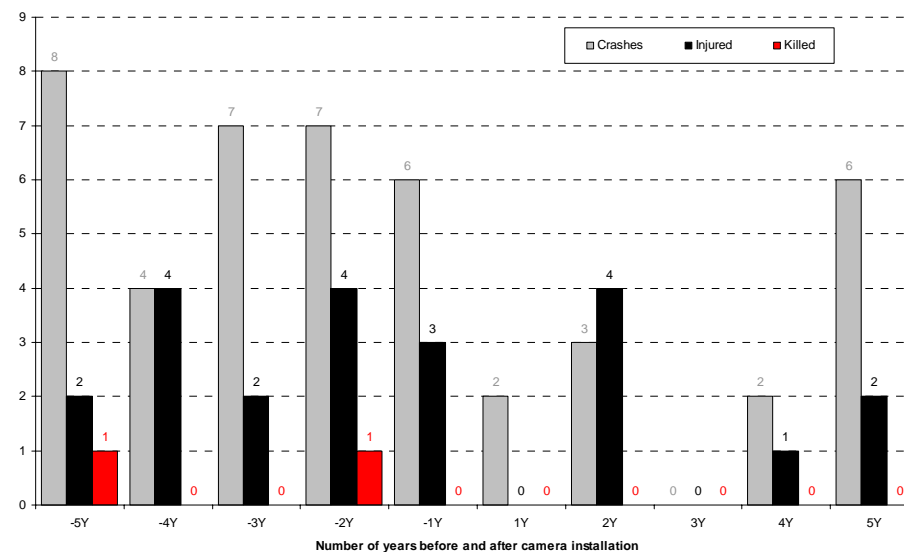
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	15	8	47%
Casualties	17	8	53%
Crashes	32	16	50%
Casualty Cost	\$14.71M	\$1.09M	93%

\*February 2002 to February 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 50 per cent reduction in the annual average number of crashes and a 53 per cent reduction in the annual average number of casualties.
- This has been a saving of \$13.62 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

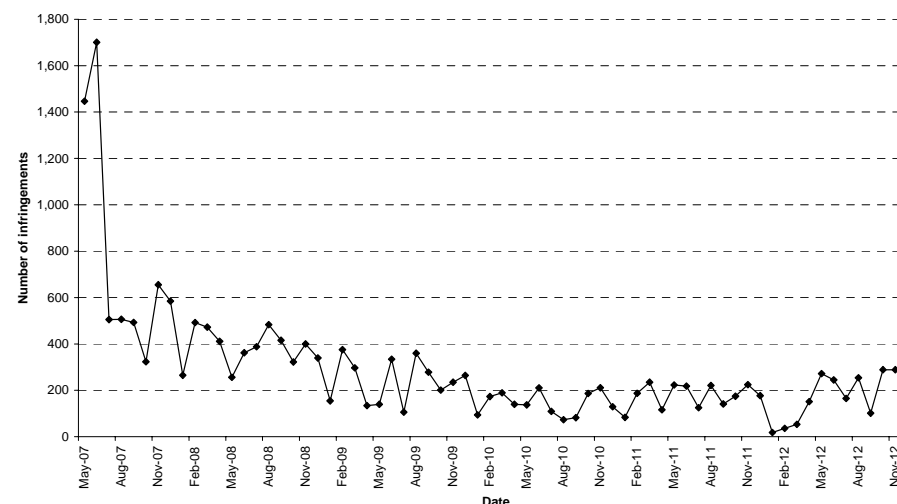
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

MERRYLANDS ROAD MERRYLANDS





## Kingsway, Miranda (school zone)

Location: Kingsway, between Sylva Avenue and University Road

School zone: Port Hacking High School, Miranda Public School

Length description: 180m west to 220m east of camera

Total length: 400 (patch to patch)

Number of cameras: 2

Started infringing: 07/11/2007

Status: **Effective**

### Current camera performance

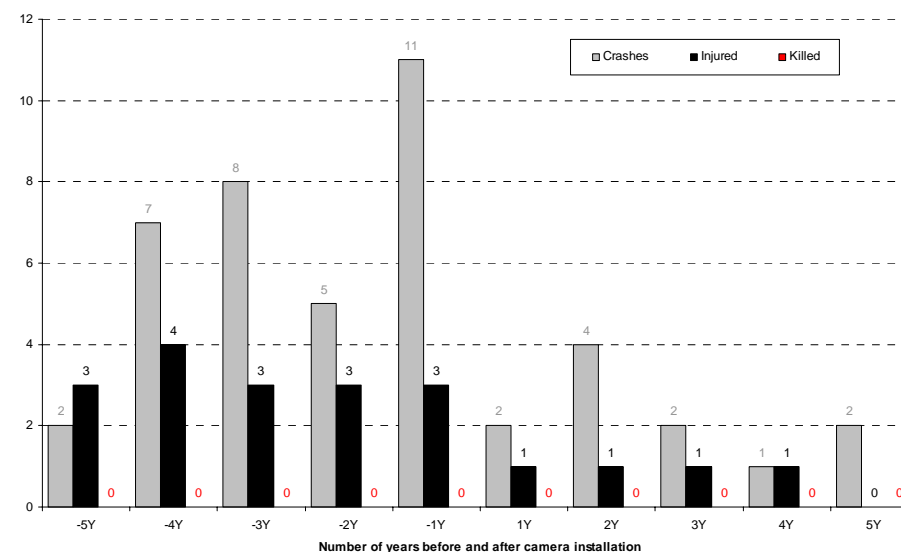
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	16	5	69%
Casualties	16	5	69%
Crashes	33	12	64%
Casualty Cost	\$2.18M	\$0.68M	69%

\*August 2002 to August 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 64 per cent reduction in the annual average number of crashes and a 69 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.50 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

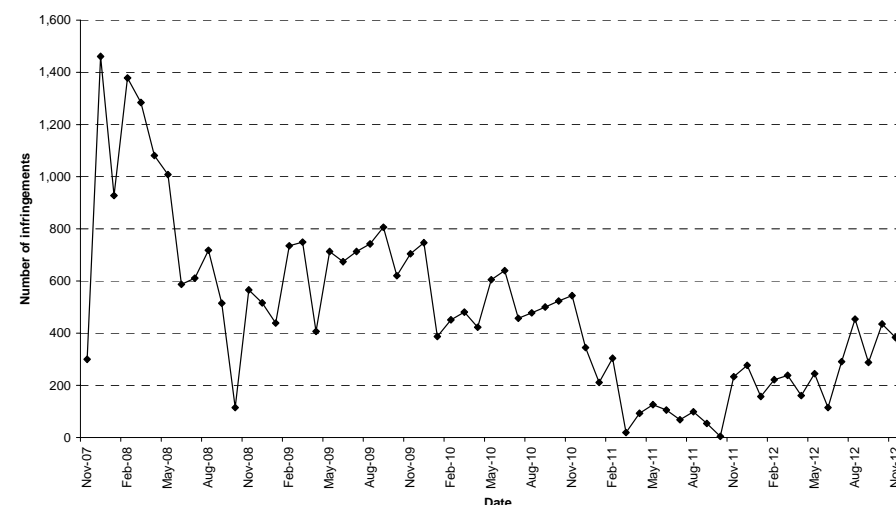
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

KINGSWAY MIRANDA



## Cleveland St, Moore Park (school zone)

Location: Cleveland Street, between Anzac Parade and South Dowling Street

School zone: Sydney Boys High School, Sydney Girls High School

Length description: 130m west to 250m east of camera

Total length: 380m (patch to patch)

Number of cameras: 2

Started infringing:

- Camera 1 (eastbound) 14/11/2007
- Camera 2 (westbound) 15/11/2007

Status: **Effective**

### Current camera performance

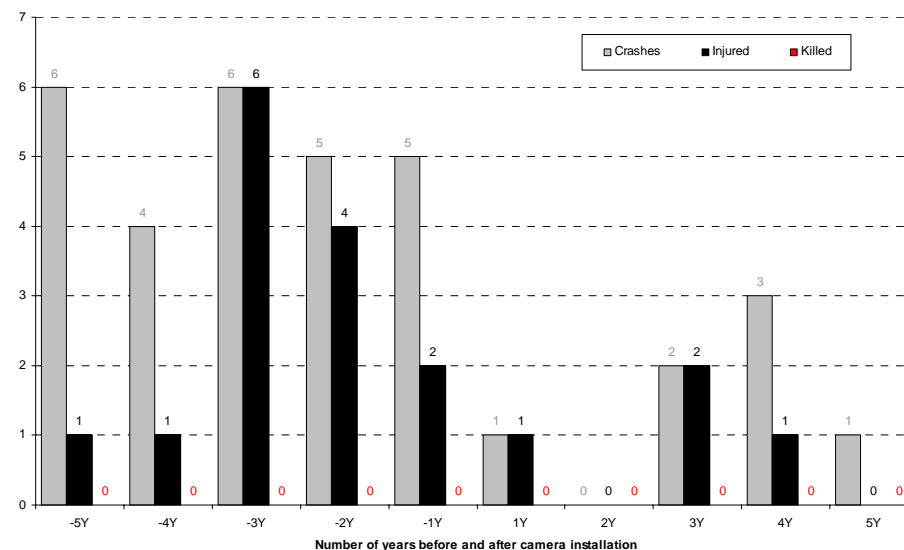
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	14	4	71%
Casualties	14	4	71%
Crashes	26	7	73%
Casualty Cost	\$1.90M	\$0.54M	71%

\*August 2002 to August 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 73 per cent reduction in the annual average number of crashes and a 71 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.36 million in costs to the community.
- The infringement graph details the trend in infringements at this location since March 2008. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

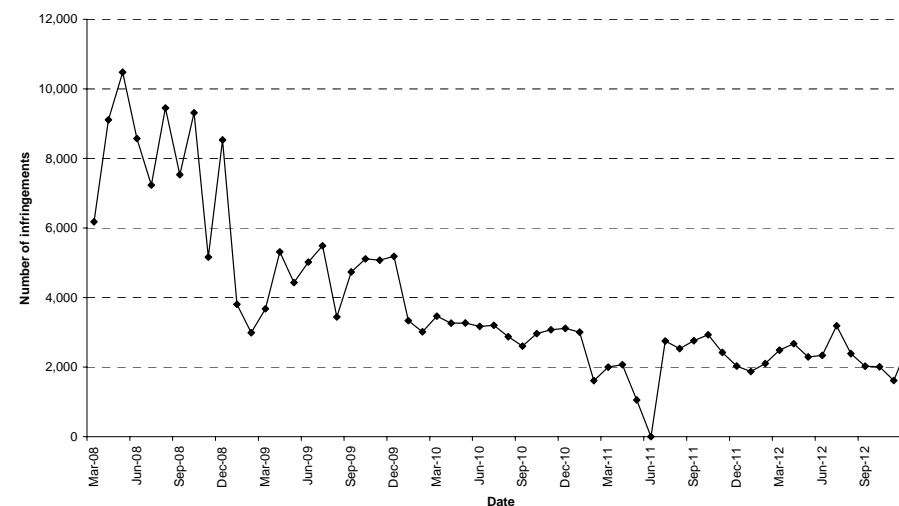
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

CLEVELAND STREET MOORE PARK



## Macpherson Street, Mosman (school zone)

Location: Macpherson Street, between Ourimbah Road and Montague Road

School zone: Middle Harbour Primary School

Length description: 90m north to 230m south of camera

Total length: 320m (patch to patch)

Number of cameras: 1

Started infringing: 15/07/2003

Status: **Effective**

### Current camera performance

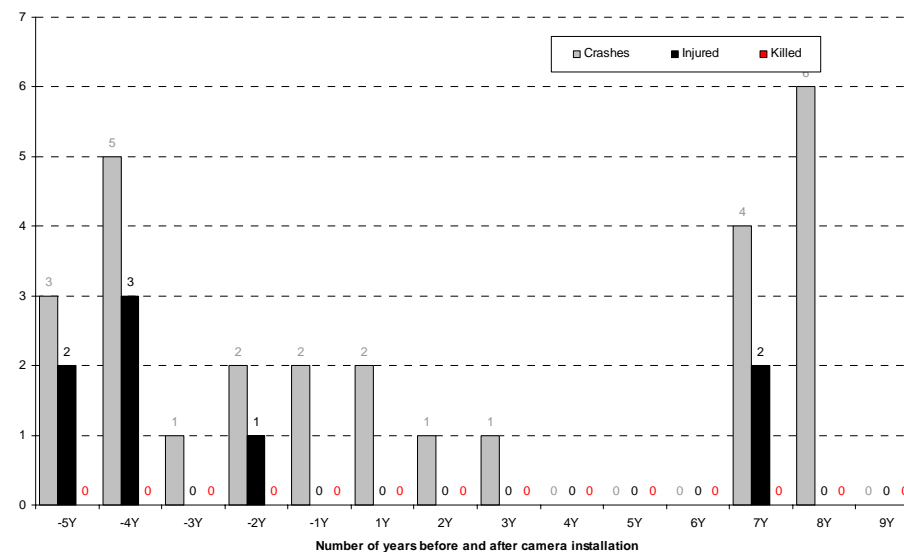
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	6	2	67%
Casualties	6	2	67%
Crashes	13	10	23%
Casualty Cost	\$0.82M	\$0.27M	67%

\*April 1998 to April 2003

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 23 per cent reduction in the annual average number of crashes and a 67 per cent reduction in the annual average number of casualties.
- This has been a saving of \$550,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

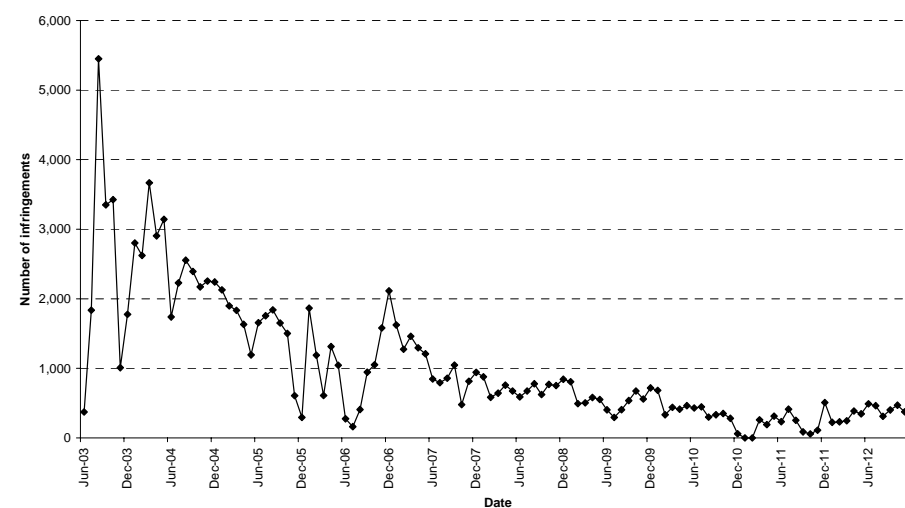
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

MACPHERSON STREET MOSMAN



## Pittwater Road, Narrabeen (school zone)

Location: Pittwater Road, between Ocean Street and Devitt Street

School zone: Narrabeen Lakes Primary School

Length description: 170m south to 130m north of camera

Total length: 300m (patch to patch)

Number of cameras: 2

Started infringing: 31/10/2007

Status: **Effective**

### Camera performance

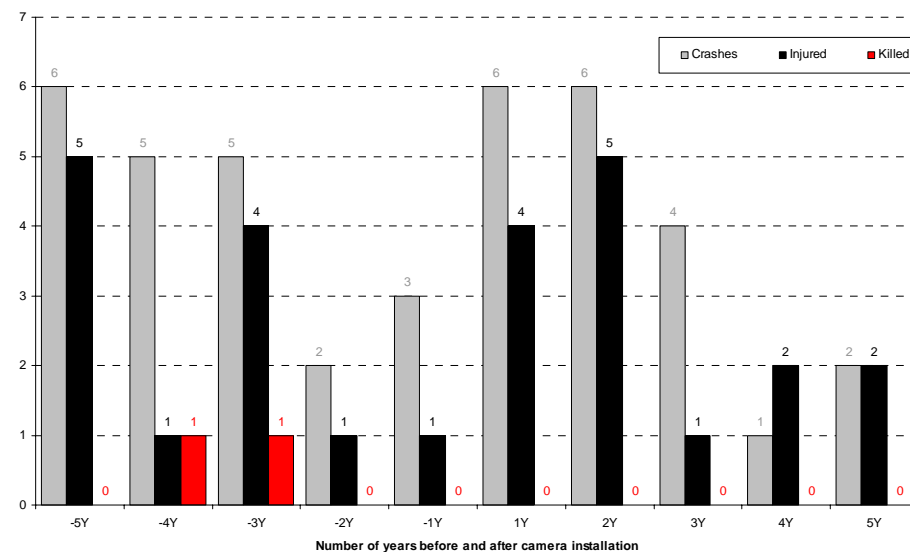
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	12	14	+17%
Casualties	14	14	0%
Crashes	21	19	10%
Casualty Cost	\$14.31M	\$1.90M	87%

\*July 2002 to July 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 10 per cent reduction in the annual average number of crashes. While there has been a slight increase in the number of injuries, there has been a reduction in the number of fatalities from two in the pre installation period to zero in the post installation period.
- This has been a saving of \$12.41 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

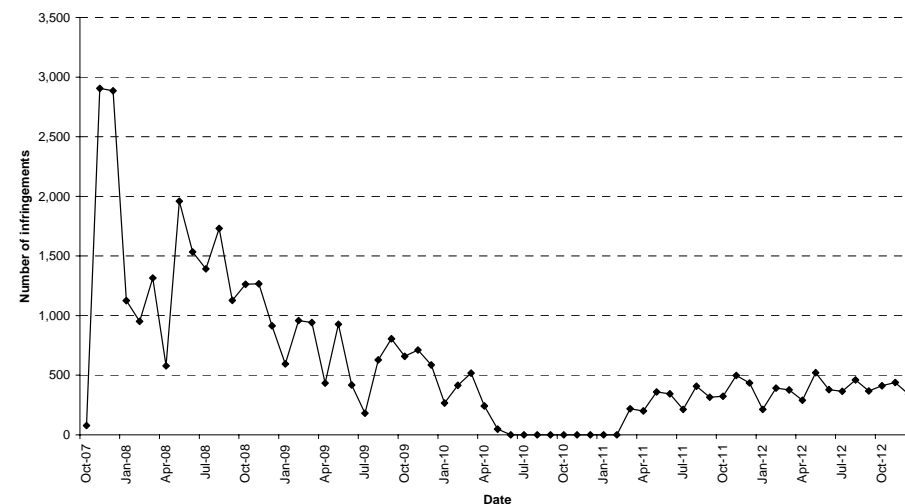
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PITTWATER ROAD NARRABEEN



## Pacific Highway, New Italy

Location: Pacific Highway, between New Italy Road and Turners Road  
 Length description: 500m south to 500m north of midpoint between camera 1 and camera 2  
 Total length: 1000m  
 Number of cameras: 2  
 Started infringing: 25/07/2002  
 Status: **Effective**

### Current camera performance

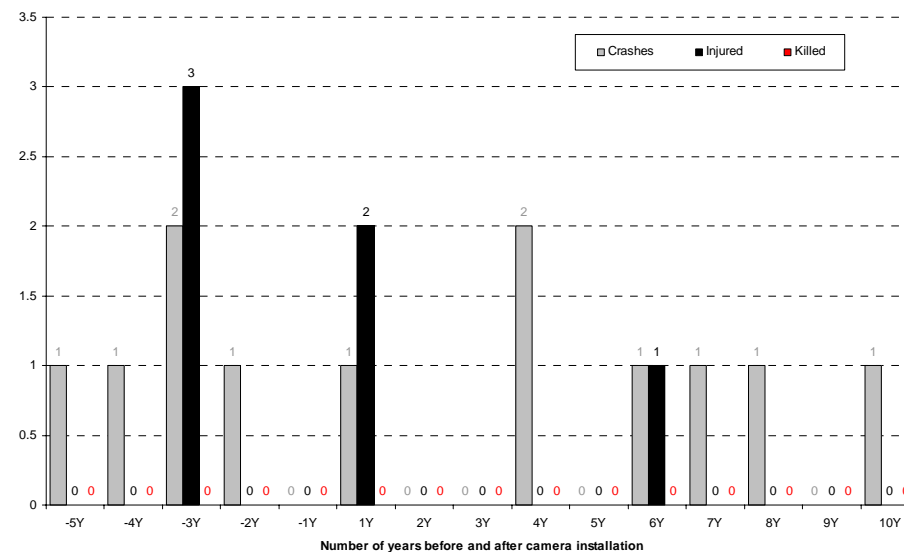
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	3	0	100%
Casualties	3	0	100%
Crashes	5	3	40%
Casualty Cost	\$0.41M	\$0M	100%

\*April 1997 to April 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 40 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$410,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

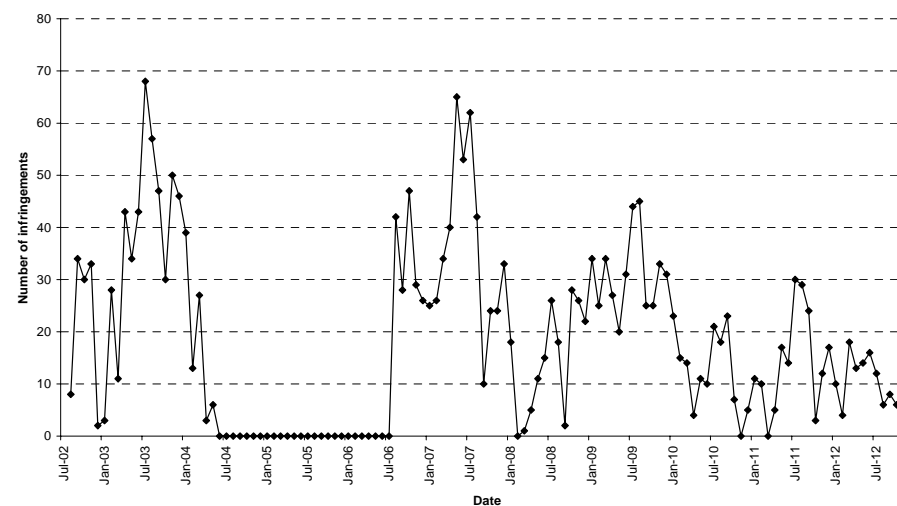
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY NEW ITALY



## Pacific Highway, Nords Wharf

Location: Pacific Highway, between Nords Wharf Road and Flowers Drive

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 27/02/2003

Status: **Effective**

### Current camera performance

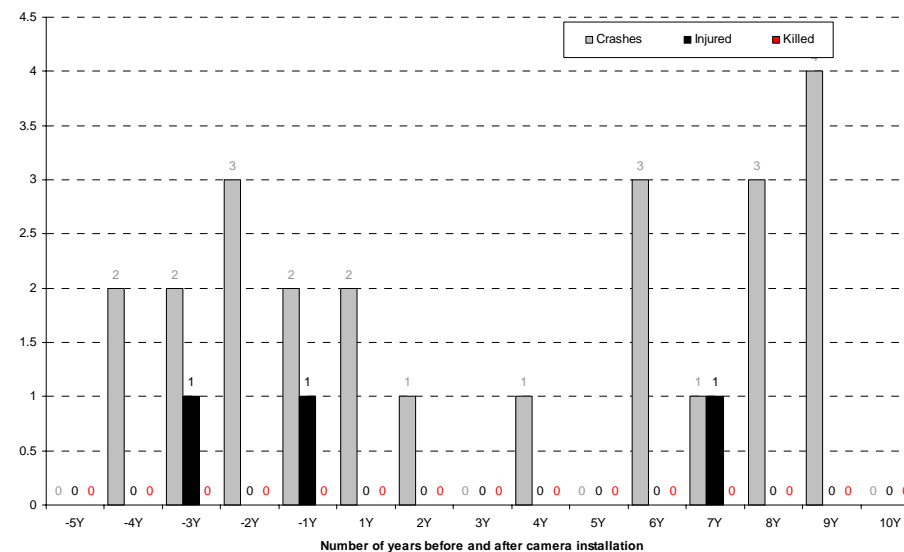
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	2	1	50%
Casualties	2	1	50%
Crashes	9	11	+22%
Casualty Cost	\$0.27M	\$0.14M	50%

\*November 1997 to November 2002

- The current pre and post installation analysis shows that crashes have increased at this location however casualties have decreased.
- When comparing the pre installation period to the most recent five year period, there has been an increase in the number of crashes from 9 to 11, however there have been no crashes in 2012. There has also been a 50 per cent reduction in the annual average number of casualties.
- This has been a saving of \$130,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the June 2003. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

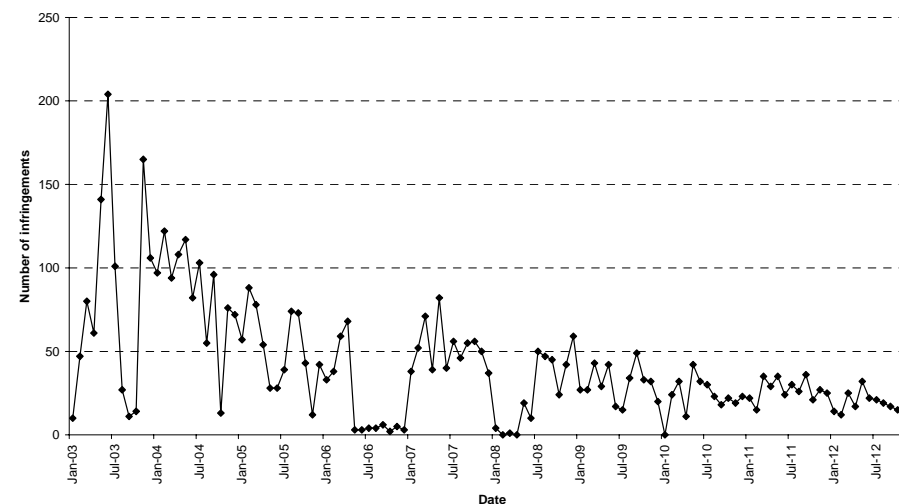
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY NORDS WHARF



## Harbord Road, North Curl Curl (school zone)

Location: Harbord Road, between Abbott Road and Brighton Street  
 School zone: Freshwater Senior High School, Manly Selective Campus  
 Length description: 500m north to 560m south of camera  
 Total length: 1060m (patch to patch)  
 Number of cameras: 1  
 Started infringing: 31/10/2007  
 Status: **Effective**

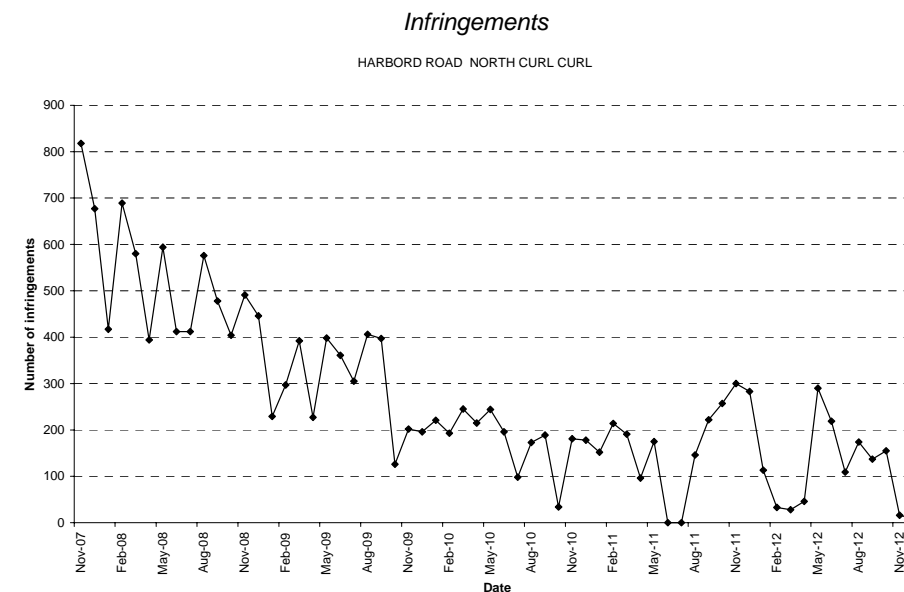
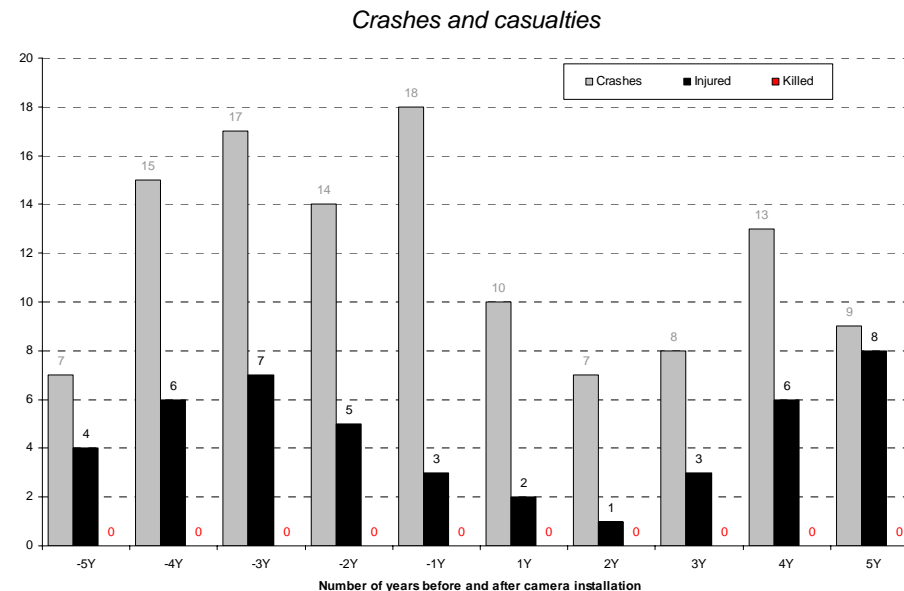
### Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	25	20	20%
Casualties	25	20	20%
Crashes	71	47	34%
Casualty Cost	\$3.40M	\$2.72M	20%

\*July 2002 to July 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 34 per cent reduction in the annual average number of crashes and a 20 per cent reduction in the annual average number of casualties.
- This has been a saving of \$680,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

## Trend in road safety performance at camera location



## Pittwater Road, North Narrabeen (school zone)

Location: Pittwater Road, between Garden Street and Namona Street

School: Narrabeen North Public School, Narrabeen Sports High

Length description: 330m south to 260m north of camera

Total length: 590m (patch to patch)

Number of cameras: 2

Started infringing: 28/01/2009

Status: **Effective**

### Current camera performance

	Five years before installation*	Most recent three years and 338 days	Percentage reduction**
Fatalities	0	0	-
Injuries	11	6	31%
Casualties	11	6	31%
Crashes	25	22	+12%
Casualty Cost	\$1.50M	\$0.82M	31%

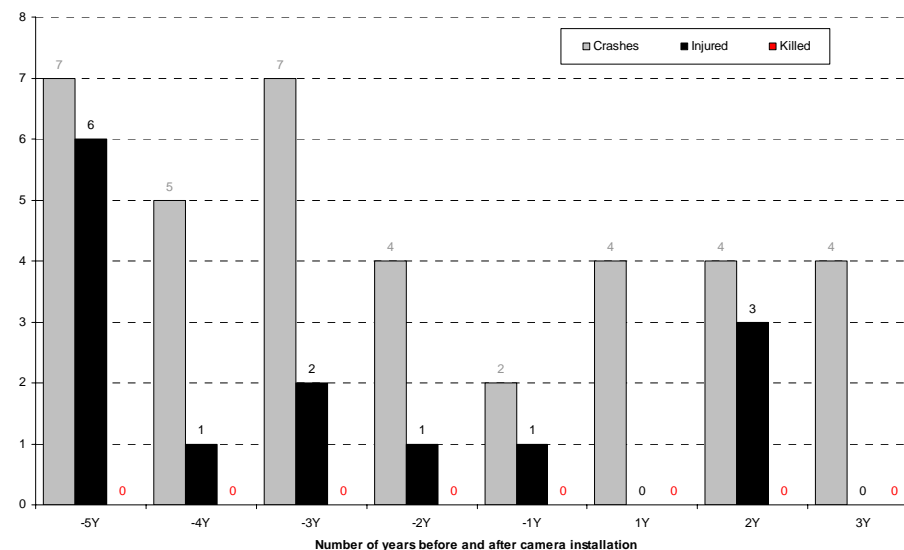
\*October 2003 to October 2008

\*\*The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods

- The current pre and post installation analysis shows that crashes have increased at this location.
- When comparing the pre installation period to the most recent three years and 338 day period, there has been a 12 per cent increase in the annual average number of crashes however there has been a 31 per cent reduction in the annual average number of casualties.
- This has been a saving of \$680,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph indicates a consistent level of speeding has been recorded at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.
- With less than five years of post installation data, it is too early to assess the effectiveness of the cameras at this location however early results indicate they are delivering the expected road safety benefits.

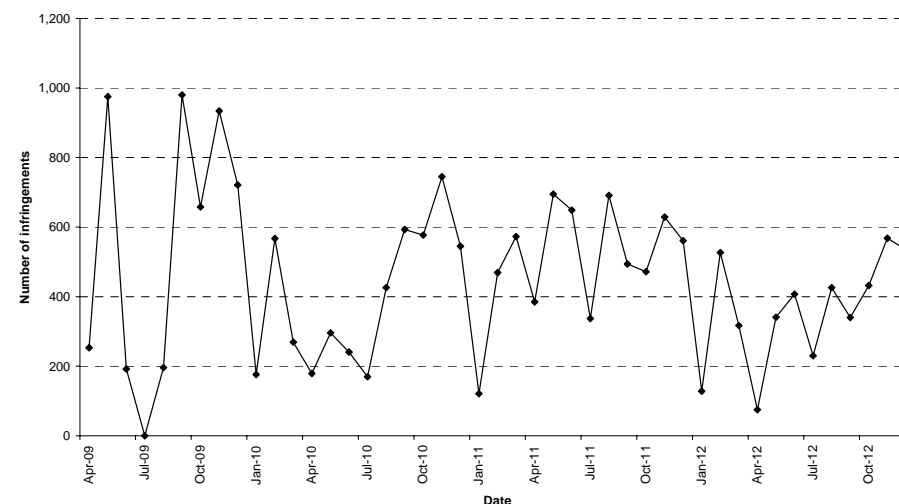
## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements

PITTWATER ROAD NORTH NARRABEEN





## Pennant Hills Road, North Parramatta

Location: Pennant Hills Road, between Castle Street and Bellevue Street

Length description: 390m west to 610m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 30/11/2001

Status: **Effective**

### Current camera performance

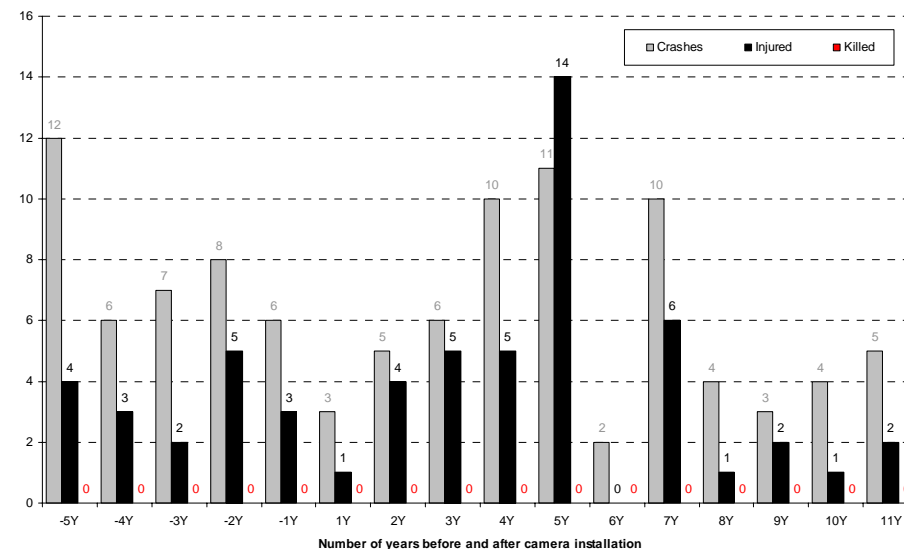
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	17	10	41%
Casualties	17	10	41%
Crashes	39	23	41%
Casualty Cost	\$2.31M	\$1.36M	41%

\*August 1996 to August 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 41 per cent reduction in the annual average number of crashes and a 41 per cent reduction in the annual average number of casualties.
- This has been a saving of \$950,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

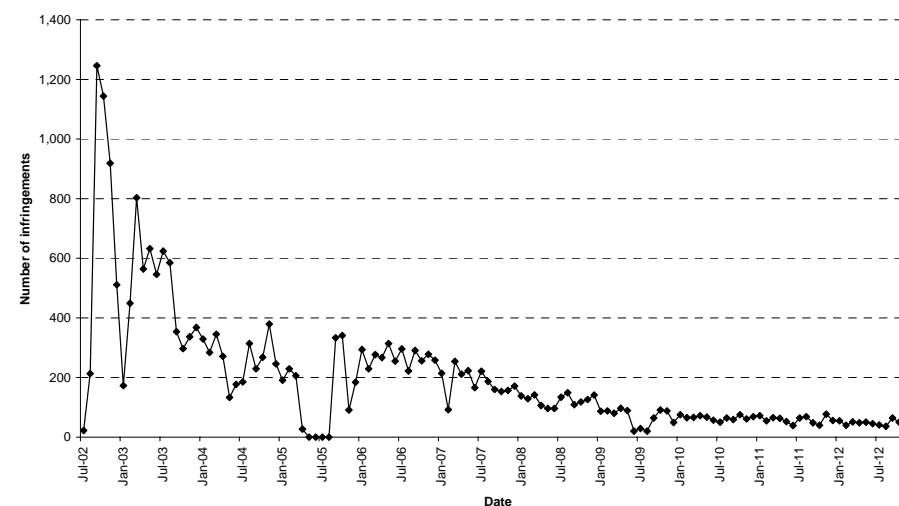
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PENNANT HILLS RD NORTH PARRAMATTA



## Pennant Hills Road, North Parramatta / Oatlands (school zone)

Location: Pennant Hills Road, between Masons Drive and Suttor Avenue  
 School zone: Burnside Public School, The Kings School, Redeemer Baptist School, Garfield Barwick School, American International School, Cumberland High School

Length description: 470m west to 2300m east of camera

Total length: 2770m (patch to patch)

Number of cameras: 2

Started Infringing: 10/04/2007

Status: **Effective**

### Current camera performance

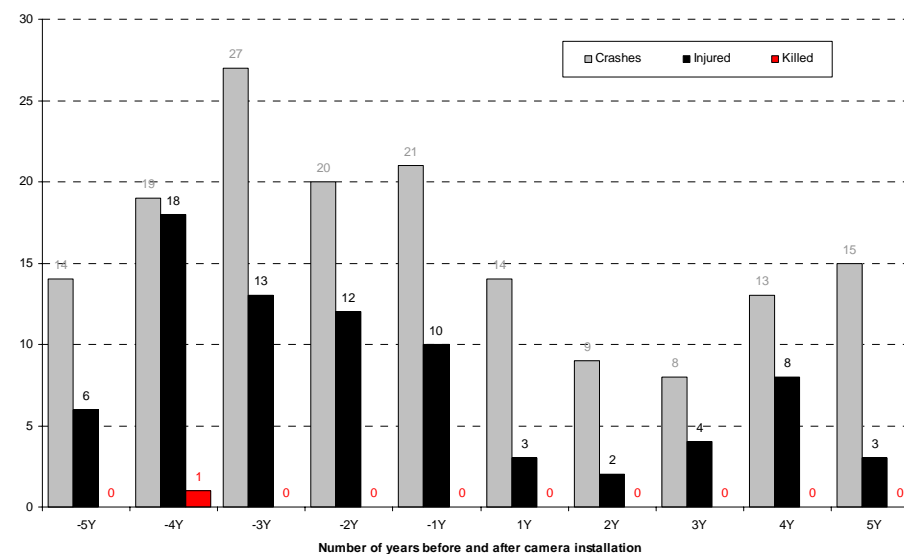
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	59	23	61%
Casualties	60	23	62%
Crashes	101	60	41%
Casualty Cost	\$14.36M	\$3.13M	78%

\*January 2002 to January 2007

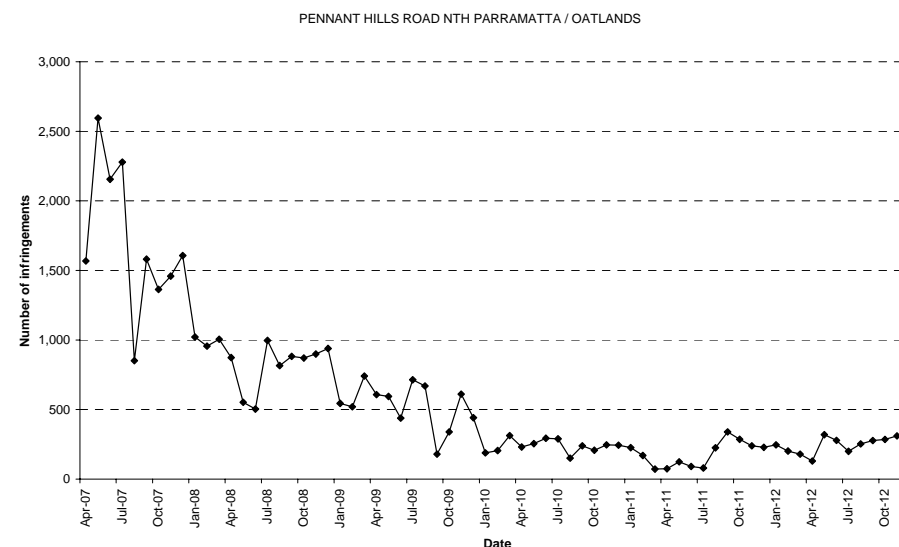
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 41 per cent reduction in the annual average number of crashes and a 62 per cent reduction in the annual average number of casualties.
- This has been a saving of \$11.23 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements



## Princes Highway, North Wollongong

Location: Princes Highway, between Ajax Avenue and Exeter Avenue

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 13/06/2000

Status: **Effective**

### Current camera performance

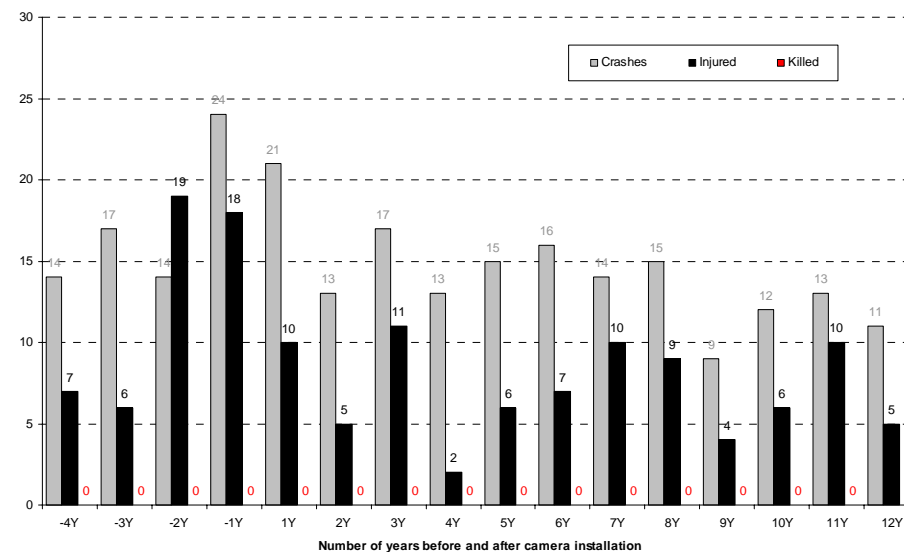
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	1	0	0	100%
Injuries	50	62.50	35	44%
Casualties	50	62.50	35	44%
Crashes	69	86.25	54	37%
Casualty Cost	\$6.80M	\$8.50M	\$4.76M	44%

\*March 1996 to March 2000. No data available for 1995.

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 37 per cent reduction in the annual average number of crashes and a 44 per cent reduction in the annual average number of casualties.
- This has been a saving of \$3.74 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

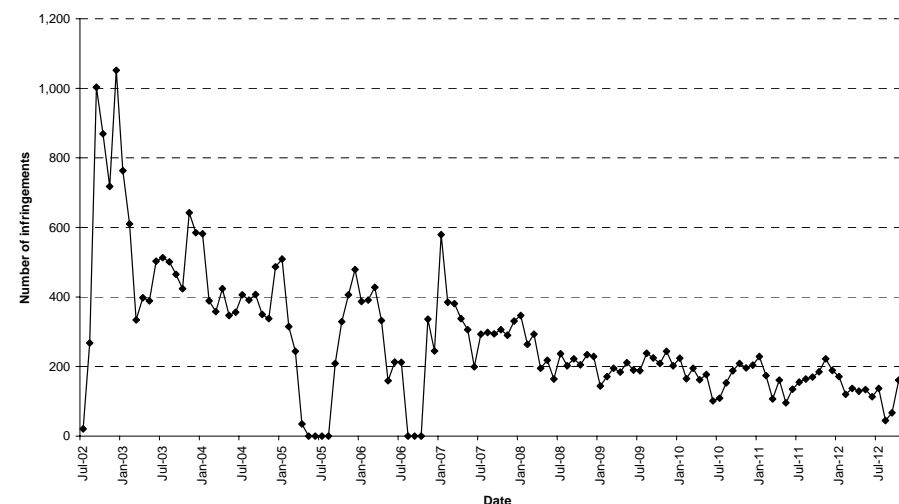
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PRINCES HIGHWAY NORTH WOLLONGONG



## Woodville Road, Old Guildford (school zone)

Location: Woodville Road, between Orchardleigh Street and Middleton Road

School zone: Old Guildford Public School

Length description: 200m south to 170m north of camera

Total length: 370m

Number of cameras: 2

Started infringing: 30/01/2009

Status: **Effective**

### Current camera performance

	Four years before installation*	Adjusted five year before installation period	Most recent three years and 336 day period	Percentage reduction**
Fatalities	0	0	0	-
Injuries	23	18.03	7	61%
Casualties	23	18.03	7	61%
Crashes	34	26.66	20	25%
Casualty Cost	\$3.13M	\$2.45M	\$0.95M	61%

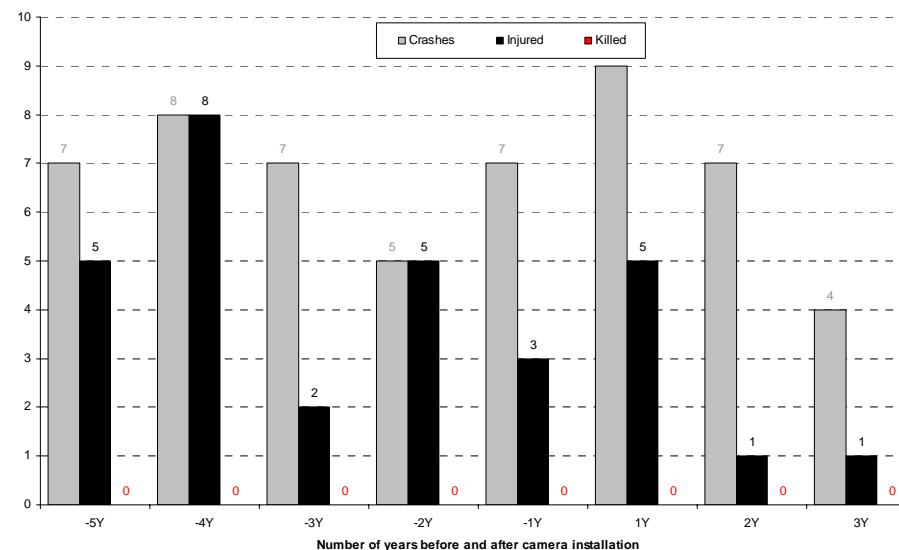
\*October 2003 to October 2008

\*\*The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent three years and 336 day period, there has been a 25 per cent reduction in the annual average number of crashes and a 61 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.50 million in costs to the community.
- The infringement graph details the trend in infringements at this location since April 2009. Infringement data before this date are not available. The graph shows there has been a consistent level of speeding at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.
- With less than five years of post installation data, it is too early to assess the effectiveness of the cameras at this location however early results indicate they are delivering the expected road safety benefits.

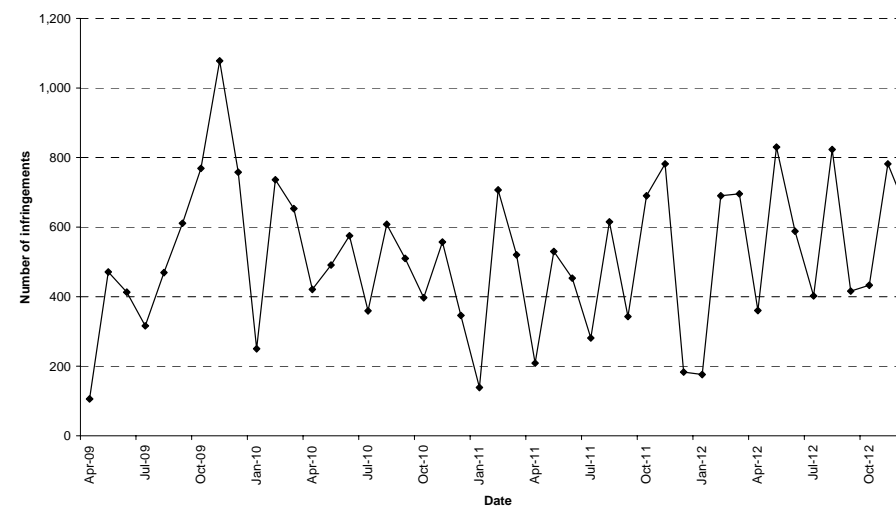
## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements

WOODVILLE ROAD OLD GUILFORD



### F3 Freeway, Ourimbah

Location: F3 Freeway, between Dogtrap Road Overpass and Ourimbah Creek Road

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 6/12/2001

Status: **Effective**

#### Current camera performance

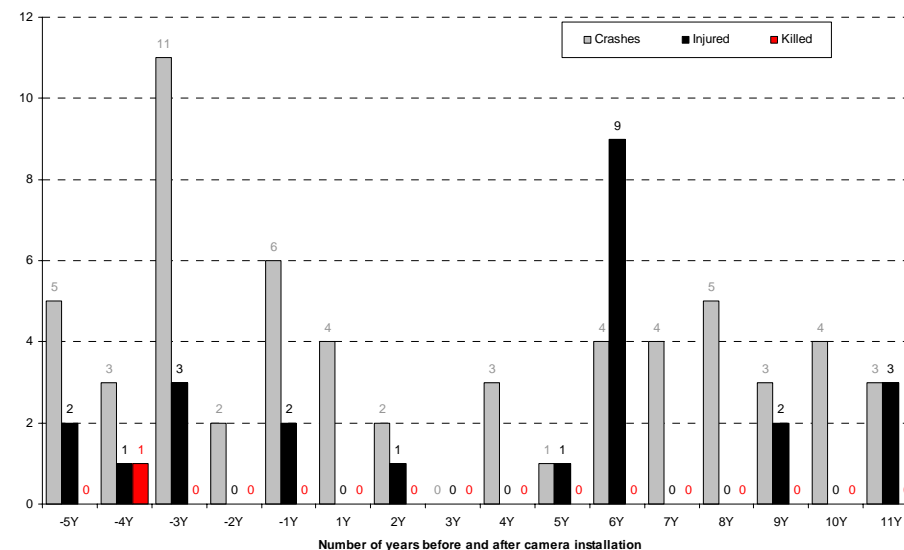
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	8	5	38%
Casualties	9	5	44%
Crashes	27	18	33%
Casualty Cost	\$7.43M	\$0.68M	91%

\*September 1996 to September 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 33 per cent reduction in the annual average number of crashes and a 44 per cent reduction in the annual average number of casualties.
- This has been a saving of \$6.75 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The graph shows there has been a consistent level of speeding at this location over time. The extended period of camera downtime at this location from December 2010 to June 2011 was due to roadworks and camera maintenance.

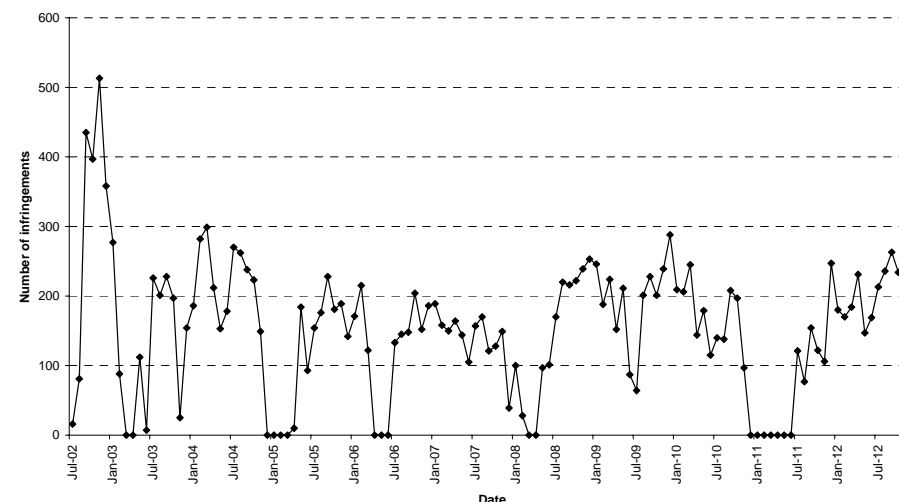
### Trend in road safety performance at camera location

Crashes and casualties



Infringements

F3 FREEWAY OURIMBAH



## Pacific Highway, Ourimbah (school zone)

Location: Pacific Highway, between Yates Road and Dog Trap Road

School zone: Ourimbah Primary School

Length description: 210m south to 150m north of camera

Total length: 360m (patch to patch)

Number of cameras: 2

Started infringing:

- Camera 1 (northbound) 15/07/2003
- Camera 2 (southbound) 18/02/2008

Status: **Effective**

### Current camera performance

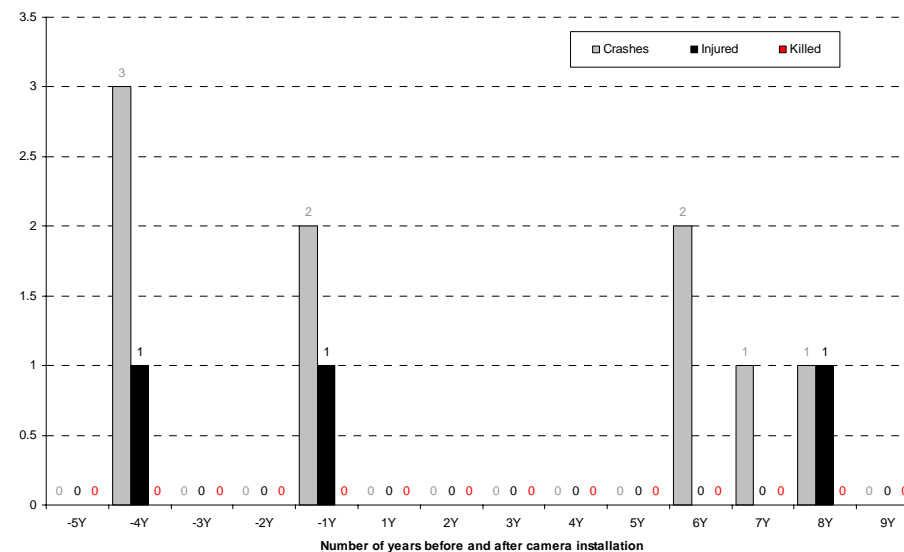
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	2	2	0%
Casualties	2	2	0%
Crashes	5	5	0%
Casualty Cost	\$0.27M	\$0.27M	0%

\*April 1998 to April 2003

- The current pre and post installation analysis shows that crashes have not changed at this location.
- This school zone fixed speed camera location remains appropriate for enforcement as it is a high risk location, enforcing a school zone on a high speed and high traffic volume road.
- The infringement graph details the trend in infringements at this location since June 2003. The spike in infringements from February 2008 can be attributed to the installation of camera 2, enforcing southbound traffic. The extended period of camera downtime at this location was due to significant road upgrades.

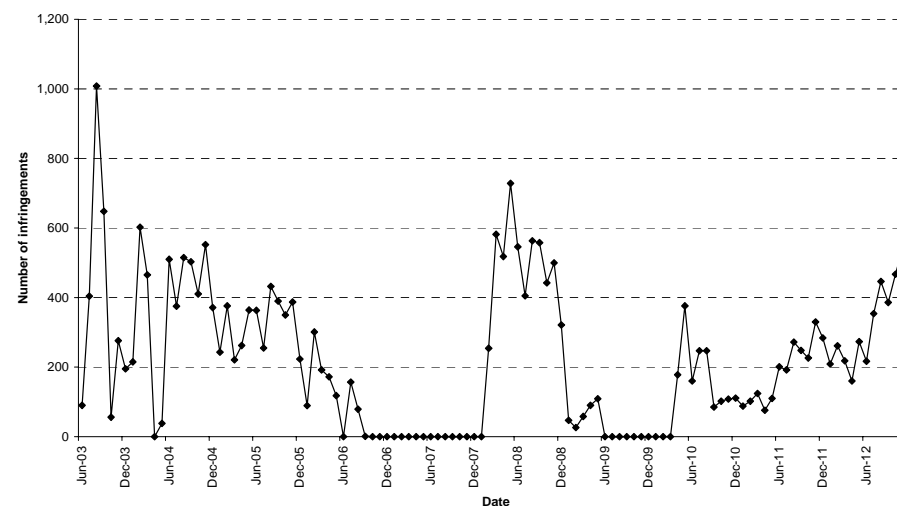
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY OURIMBAH



## Gibson Avenue, Padstow

Location: Gibson Avenue, between Turvey Street and Bryant Street, Padstow

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 03/07/2000

Status: **Effective**

### Current camera performance

	Four years before installation*	Adjusted five year before installation period	Most recent three years and 336 day period	Percentage reduction**
Fatalities	1	1.25	0	100%
Injuries	14	17.5	12	31%
Casualties	15	18.75	12	36%
Crashes	40	50	19	62%
Casualty Cost	\$8.24M	\$10.30M	\$1.63M	84%

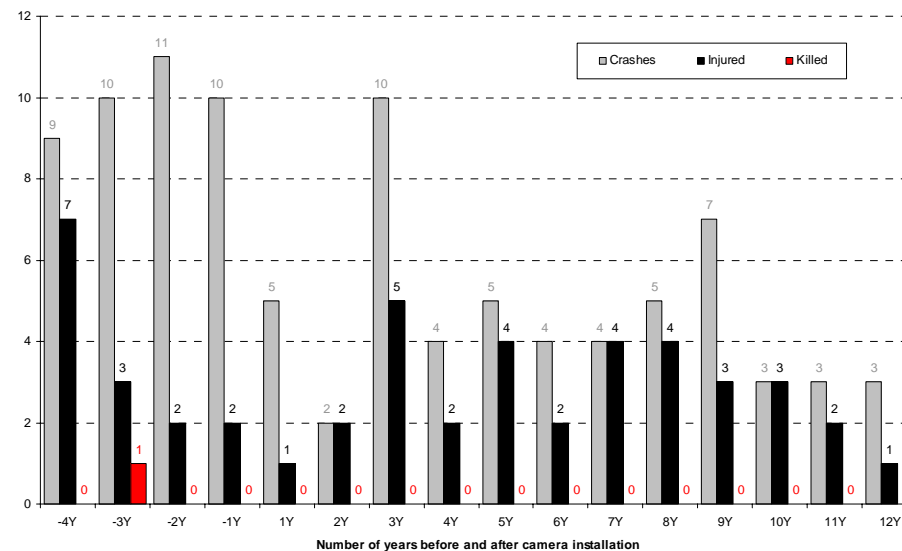
\*April 1996 to April 2000. No data available for 1995.

\*\*The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 62 per cent reduction in the annual average number of crashes and a 36 per cent reduction in the annual average number of casualties.
- This has been a saving of \$8.67 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

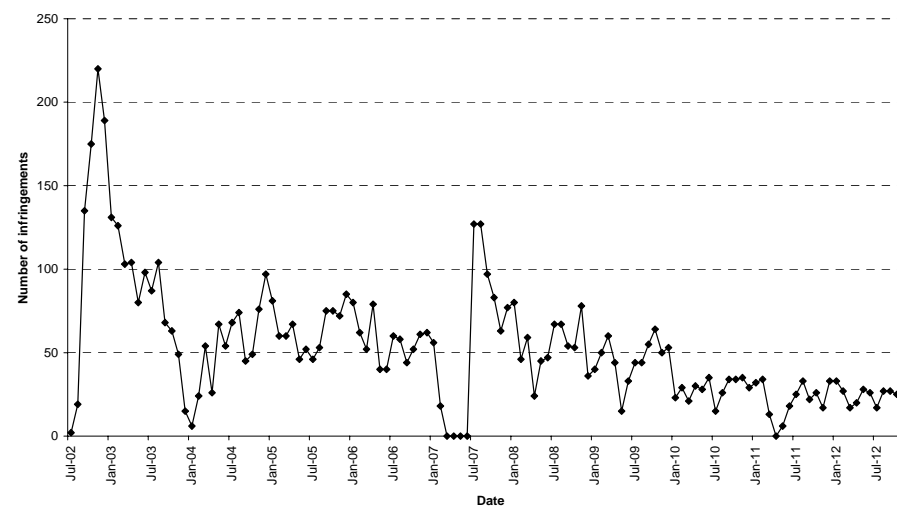
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

GIBSON AVENUE PADSTOW



## Henry Lawson Drive, Peakhurst

Location: Henry Lawson Drive, between Belmont Road and Ogilvy Street

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 29/01/2003

Status: **Effective**

### Current camera performance

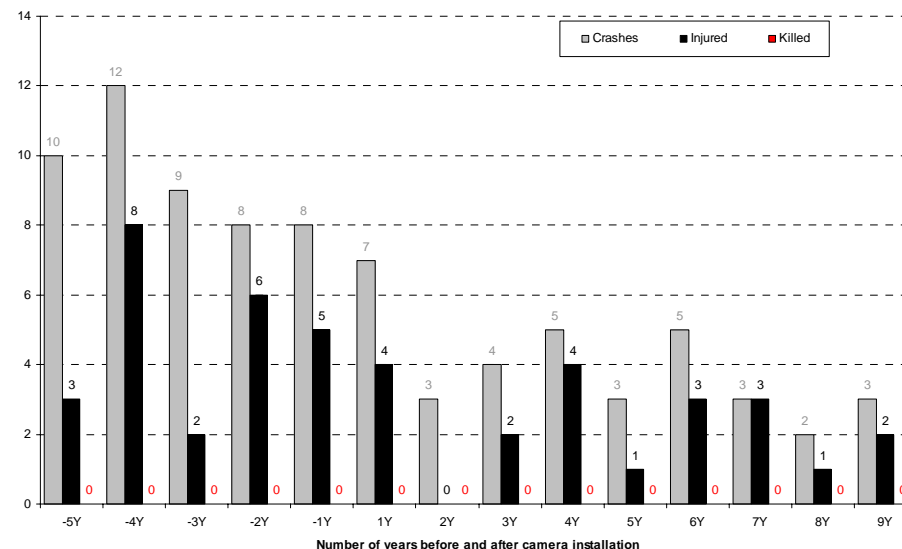
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	24	13	46%
Casualties	24	13	46%
Crashes	47	17	64%
Casualty Cost	\$3.26M	\$1.77M	46%

\*October 1997 to October 2002.

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 64 per cent reduction in the annual average number of crashes and a 46 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.49 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

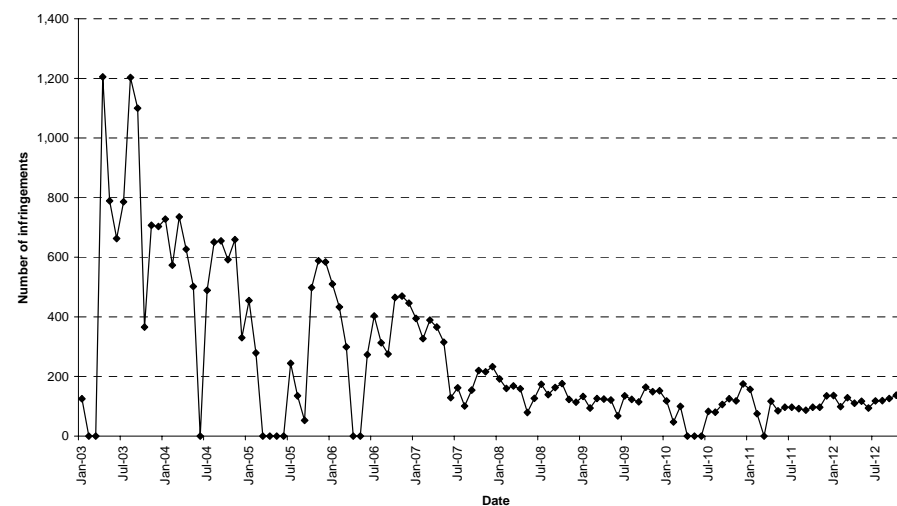
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

HENRY LAWSON DRIVE PEAKHURST





## Forest Road, Penshurst (school zone)

Location: Forest Road, between Penshurst Street and St Georges Street  
 School zone: Penshurst Girls Campus – Georges River College, Penshurst Public School, St Declan's Primary School  
 Length description: 340m east to 280m west of camera  
 Total length: 620m (patch to patch)  
 Number of cameras: 1  
 Started infringing: 17/10/2007  
 Status: **Effective**

### Current camera performance

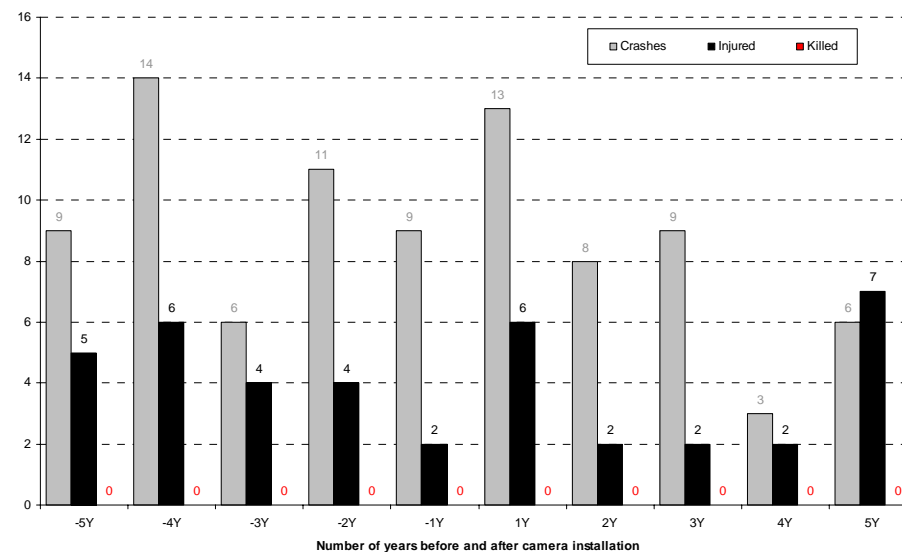
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	21	17	19%
Casualties	21	17	19%
Crashes	49	35	29%
Casualty Cost	\$2.86M	\$2.31M	19%

\*July 2002 to July 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 29 per cent reduction in the annual average number of crashes and a 19 per cent reduction in the annual average number of casualties.
- This has been a saving of \$550,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

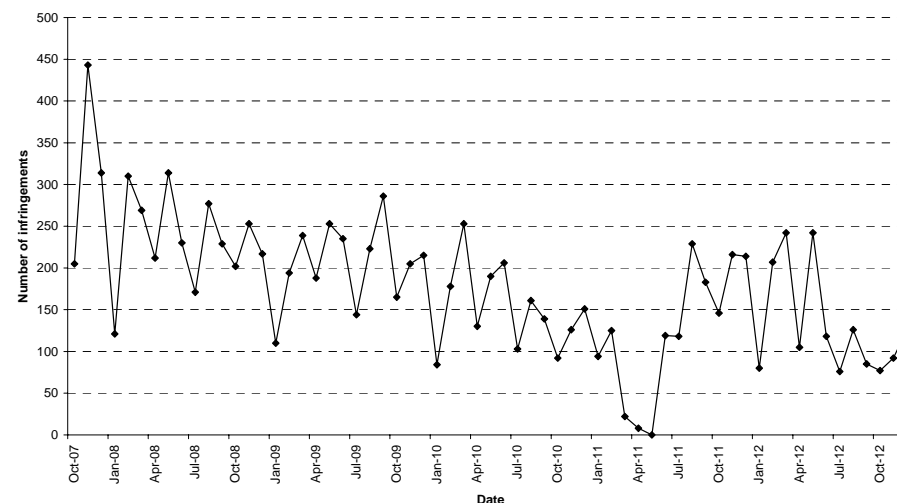
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

FOREST ROAD PENS HurST



## Henry Lawson Drive, Picnic Point

Location: Henry Lawson Drive, between Carinya Road and The River Road

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 16/05/2001

Status: **Effective**

### Current camera performance

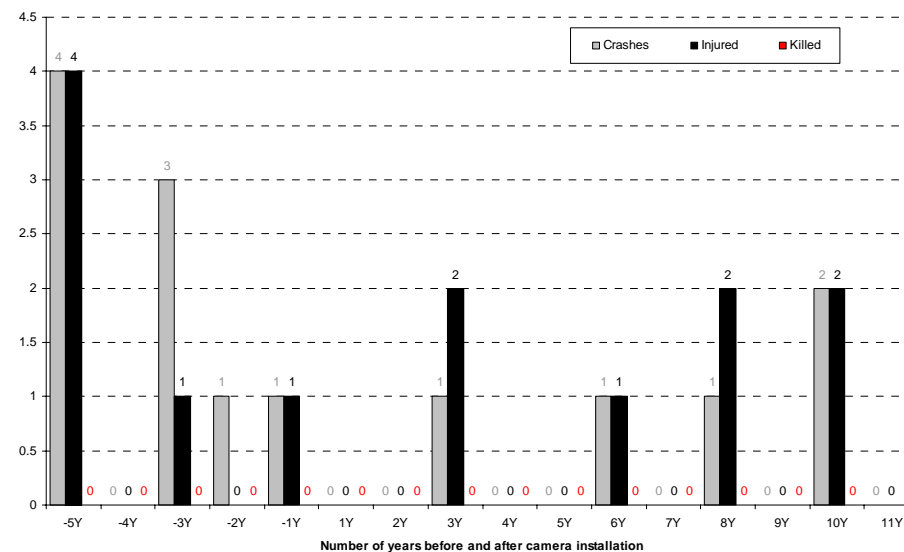
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	6	4	33%
Casualties	6	4	33%
Crashes	9	4	56%
Casualty Cost	\$0.82M	\$0.54M	33%

\*February 1996 to February 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 56 per cent reduction in the annual average number of crashes and a 33 per cent reduction in the annual average number of casualties.
- This has been a saving of \$280,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

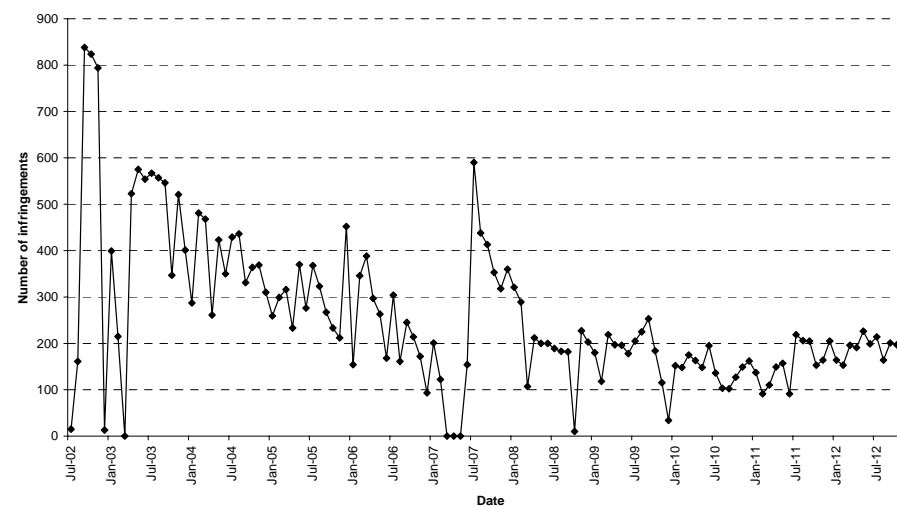
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

HENRY LAWSON DRIVE PICNIC POINT



## Lanyon Drive, Queanbeyan

Location: Lanyon Drive, between Tompsitt Drive and Hoover Road

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 02/05/2003

Status: **Effective**

### Current camera performance

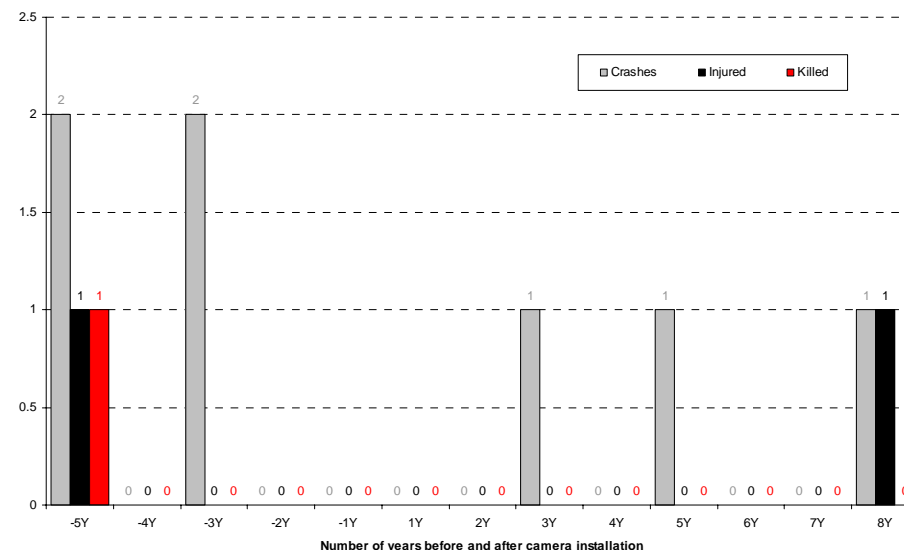
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	1	3	+200%
Casualties	2	3	+50%
Crashes	4	4	0%
Casualty Cost	\$6.47M	\$0.41M	94%

\*February 1998 to February 2003

- The current pre and post installation analysis shows that crashes have not changed at this location.
- When comparing the pre installation period to the most recent five year period, there has been a slight increase in injuries from one to three. The high percentage increase is due to the low number of crashes at this location. However there has been a reduction in fatalities from one to zero at this location.
- This has been a saving of \$6.06 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

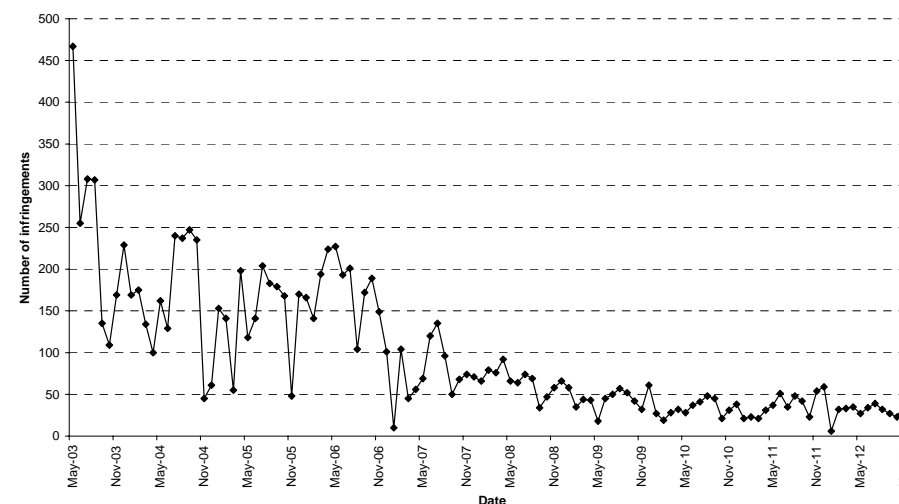
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

LANYON DRIVE QUEANBEYAN



## Avoca Street, Randwick (school zone)

Location: Avoca Street, between Howard Street and Barker Road  
 School zone: Randwick Boys High School, Randwick Girls High School  
 Length description: 350m south to 210m north of camera  
 Total length: 560m (patch to patch)  
 Number of cameras: 1  
 Started infringing: 29/06/2007  
 Status: **Effective**

### Current camera performance

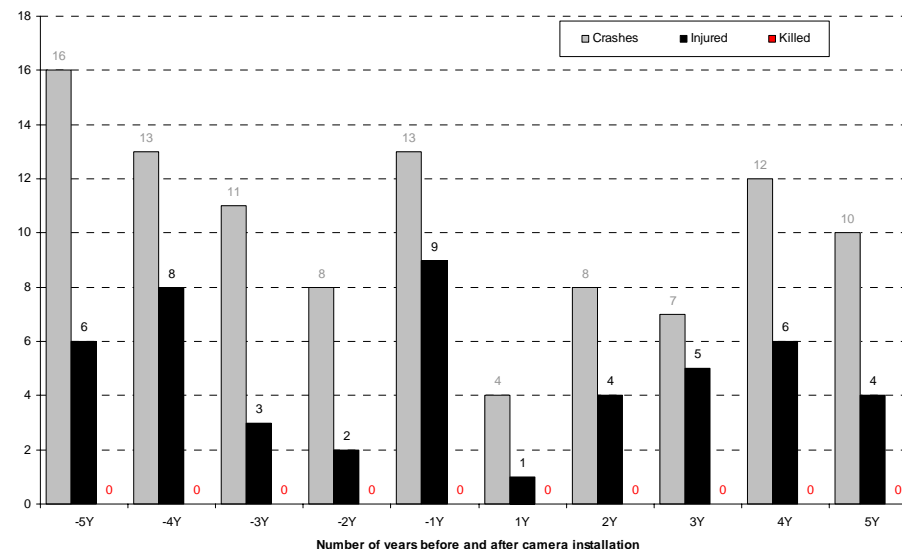
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	28	20	29%
Casualties	28	20	29%
Crashes	61	40	34%
Casualty Cost	\$3.81M	\$2.72M	29%

\*March 2002 to March 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 34 per cent reduction in the annual average number of crashes and a 29 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.09 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

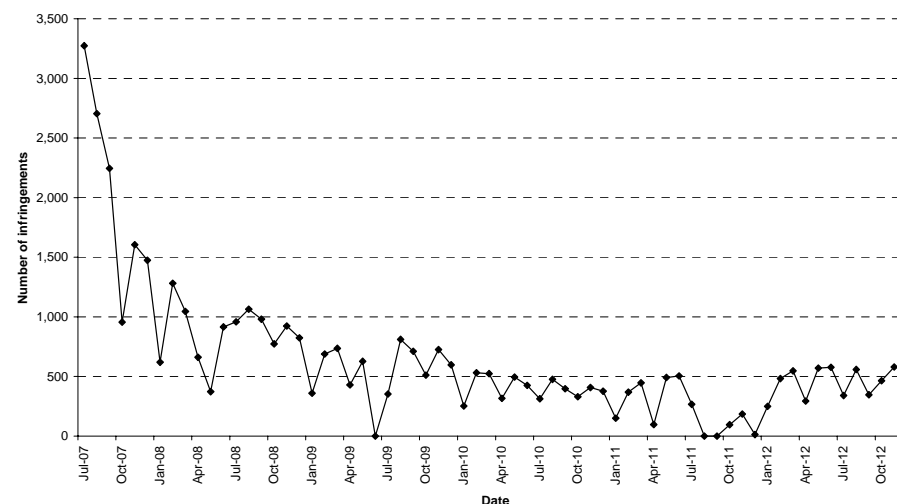
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

AVOCA STREET RANDWICK



## McCaffrey Drive, Rankin Park

Location: McCaffrey Drive, between Duval Street and Orara Street

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 29/04/2003

Status: **Review**

### Current camera performance

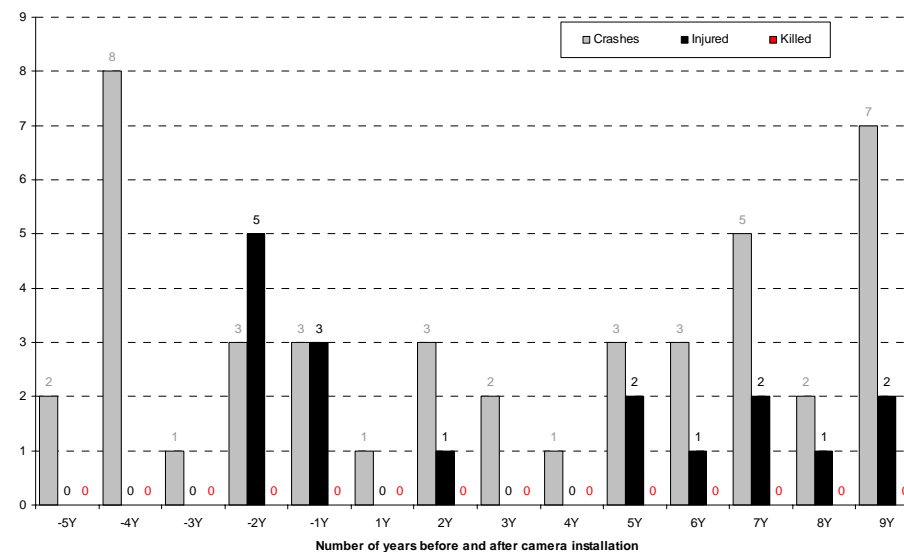
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	8	10	+25%
Casualties	8	10	+25%
Crashes	17	20	+18%
Casualty Cost	\$1.09M	\$1.36M	+25%

\*February 1998 to February 2003

- The current pre and post installation analysis shows that crashes and casualties have increased at this location.
- When comparing the pre installation period to the most recent five year period, there has been an 18 per cent increase in the annual average number of crashes and a 25 per cent increase in the annual average number of casualties. In June 2012, there was one crash that resulted in 3 injuries.
- This location is recommended for comprehensive safety review as there has been an increase in crashes and casualties at this location in the most recent five year period.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

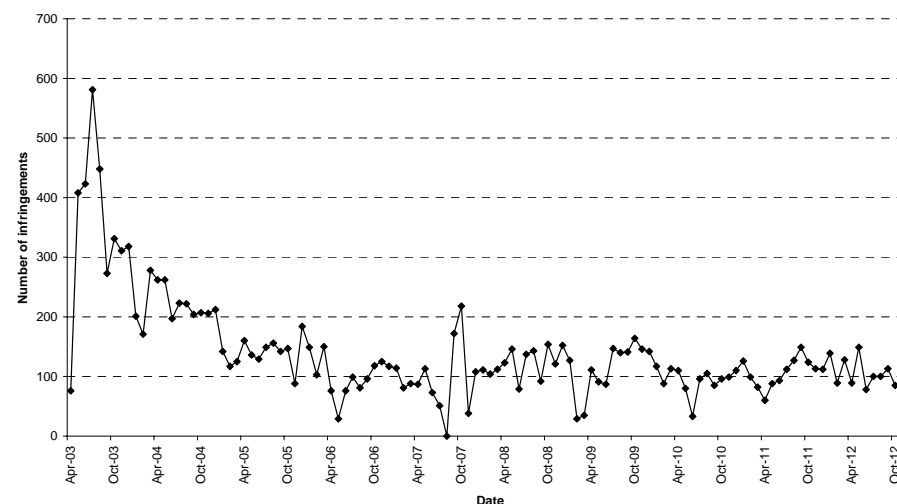
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

MCCAFFREY DRIVE RANKIN PARK



## Botany Road, Rosebery/Alexandria (school zone)

Location: Botany Road, between Gardeners Road and Gillespie Street

School zone: Gardeners Road Public School

Length description: 150m south to 210m north of camera

Total length: 360m (patch to patch)

Number of cameras: 2

Started infringing: 13/06/2007

Status: **Effective**

### Current camera performance

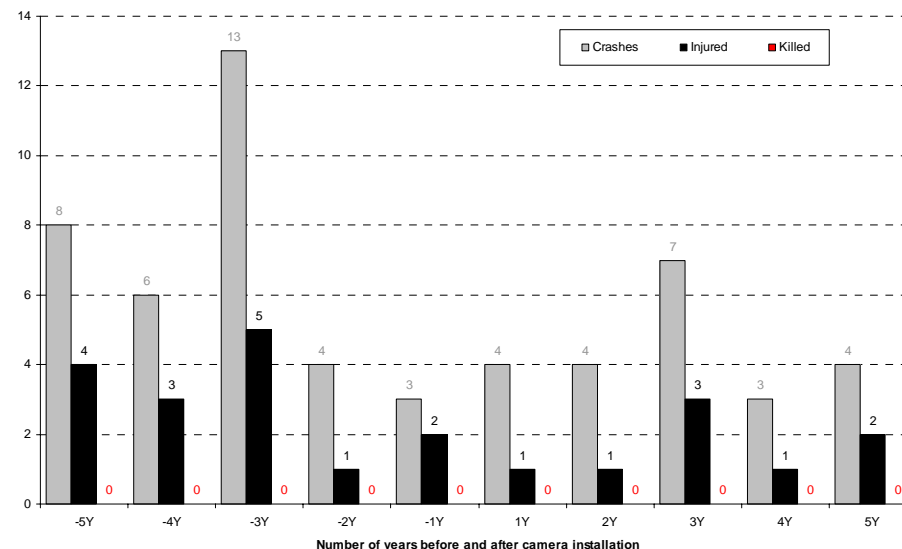
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	15	12	20%
Casualties	15	12	20%
Crashes	34	24	29%
Casualty Cost	\$2.04M	\$1.63M	20%

\*March 2002 to March 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 29 per cent reduction in the annual average number of crashes and a 20 per cent reduction in the annual average number of casualties.
- This has been a saving of \$410,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been reduction in speeding behaviour at this location over time. The spike in infringements after July 2012 can be attributed to a change in speed limit from 60km/h to 50km/h. Roadworks and camera maintenance may influence the number of infringements issued.

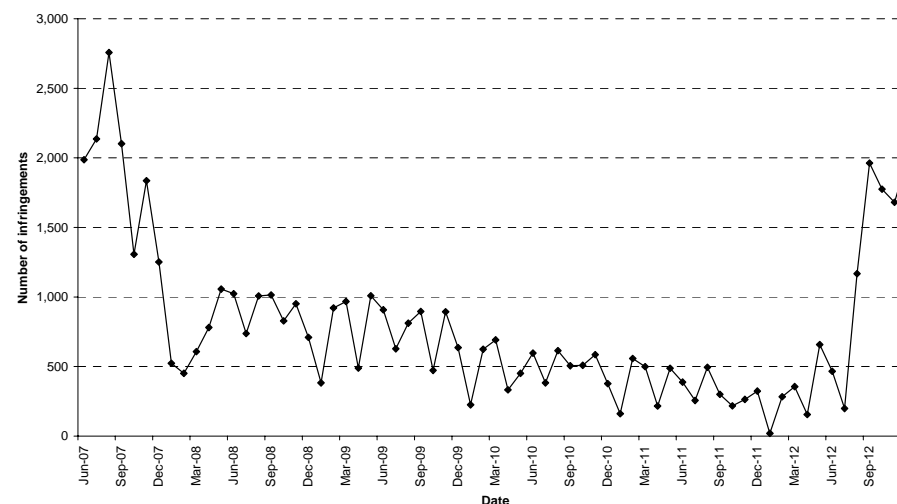
## Trend in road safety performance at camera location

### Crashes and casualties



### Infringements

BOTANY ROAD ALEXANDRIA | ROSEBERY



## Victoria Road, Rydalmere (school zone)

Location: Victoria Road, between Park Road and John Road

School zone: Rydalmere Public School

Length description: 190m west to 250m east of camera

Total length: 440m (patch to patch)

Number of cameras: 2

Started infringing: 28/01/2009

Status: **Effective**

### Current camera performance

	Five years before installation*	Most recent 3 years and 338 day period	Percentage reduction**
Fatalities	0	0	-
Injuries	3	3	+27%
Casualties	3	3	+27%
Crashes	19	5	66%
Casualty Cost	\$0.41M	\$0.41M	+27%

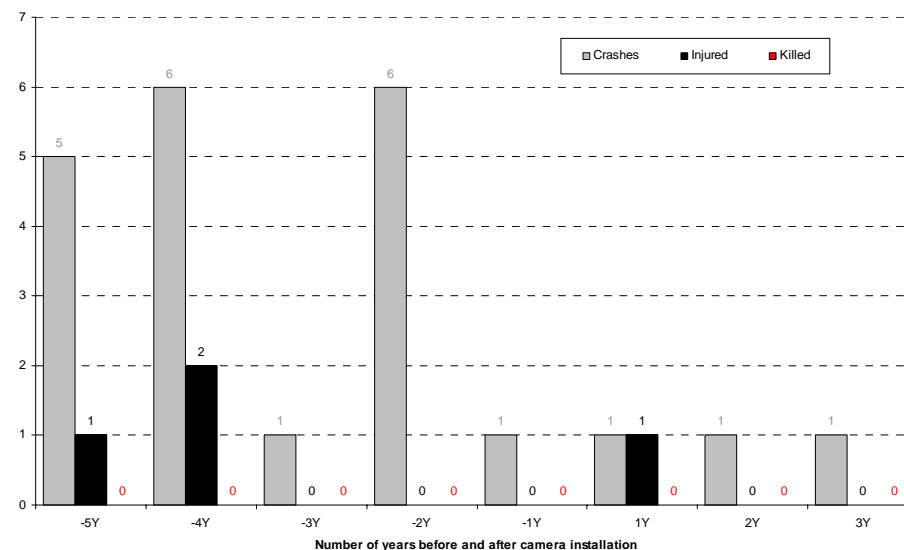
\* October 2003 to October 2008

\*\*The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 66 per cent reduction in the annual average number of crashes however there has been a 27 per cent reduction in the annual average number of casualties.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a consistent level of speeding at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.
- With less than five years of post installation data, it is too early to assess the effectiveness of the cameras at this location however early results indicate they are delivering the expected road safety benefits.

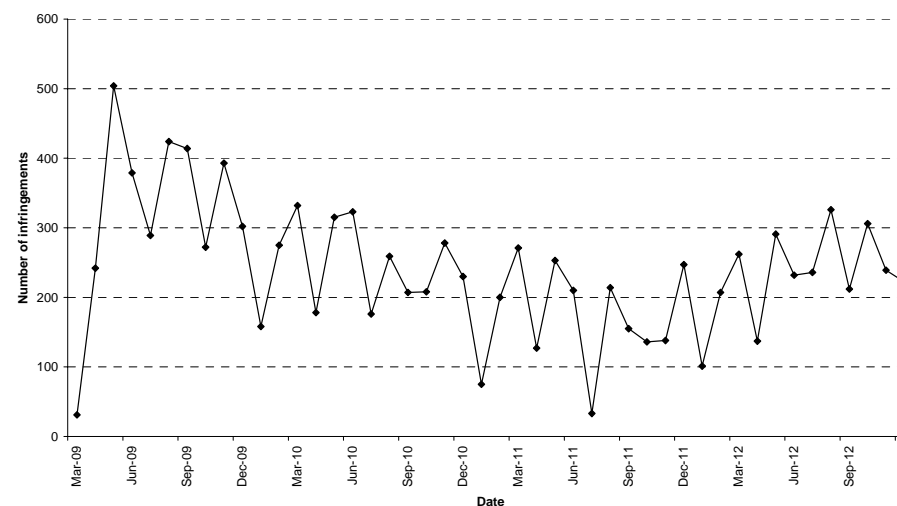
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

VICTORIA ROAD RYDALMERE



## Blaxland Road, Ryde

Location: Blaxland Road, between Reservoir Lane and North Road

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 24/06/2002

Status: **Effective**

### Current camera performance

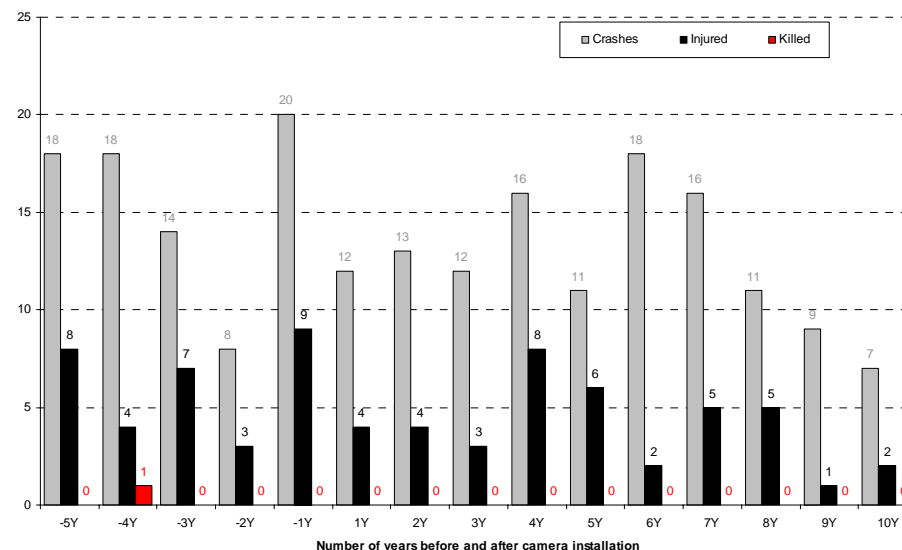
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	31	14	55%
Casualties	32	14	56%
Crashes	78	58	26%
Casualty Cost	\$10.55M	\$1.90M	82%

\*March 1997 to March 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 26 per cent reduction in the annual average number of crashes and a 56 per cent reduction in the annual average number of casualties.
- This has been a saving of \$8.65 million in costs to the community.
- The infringement graph details the trend in infringements at this location since October 2002. Infringement data before this date are not available. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

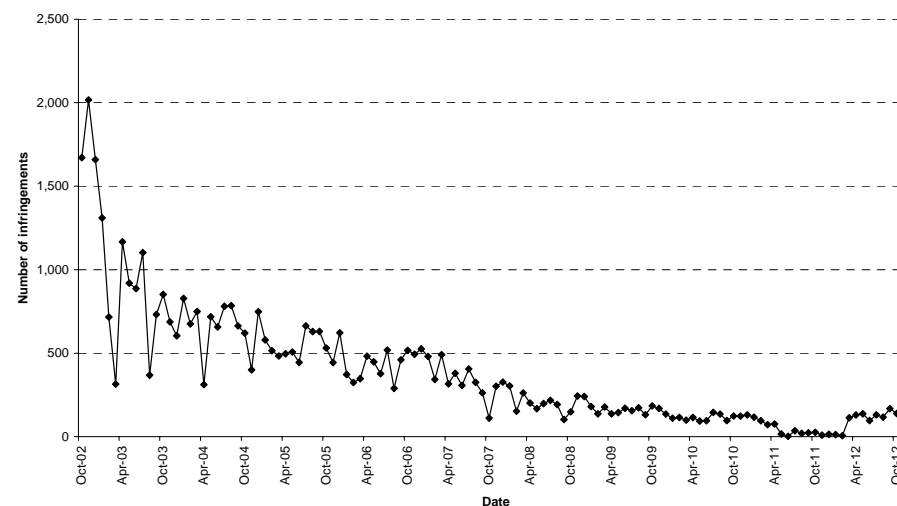
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

BLAXLAND ROAD RYDE





## Victoria Road, Ryde (school zone)

Location: Victoria Road, between Margaret Street and Cressy Road

School zone: Holy Cross College Ryde, St Charles School Ryde

Length description: 300m west to 270m east of camera

Total length: 570m (patch to patch)

Number of cameras: 2

Started infringing: 14/11/2007

Status: **Effective**

### Current camera performance

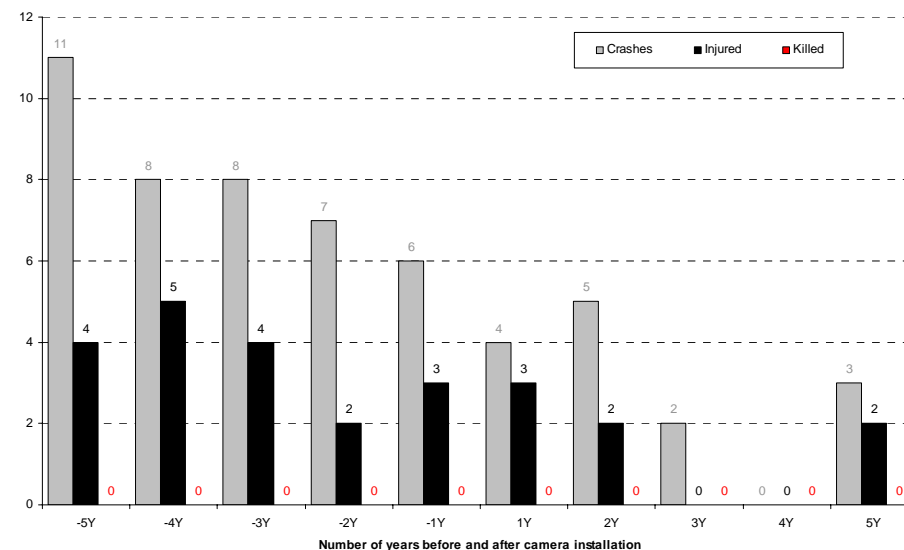
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	18	5	72%
Casualties	18	5	72%
Crashes	40	11	73%
Casualty Cost	\$2.45M	\$0.68M	72%

\*August 2002 to August 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 73 per cent reduction in the annual average number of crashes and a 72 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.77 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

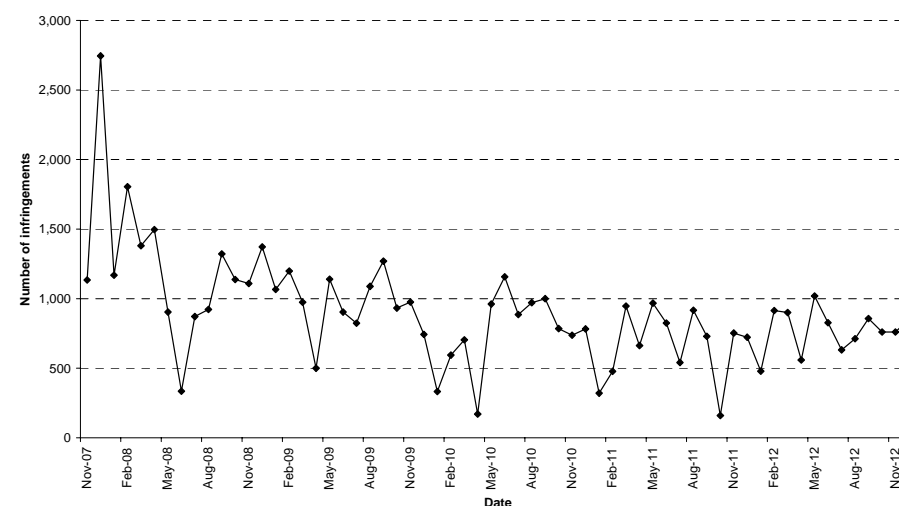
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

VICTORIA ROAD RYDE



## Pacific Highway, Sandgate

Location: Pacific Highway, between Wallsend Road and Ironbark Creek  
 Length description: 500m south to 500m north from midpoint between camera sites

Total length: 1000m

Number of cameras: 2

Started infringing:

- Camera 1 (northbound) 14/01/2003
- Camera 2 (southbound) 23/04/2003

Status: **Review**

### Current camera performance

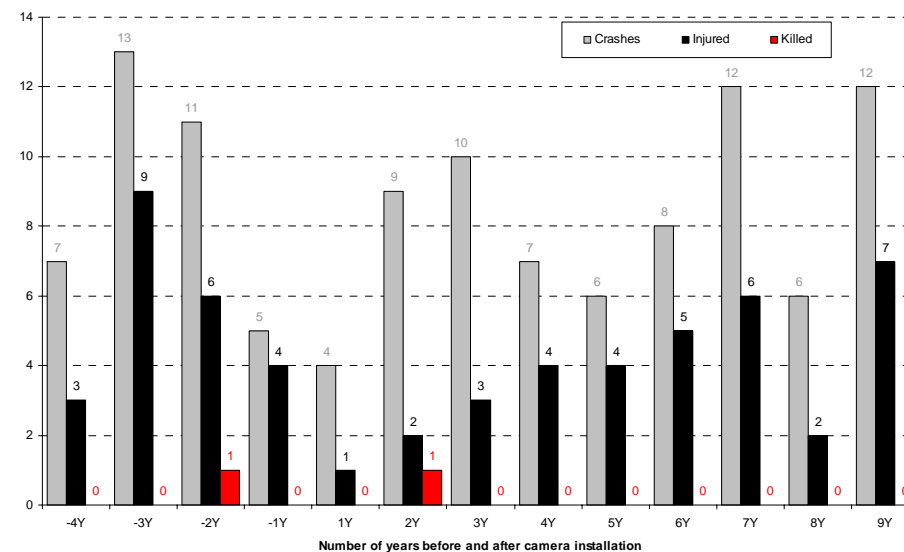
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	22	20	9%
Casualties	23	20	13%
Crashes	36	47	+31%
Casualty Cost	\$9.33M	\$2.72M	71%

\*October 1998 to October 2002

- The current pre and post installation analysis shows that crashes have increased at this location however casualties have decreased.
- When comparing the pre installation period to the most recent five year period, there has been a 31 per cent increase in the annual average number of crashes however there has been a 13 per cent reduction in the annual average number of casualties. Further, there has been a reduction in fatalities from one fatality in the pre installation period to no fatalities in the most recent five year period.
- This has been a saving of \$6.61 million in costs to the community.
- This location is recommended for comprehensive safety review as there has been a gradual increase in casualties at this location since the cameras were installed.
- The infringement graph details the trend in infringements at this location since December 2002. Infringement data before this date are not available. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

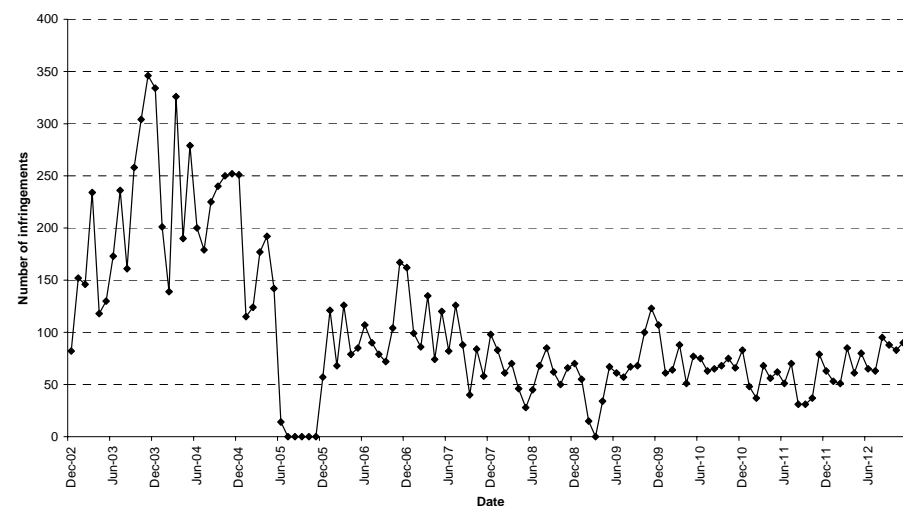
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY SANDGATE



## George Street, South Windsor

Location: George Street, between Rickaby Street and Yarrawonga Street

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 30/11/2001

Status: **Effective**

### Current camera performance

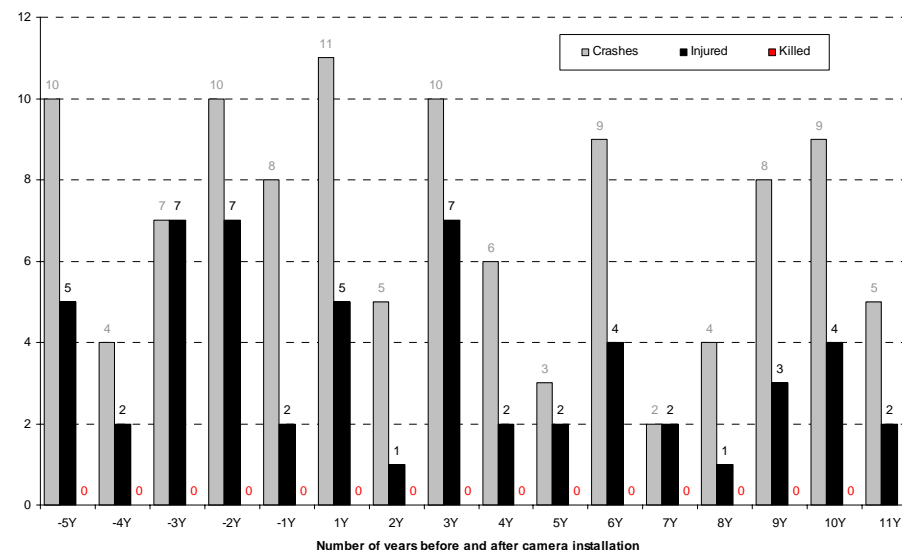
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	23	12	48%
Casualties	23	12	48%
Crashes	39	29	26%
Casualty Cost	\$3.13M	\$1.63M	48%

\*August 1996 to August 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 26 per cent reduction in the annual average number of crashes and a 48 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.50 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The spike in infringements in April 2007 may be attributed to the camera commencing speed enforcement of both directions of traffic where it previously enforced one direction only. Roadworks and camera maintenance may influence the number of infringements issued.

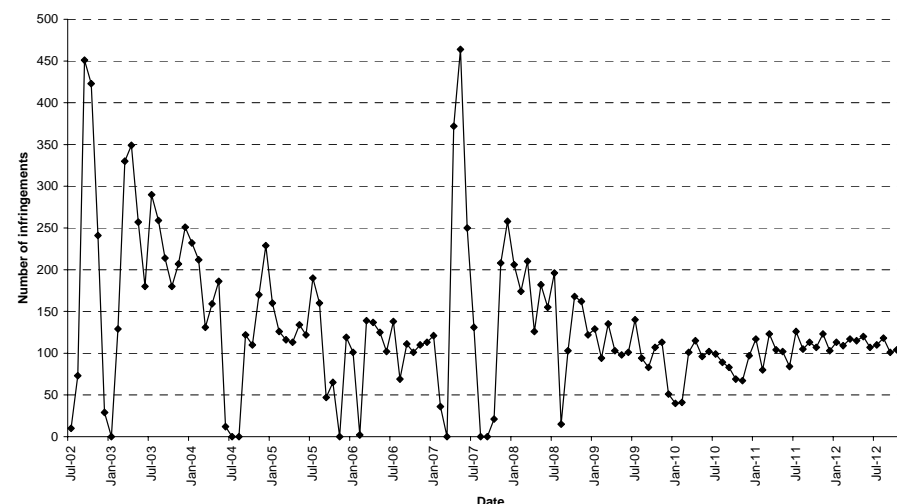
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

GEORGE STREET SOUTH WINDSOR



## The Boulevard, Strathfield (school zone)

Location: The Boulevard, between Torrington Parade and Russell Street  
 School zone: Trinity Grammar Preparatory School, Santa Sabina College, Santa Maria Del Monte, Meridan Senior and Junior  
 Length description: 425m north to 585m south of camera  
 Total length: 1010m (patch to patch)  
 Number of cameras: 1  
 Started infringing: 04/02/2009  
 Status: **Effective**

### Current camera performance

	Five years before installation*	Most recent three years and 331 days	Percentage reduction**
Fatalities	0	0	-
Injuries	38	29	2%
Casualties	38	29	2%
Crashes	71	44	21%
Casualty Cost	\$5.17M	\$3.94M	2%

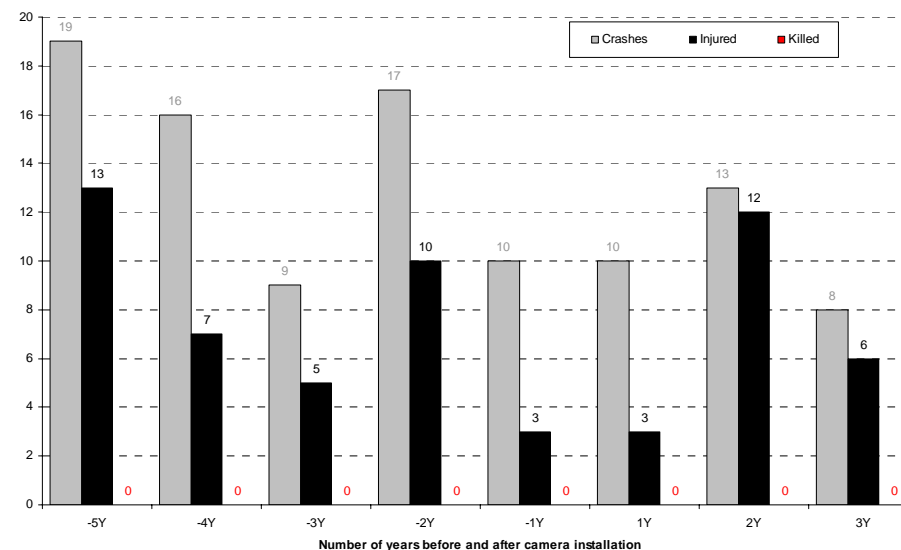
\*November 2003 to November 2008

\*\*The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent three years and 331 day period, there has been a 21 per cent reduction in the annual average number of crashes and a 2 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.23 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

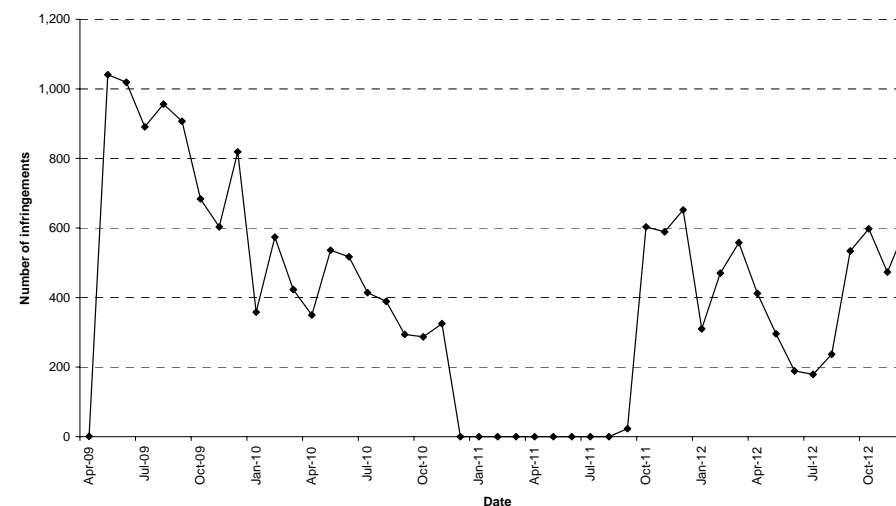
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

THE BOULEVARDE STRATHFIELD



## Sydney Harbour Tunnel, Sydney (high risk location)

Location: Sydney Harbour Tunnel, between Cahill Expressway and Warringah Freeway

Length description:

- Camera 1 (northbound) 865m south to 1430m north of camera
- Camera 2 (southbound) 870m south to 1425m north of camera

Total length:

- Camera 1 (northbound) 2295m
- Camera 2 (southbound) 2295m

Number of cameras: 2

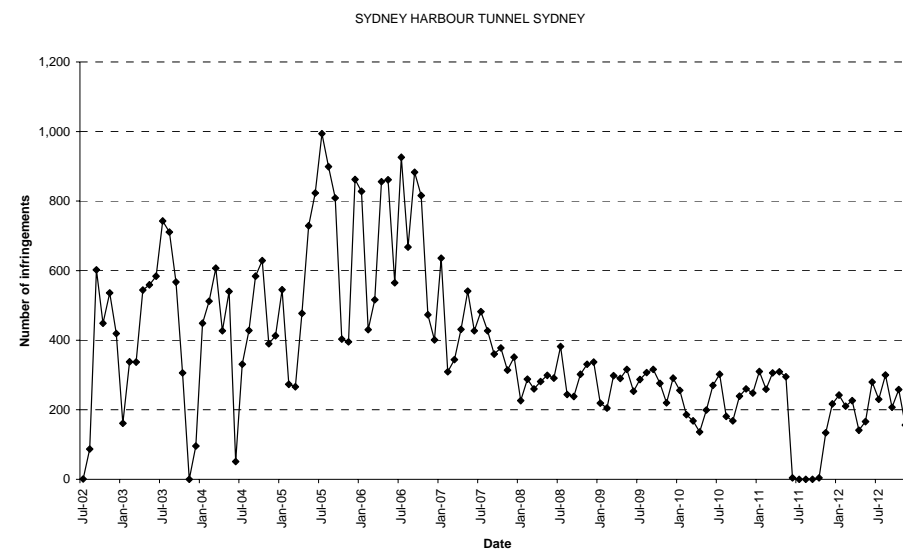
Started infringing: 02/08/2002

### Crash and casualty data – January 2012 to December 2012

	Northbound	Southbound
Fatalities	0	0
Injuries	1	1
Casualties	1	1
Crashes	5	5

- This location is appropriate for fixed speed camera enforcement as it is a high risk location that is difficult for the NSW Police Force to enforce using traditional methods.
- The infringement graph details the trend in infringements at this location since the cameras began operation. The extended period of camera downtime from June 2011 to October 2011 was due to camera maintenance requirements and difficulties accessing the tunnel site.

## Infringements at fixed speed camera location



## New England Highway, Tenterfield

Location: New England Highway, between Duncan Street and George Street

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 2

Started infringing: 3/10/2002

Status: **Effective**

### Current camera performance

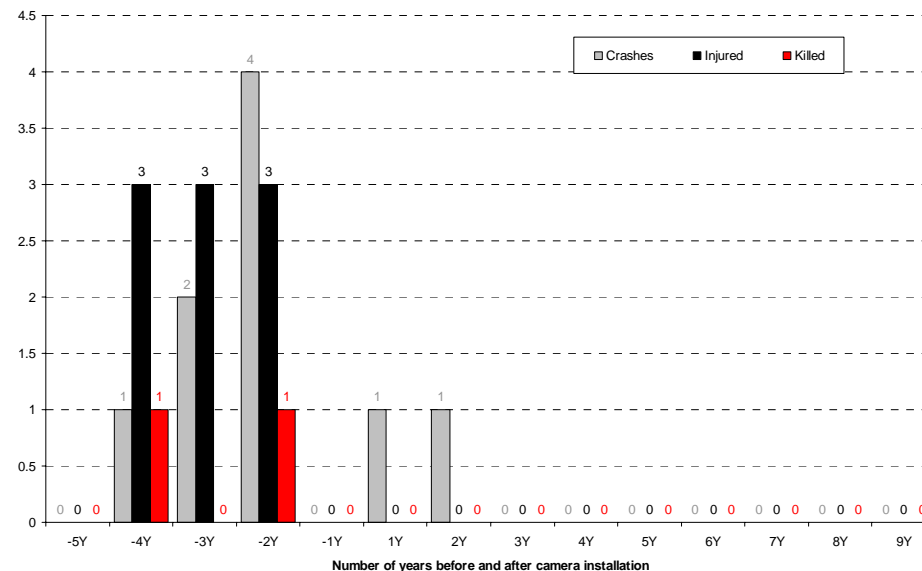
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	9	0	100%
Casualties	11	0	100%
Crashes	7	0	100%
Casualty Cost	\$13.90M	\$0M	100%

\*July 1997 to July 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 100 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$13.90 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

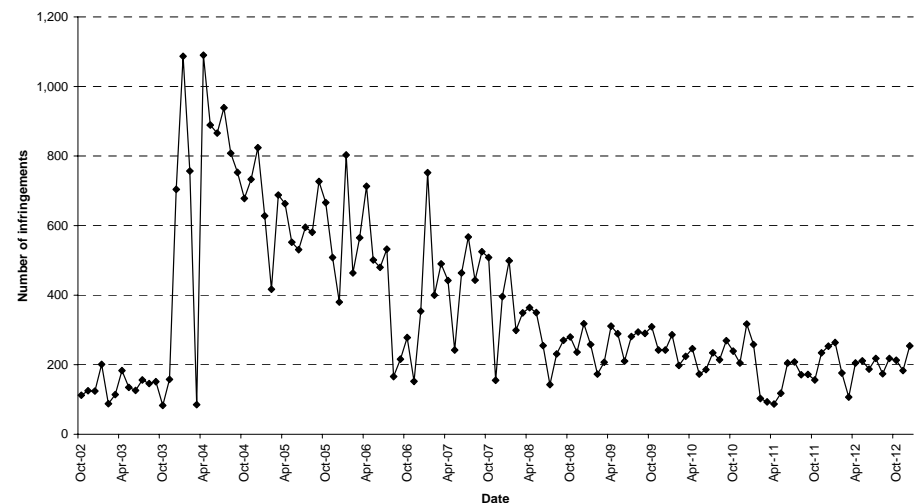
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

NEW ENGLAND HIGHWAY TENTERFIELD



## Terrigal Drive, Terrigal

Location: Terrigal Drive, between Brunswick Road and Bellbird Avenue

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 27/02/2003

Status: **Effective**

### Current camera performance

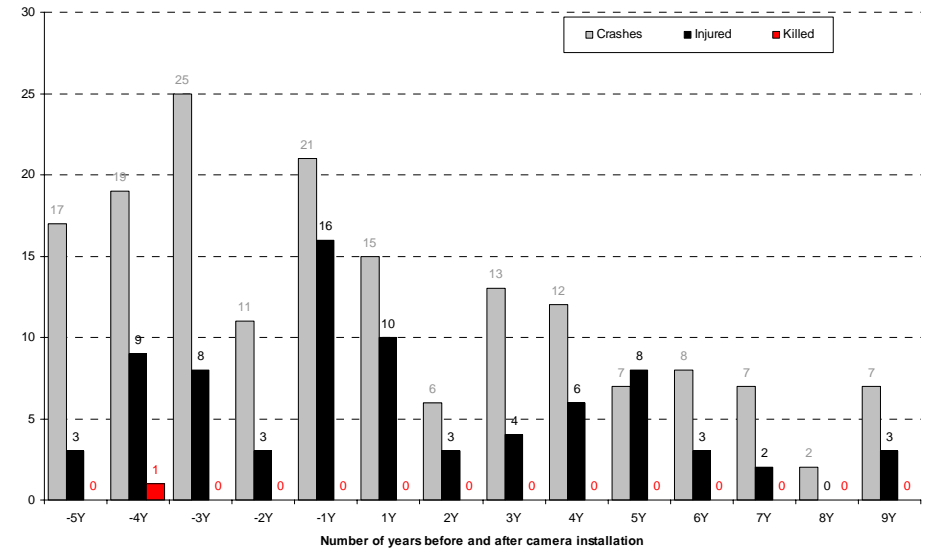
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	39	9	77%
Casualties	40	9	78%
Crashes	93	26	72%
Casualty Cost	\$11.64M	\$1.22M	89%

\*November 1997 to November 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 72 per cent reduction in the annual average number of crashes and a 78 per cent reduction in the annual average number of casualties.
- This has been a saving of \$10.42 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.
- This location was changed to a school zone in March 2012. The current analysis is of the original non-school zone length.

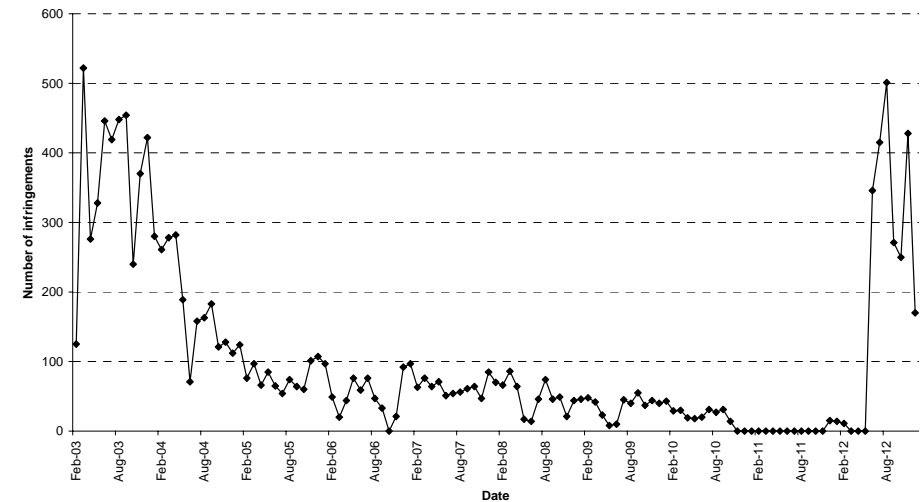
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

TERRIGAL DRIVE TERRIGAL



## Fitzwilliam Road, Toongabbie (school zone)

Location: Fitzwilliam Road, between Reynolds Street and Binalong Road

School zone: Toongabbie Public School

Length description: 590m (patch to patch)

Total length: 350m east to 240m west of camera

Number of cameras: 2

Started infringing: 16/05/2007

Status: **Effective**

### Current camera performance

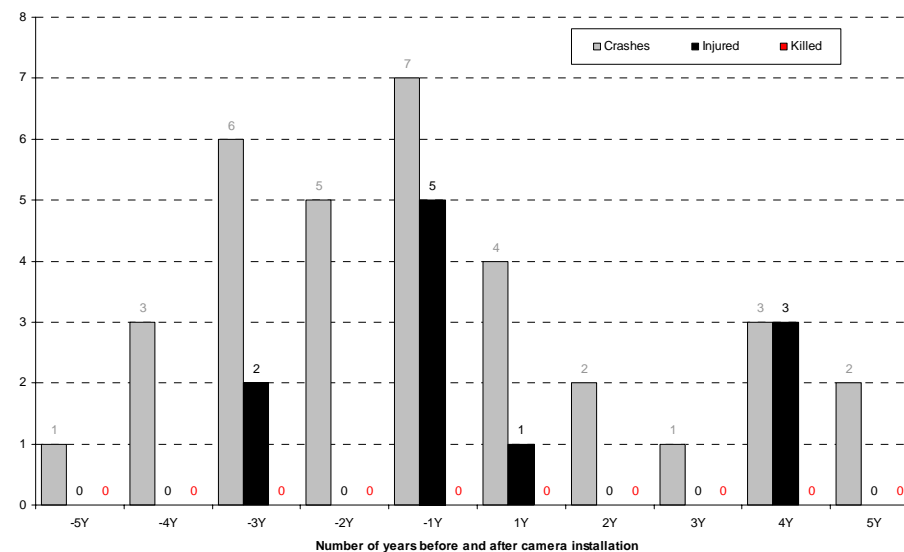
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	7	3	57%
Casualties	7	3	57%
Crashes	22	8	64%
Casualty Cost	\$0.95M	\$0.41M	57%

\*February 2002 to February 2007

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 64 per cent reduction in the annual average number of crashes and a 57 per cent reduction in the annual average number of casualties.
- This has been a saving of \$540,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

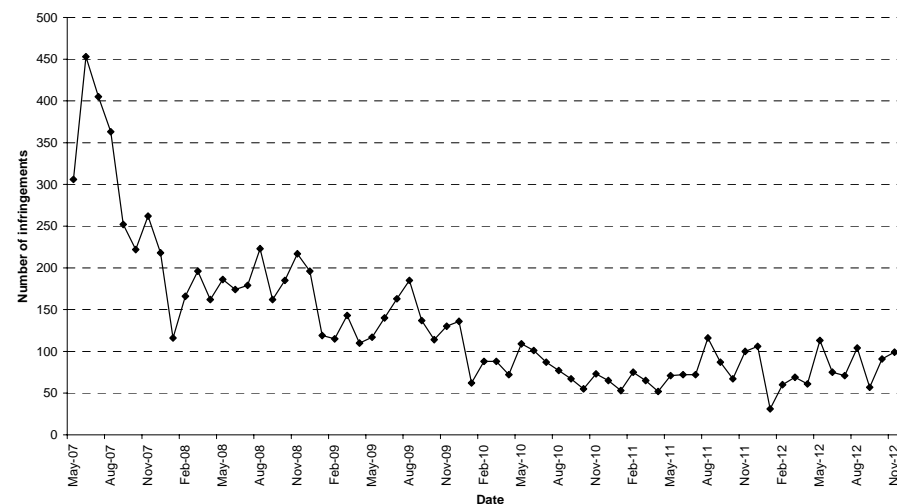
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

FITZWILLIAM ROAD OLD TOONGABBIE





## Pacific Highway, Valla Beach

Location: Pacific Highway, between Valla Beach Road and Oyster Creek

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 2

Started infringing: 05/02/2002

Status: **Retained based on 2012 desktop review**

### Current camera performance

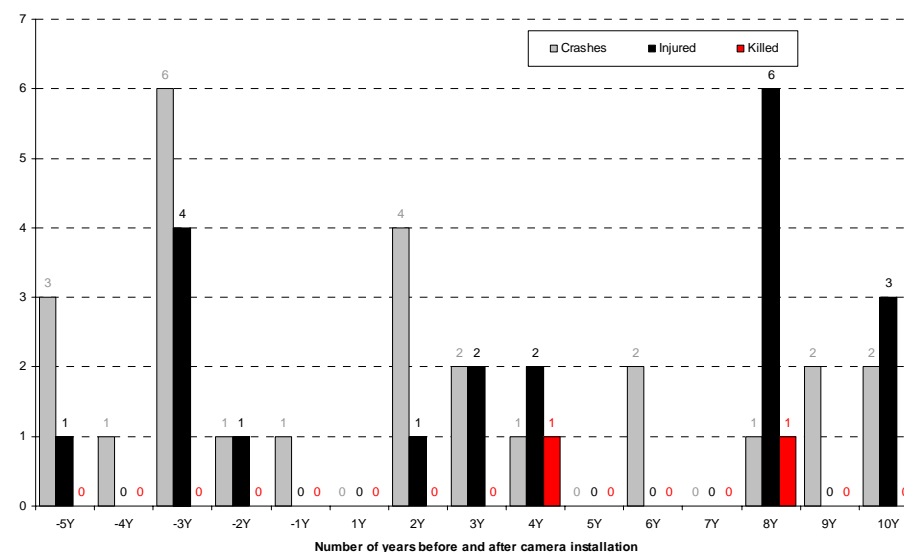
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	1	Increase from 0 to 1
Injuries	6	9	+50%
Casualties	6	10	+67%
Crashes	12	5	58%
Casualty Cost	\$0.82M	\$7.56M	+827%

\*November 1996 to November 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 58 per cent reduction in the annual average number of crashes however casualties have increased at this location including one fatality.
- Based on the assessment criteria the fixed speed cameras at this location were identified for review. A more detailed analysis of the crashes revealed that one casualty crash in 2009 resulted in one fatality and six injuries which significantly influenced the effectiveness result. These speed cameras are also located on a section of the Pacific Highway that is yet to be upgraded.
- The infringement graph details the trend in infringements at this location since July 2004. Infringement data before this date are not available. The spike in infringements from May 2011 can be attributed to the speed limit changing from 100km/h to 80km/h. The speed limit was changed due to the poor safety record of this section of the Pacific Highway. Roadworks and camera maintenance may influence the number of infringements issued.

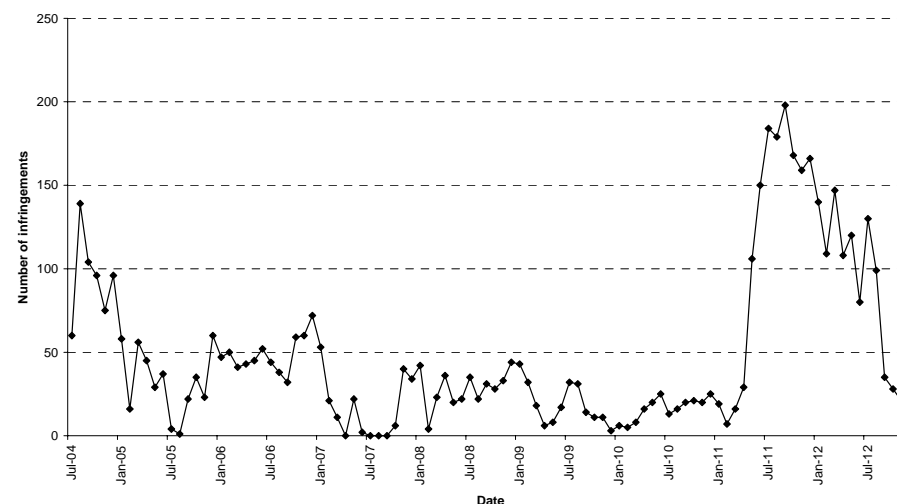
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY VALLA BEACH



## Great Western Highway, Valley Heights

Location: Great Western Highway, between The Valley Road and Sun Valley Road

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 29/04/2002

Status: **Effective**

### Current camera performance

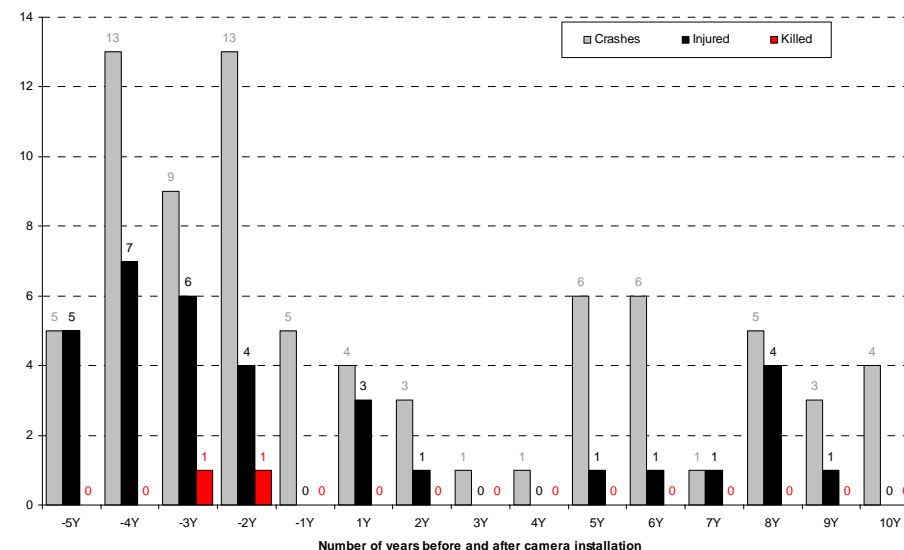
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	22	7	68%
Casualties	24	7	71%
Crashes	45	19	58%
Casualty Cost	\$15.67M	\$0.95M	94%

\*January 1997 to January 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 58 per cent reduction in the annual average number of crashes and a 71 per cent reduction in the annual average number of casualties.
- This has been a saving of \$14.72 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

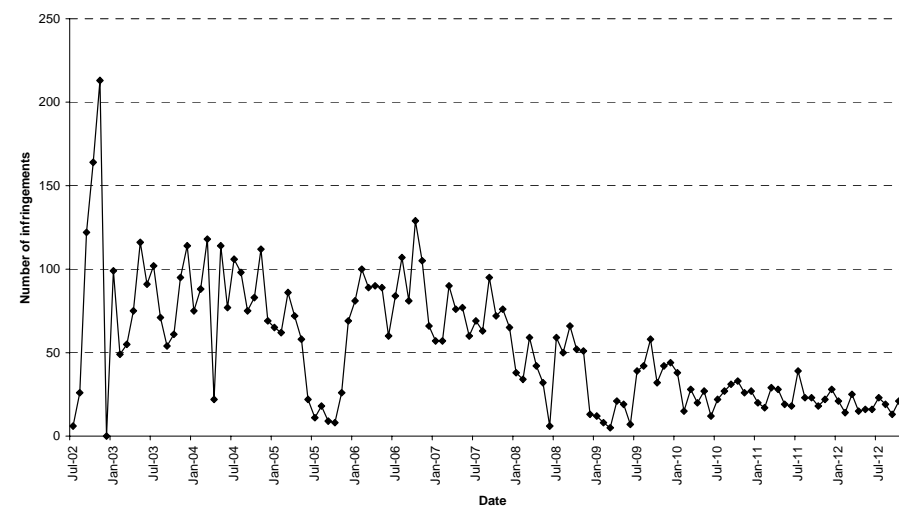
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

GREAT WESTERN HIGHWAY VALLEY HEIGHTS



## Pacific Highway, Wahroonga (school zone)

Location: Pacific Highway, between Gilda Avenue and Woodville Avenue  
 School zone: Warrawee Public School, Knox Grammar, Abbotsleigh Senior Campus  
 Length description: 1080m south to 880m north of camera  
 Total length: 1960m (patch to patch)  
 Number of cameras: 2  
 Started infringing: 28/01/2009  
 Status: **Effective**

### Current camera performance

	Five years before installation*	Most recent three years and 338 day period	Percentage reduction**
Fatalities	0	0	-
Injuries	65	40	22%
Casualties	65	40	22%
Crashes	123	90	7%
Casualty Cost	\$8.84M	\$5.44M	22%

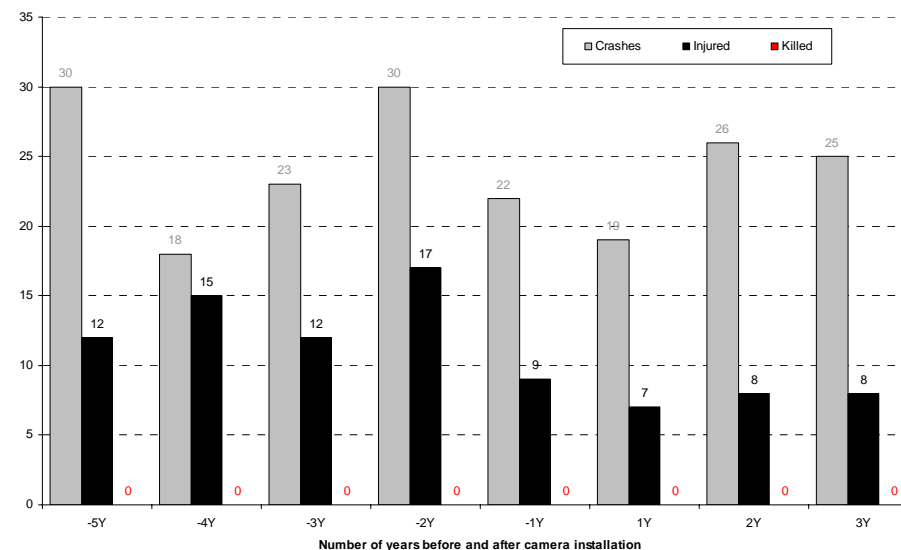
\*October 2003 to October 2008

\*\*The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent three years and 338 day period, there has been a 7 per cent reduction in the annual average number of crashes and a 22 per cent reduction in the annual average number of casualties.
- This has been a saving of \$3.40 million in costs to the community.
- The infringement graph details the trend in infringements at this location since April 2009. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

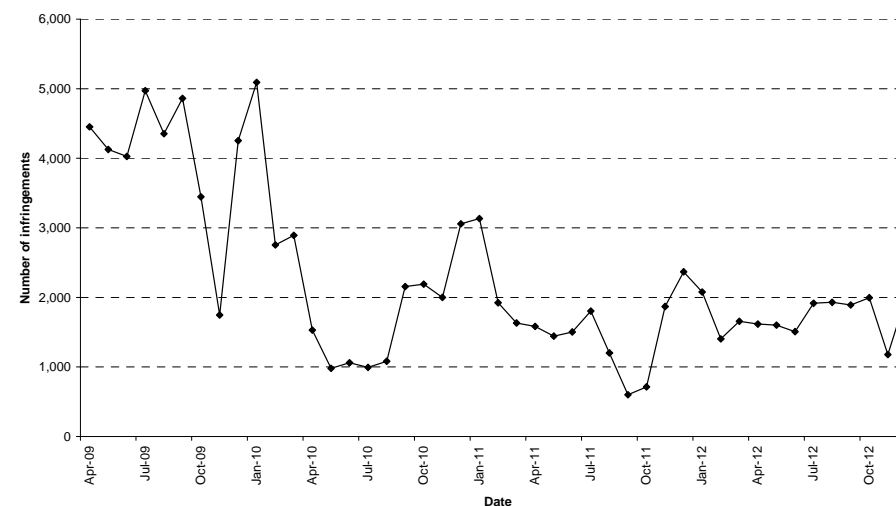
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY WAHROONGA



## Pacific Highway, Wardell

Location: Pacific Highway, between Riverside Drive and Carlisle Street

Length description: 500m north to 500m south of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 24/02/2003

Status: **Effective**

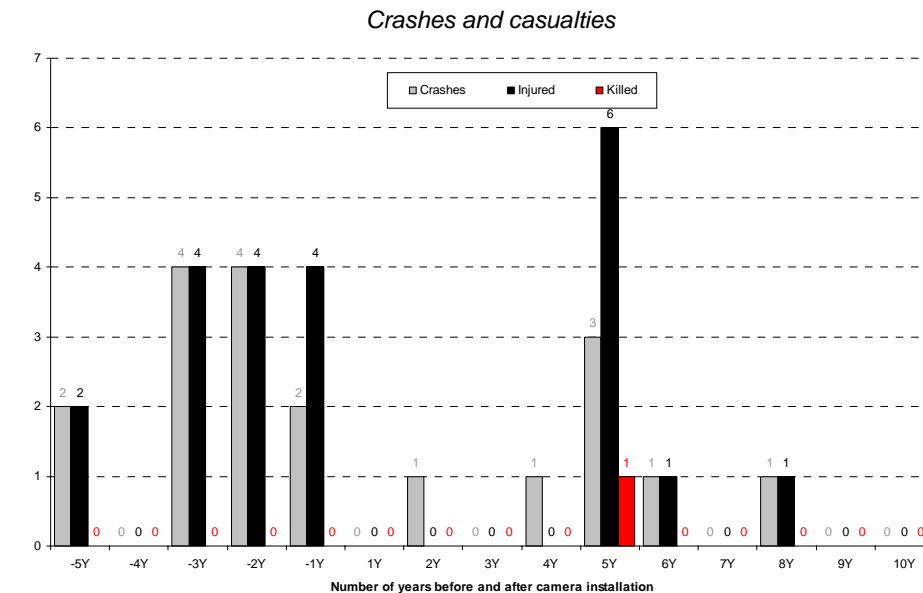
### Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	14	3	79%
Casualties	14	3	79%
Crashes	12	3	75%
Casualty Cost	\$1.90M	\$0.41M	79%

\*November 1997 to November 2002

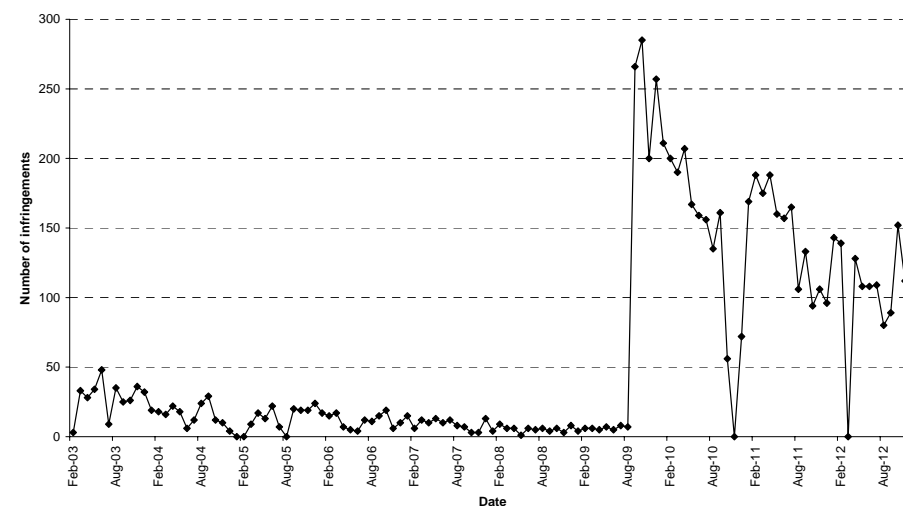
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 75 per cent reduction in the annual average number of crashes and a 79 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.49 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The spike in infringements in September 2009 can be attributed to the speed limit changing from 100km/h to 80km/h. Roadworks and camera maintenance may influence the number of infringements issued.

## Trend in road safety performance at camera location



### Infringements

PACIFIC HIGHWAY WARDELL



## Northcliffe Drive, Warrawong

Location: Northcliffe Drive, between Griffin Street and Kully Street

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 1/05/2003

Status: **Effective**

### Current camera performance

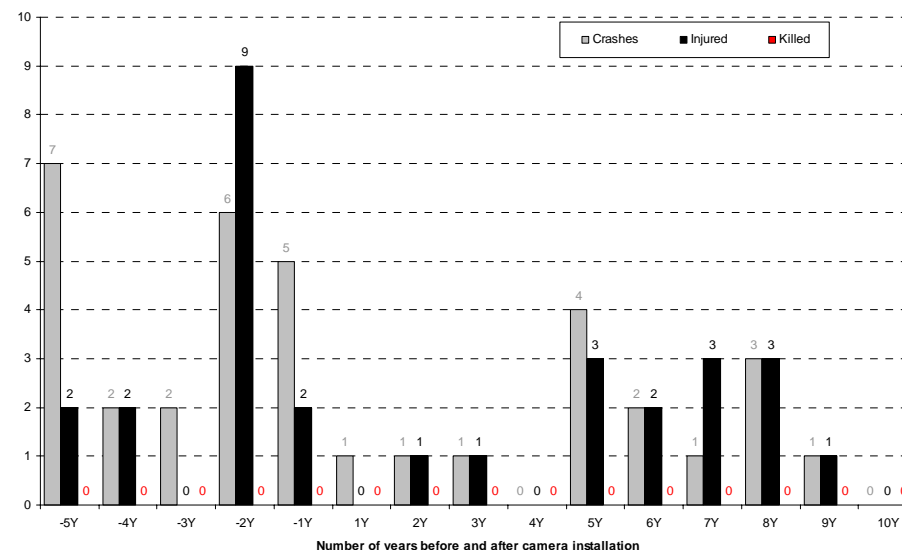
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	15	10	33%
Casualties	15	10	33%
Crashes	22	9	59%
Casualty Cost	\$2.04M	\$1.36M	33%

\*February 1998 to February 2003

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 59 per cent reduction in the annual average number of crashes and a 33 per cent reduction in the annual average number of casualties.
- This has been a saving of \$680,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location. Roadworks and camera maintenance may influence the number of infringements issued.

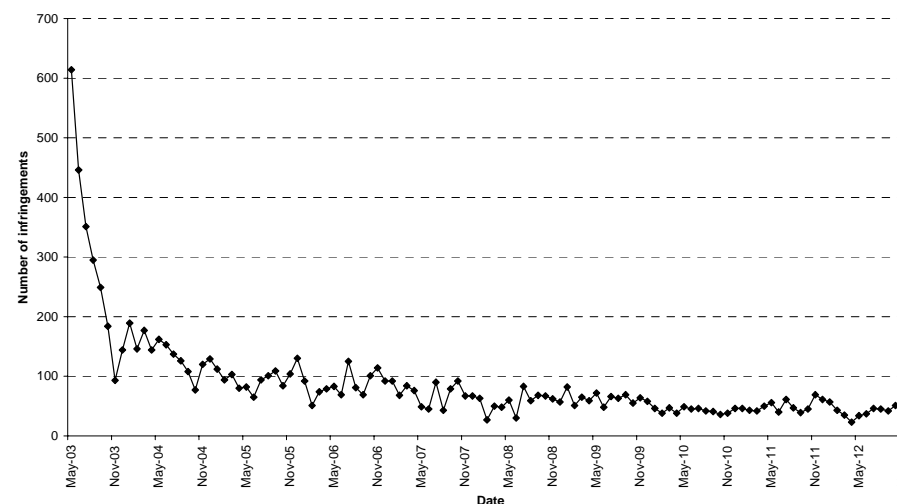
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

NORTHCLIFFE DRIVE WARRAWONG



## Castle Hill Road, West Pennant Hills

Location: Castle Hill Road, between Pennant Hills Road and Coonara Avenue

Length description: 500m east to 500m west of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 18/07/2002

Status: **Effective**

### Current camera performance

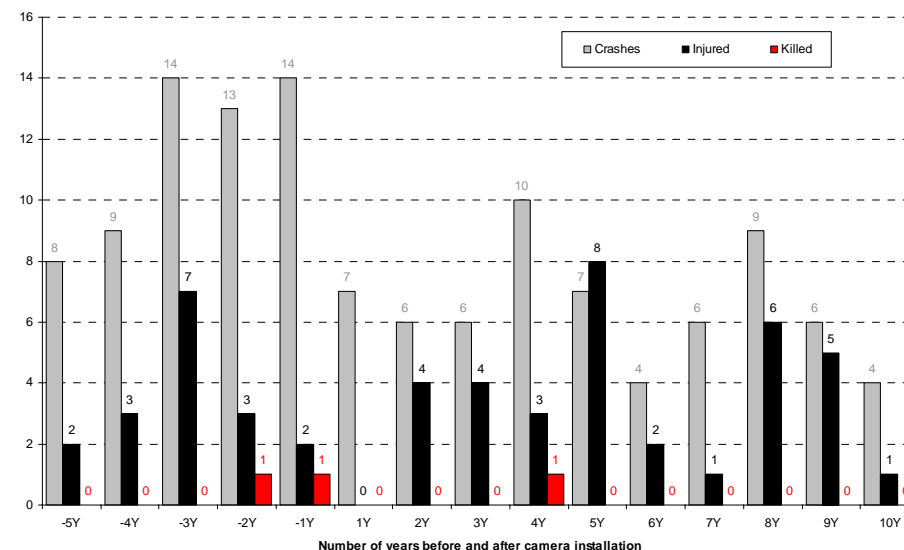
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	17	18	+6%
Casualties	19	18	5%
Crashes	58	30	48%
Casualty Cost	\$14.99M	\$2.45M	2%

\*April 1997 to April 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 48 per cent reduction in the annual average number of crashes and a 5 per cent reduction in the annual average number of casualties.
- This has been a saving of \$12.54 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location. Roadworks and camera maintenance may influence the number of infringements issued.

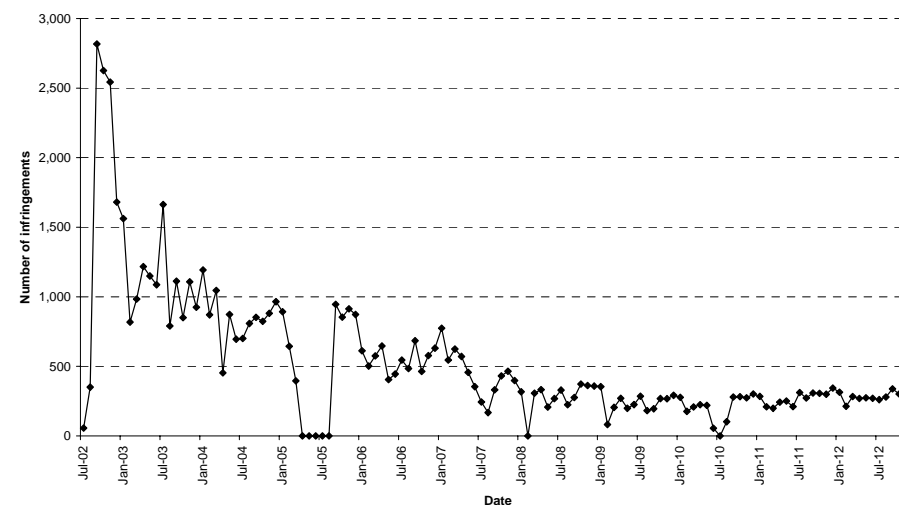
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

CASTLE HILL ROAD WEST PENNANT HILLS



## Bruxner Highway, Wollongbar

Location: Bruxner Highway, between Convernys Lane and McLeans Ridges Road

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 24/02/2003

Status: **Effective**

### Current camera performance

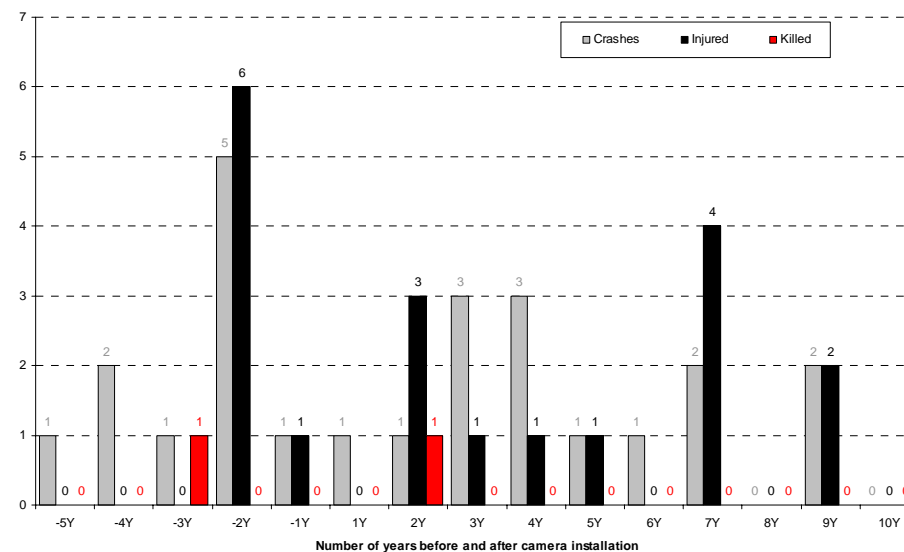
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	1	0%
Injuries	7	6	14%
Casualties	8	7	13%
Crashes	10	6	40%
Casualty Cost	\$7.29M	\$7.15M	2%

\*November 1997 to November 2002

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 40 per cent reduction in the annual average number of crashes and a 13 per cent reduction in the annual average number of casualties.
- This has been a saving of \$140,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since May 2003. Infringement data before this date are unavailable. The graph shows there has been a consistent level of speeding behaviour at this location. The spike in infringements in February 2006 can be attributed to the speed limit changing from 100km/h to 80km/h. The spike in infringements in April 2009 can be attributed to when the camera switched to bi-directional enforcement where it previously enforced in one direction. Roadworks and camera maintenance may influence the number of infringements issued.

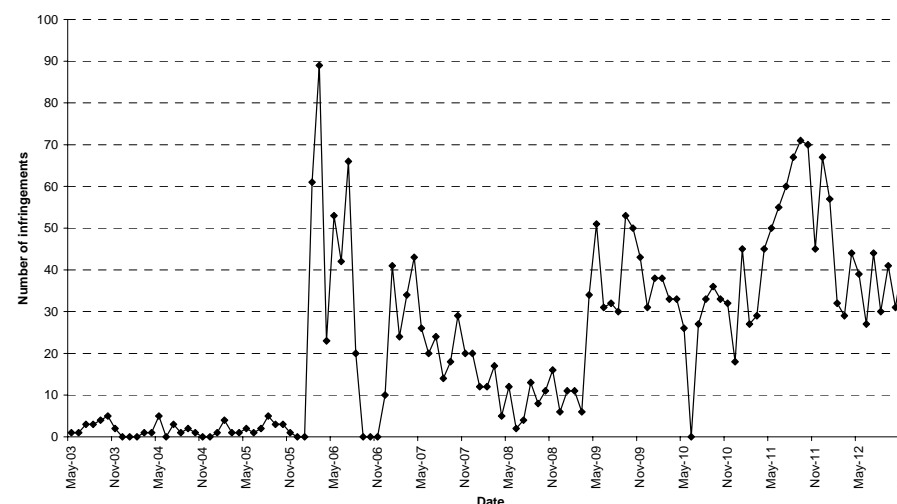
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

BRUXNER HWY WOLLONGBAR



## Princes Highway, Wollongong (school zone)

Location: Princes Highway, between Mount Keira Road and Highway Avenue  
 School Zone: Illawarra Grammar School, Wollongong Public School, St Theresa Primary School

Length description: 440m north to 180m south of camera

Total length: 620m (patch to patch)

Number of cameras: 1

Started infringing: 15/07/2003

Status: **Effective**

### Current camera performance

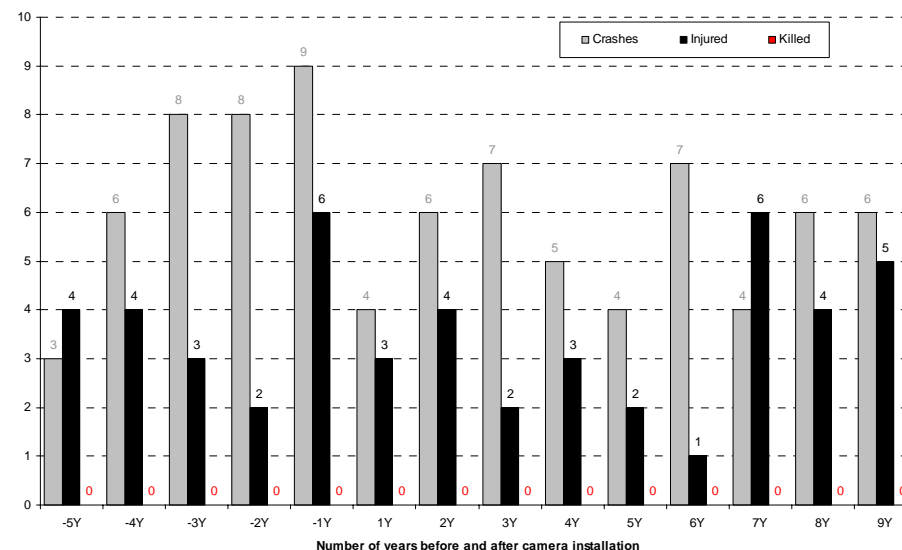
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	19	18	5%
Casualties	19	18	5%
Crashes	34	27	21%
Casualty Cost	\$2.58M	\$2.45M	5%

\*April 1998 to April 2003

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 21 per cent reduction in the annual average number of crashes and a 5 per cent reduction in the annual average number of casualties.
- This has been a saving of \$130,000 in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2003. Infringement data before this date are not available. The graph shows there has been a reduction in speeding behaviour at this location. Roadworks and camera maintenance may influence the number of infringements issued.

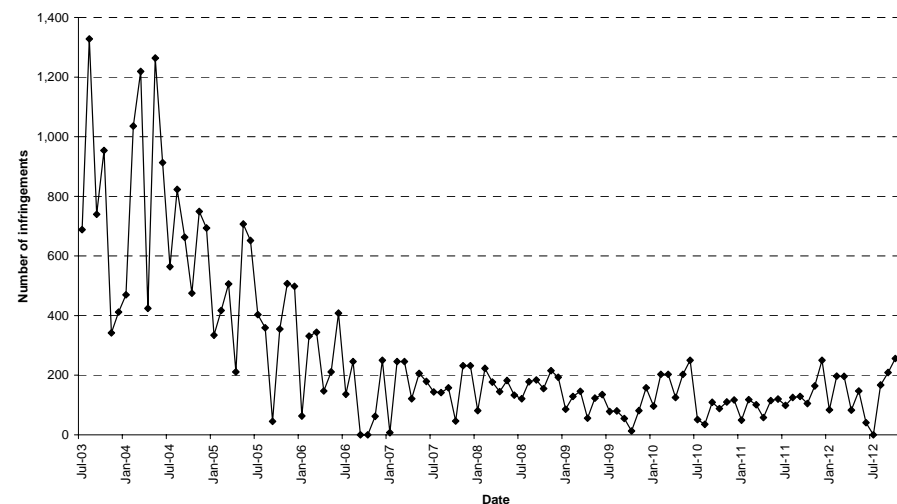
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PRINCES HIGHWAY WEST WOLLONGONG





## Pacific Highway, Woodburn

Location: Pacific Highway, between Wagner Street and Norman Street

Length description: 500m south to 500m north of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 20/03/2001

Status: **Effective**

### Current camera performance

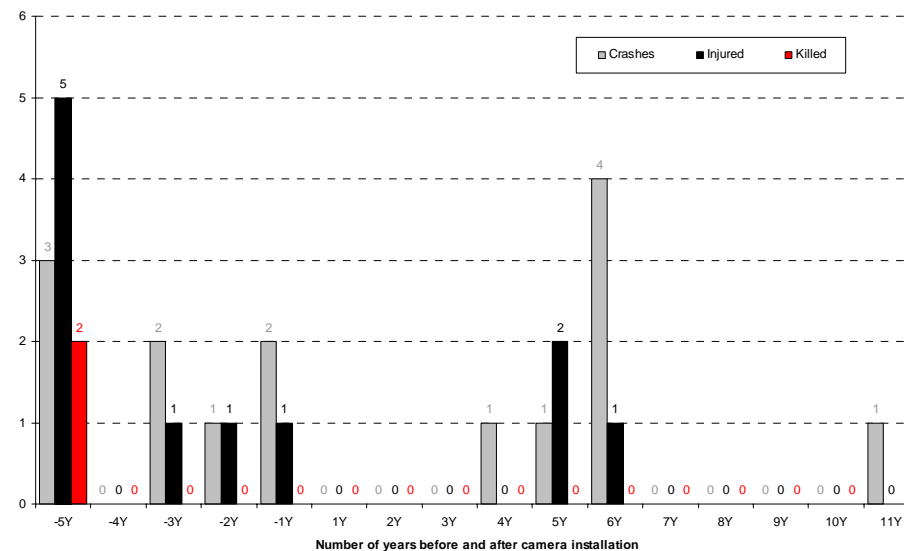
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	8	0	100%
Casualties	10	0	100%
Crashes	8	1	88%
Casualty Cost	\$13.76M	\$0M	100%

\*December 1995 to December 2000

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been an 88 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$13.76 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are unavailable. Roadworks and camera maintenance may influence the number of infringements issued.

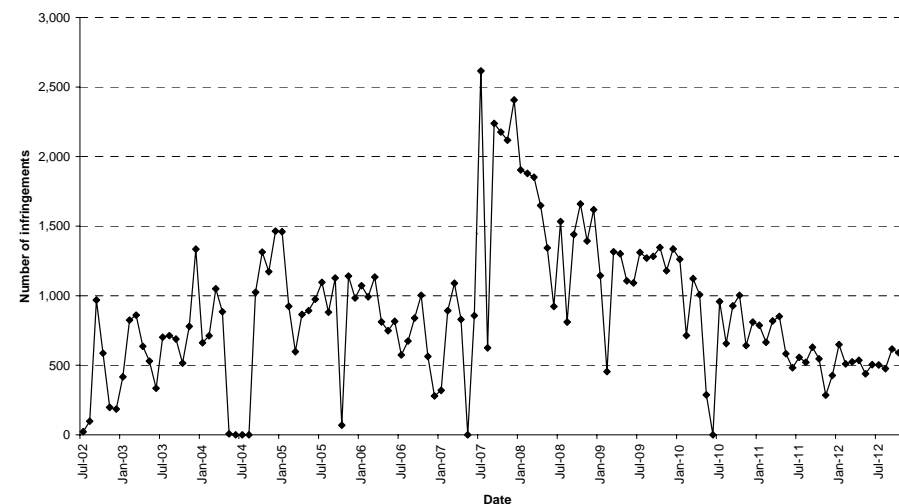
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY WOODBURN



## Cross City Tunnel, Woolloomooloo/ East Sydney (high risk location)

Location: Cross City Tunnel, between McLachlan Avenue and Harbour Street, Woolloomooloo

Length description:

- Camera 1 (eastbound) 140m east to 2005m west of camera
- Camera 2 (westbound) 200m east to 1890m west of camera

Total length:

- Camera 1 (eastbound) 2145m
- Camera 2 (westbound) 2090m

Number of cameras: 2

Started infringing: 05/09/2005

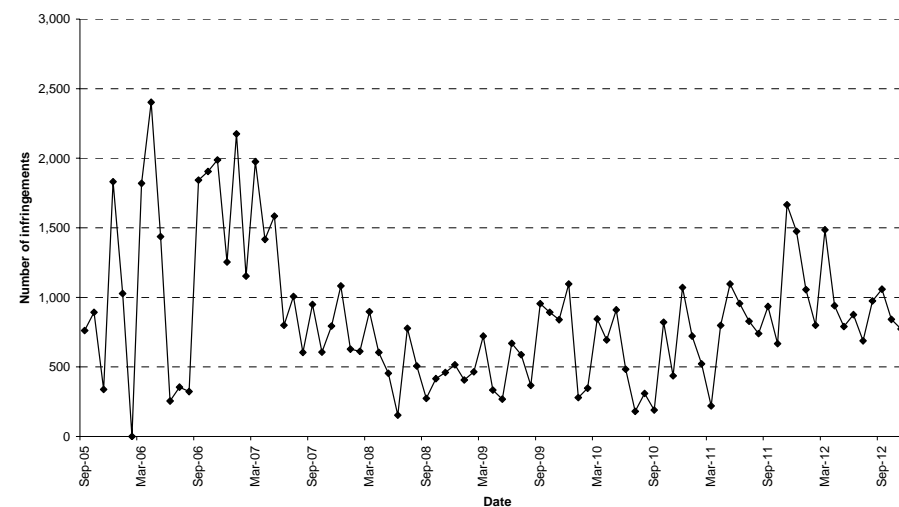
### Crash and casualty data – January 2012 to December 2012

	Eastbound	Westbound
Fatalities	0	0
Injuries	0	0
Casualties	0	0
Crashes	2	0

- This location is appropriate for fixed speed camera enforcement as it is a high risk location that is difficult for the NSW Police Force to enforce using traditional methods.
- The infringement graph details the trend in infringements at this location since the cameras began operating. Roadworks and camera maintenance may influence the number of infringements issued.

## Infringements at fixed speed camera location

CROSS CITY TUNNEL WOOLLOOMOOLOO EAST SYDNEY



## Henry Parry Drive, Wyoming (school zone)

Location: Henry Parry Drive, between Glennie Street and Dwyer Street

School Zone: Our Lady of the Rosary Primary School

Length description: 60m south to 170m north of camera

Total length: 230m (patch to patch)

Number of cameras: 1

Started infringing: 15/07/2003

Status: **Effective**

### Current camera performance

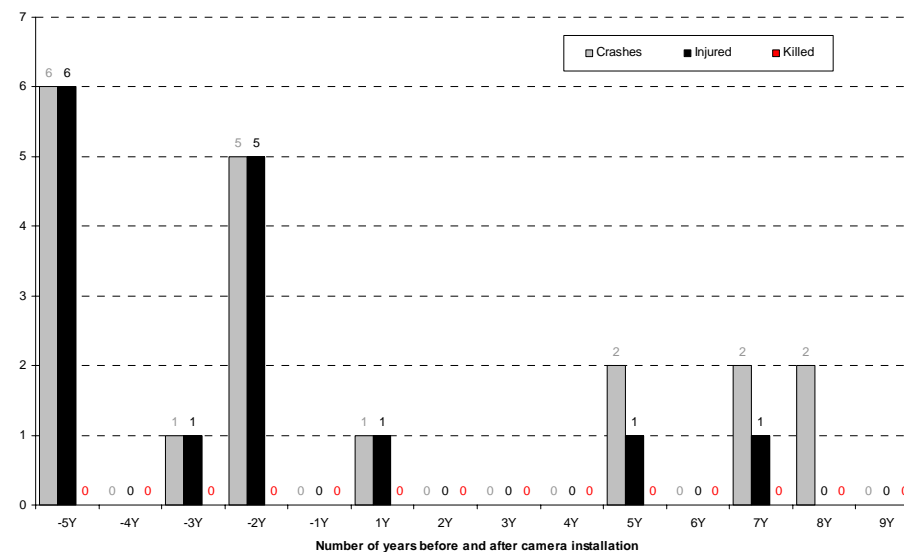
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	12	4	67%
Casualties	12	4	67%
Crashes	12	6	50%
Casualty Cost	\$1.63M	\$0.54M	67%

\*April 1998 to April 2003

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 50 per cent reduction in the annual average number of crashes and a 67 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.09 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph shows there has been a reduction in speeding behaviour at this location. Roadworks and camera maintenance may influence the number of infringements issued.

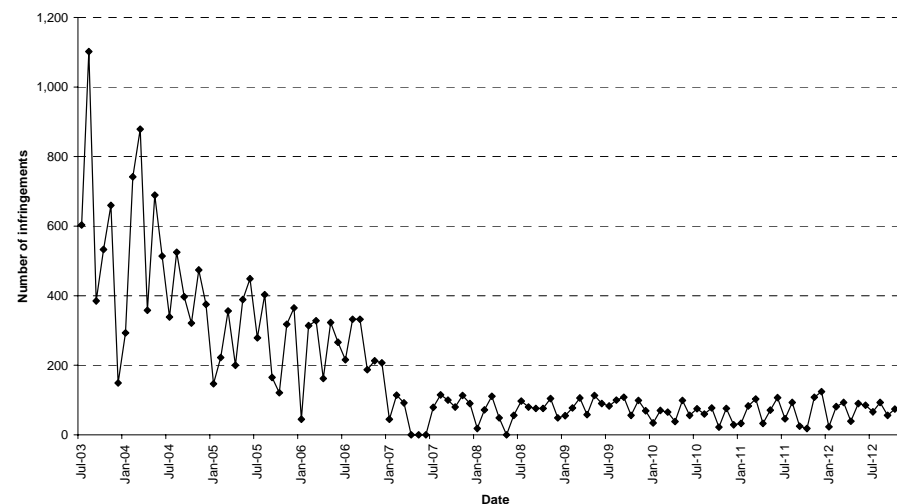
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

HENRY PARRY DRIVE WYOMING



## Hume Highway, Yagoona

Location: Hume Highway, between Smith Street and Brennan Avenue

Length description: 500m west to 500m east of camera

Total length: 1000m

Number of cameras: 1

Started infringing: 07/12/2001

Status: **Effective**

### Current camera performance

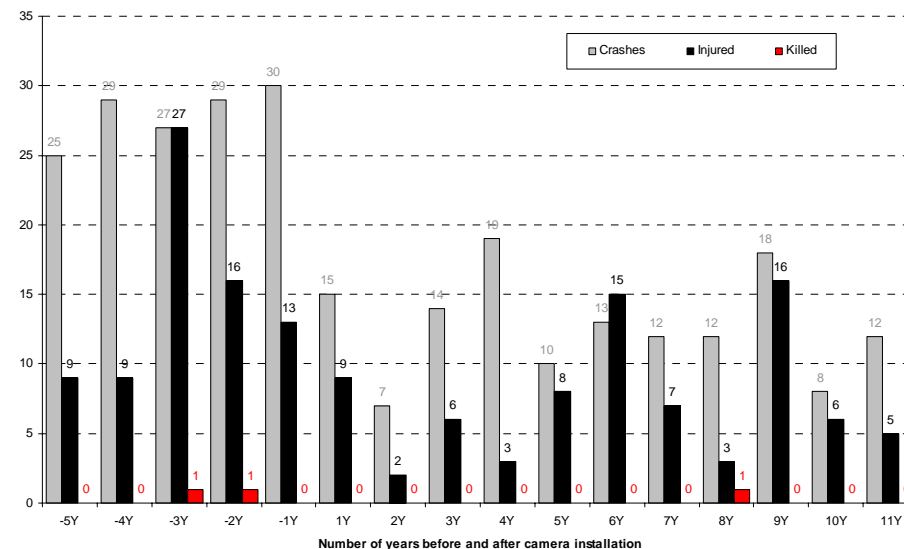
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	1	50%
Injuries	74	35	53%
Casualties	76	36	53%
Crashes	140	61	56%
Casualty Cost	\$22.74M	\$11.10M	51%

\*September 1996 to September 2001

- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 56 per cent reduction in the annual average number of crashes and a 53 per cent reduction in the annual average number of casualties.
- This has been a saving of \$11.64 million in costs to the community.
- The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are unavailable. The graph shows there has been a reduction in speeding behaviour at this location. Roadworks and camera maintenance may influence the number of infringements issued.

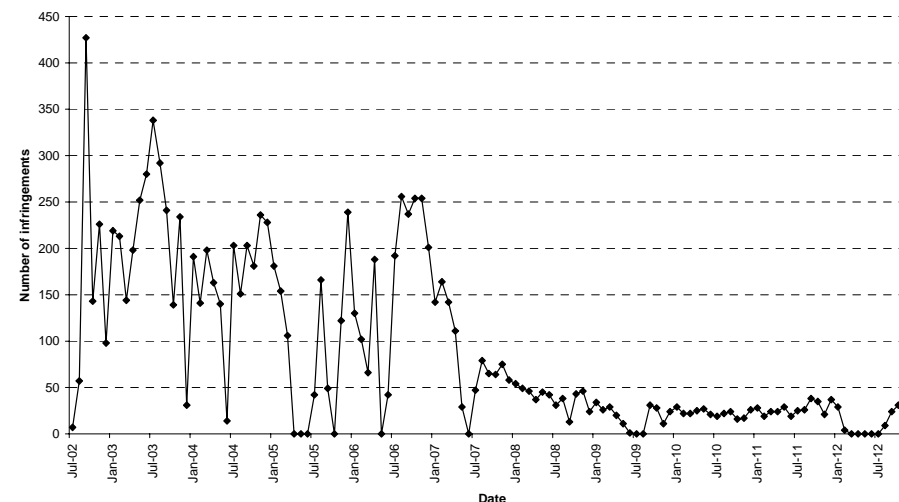
## Trend in road safety performance at camera location

Crashes and casualties



Infringements

HUME HIGHWAY YAGOONA



## **Appendix D: NSW fixed speed cameras operating in warning mode**

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### **NSW fixed speed camera locations operating in warning mode**

Following the results of the 2011 audit of speed cameras, the Minister for Roads and Ports directed the deactivation of fixed speed cameras that were found to not be delivering the expected road safety benefit at 38 locations. Cameras at seven of these locations remain in warning mode following reviews by the Centre for Road Safety and safety concerns expressed by the community. These seven locations are not included in the fixed speed camera analysis however a report on crash and infringement results from July 2012 until December 2012 has been included below.

The cameras began operating in warning mode at different times, starting from August 2011. By July 2012, cameras at all seven locations commenced operating under a 'three strike' scheme where vehicle owners receive an infringement notice on the third speeding offence at any of the seven locations. Vehicles detected speeding more than 30km/h over the speed limit receive a court attendance notice and face significant penalties.

**Performance at fixed speed camera locations operating in warning mode (July 2012 to December 2012)**

Location (month and year warning mode commenced)	No. of cameras	Crashes and casualties				Warning letters and infringements issued under '3 strikes' program				Court attendance notices issued		
		Fatalities	Injuries	Casualties	Crashes	1 <sup>st</sup> warning letter	2 <sup>nd</sup> warning letter	3 <sup>rd</sup> speeding offence (infringement issued)	Total number of warning letters and infringements	Vehicles speeding >30km/h	Vehicles speeding >45km/h	Total number of notices issued
Spit Road, Beauty Point (June 2012)	2	0	10	10	19	3295	196	58	3549	3	2	5
Bangalow Road, Clunes (August 2011)	1	0	6	6	2	2161	62	38	2261	48	0	48
Eastern Arterial Road, Gordon (June 2012)	1	0	3	3	3	208	8	1	217	0	0	0
President Avenue, Gymea - <i>school zone</i> (August 2011)	1	0	4	4	6	947	34	3	984	0	0	0
Carlingford Road, North Epping - <i>school zone</i> (June 2012)	1	0	0	0	0	1825	121	42	1988	2	0	2
Eastern Valley Way, North Willoughby (July 2012)	1	0	2	2	3	438	18	2	458	0	0	0
Pacific Highway, Urunga (January 2012)	1	0	1	1	2	1778	24	2	1804	20	3	23

## Appendix E: Analysis of the NSW point-to-point enforcement program

### Overview of point-to-point enforcement lengths

	Road	Section	Approximate Length (Km)
1	Federal Highway	Between Goulburn and Collector	20
2	Golden Highway	Between Sandy Hollow and Merriwa	34
3	Great Western Highway	Between Meadow Flat and Raglan	27
4	Great Western Highway	Between Mount Victoria and Lithgow	TBC
5	Gwydir Highway	Between Glen Innes and Inverell	60
6	Hume Highway	Between Coolac and Yass	75
7	Hume Highway	Between Gundagai and Coolac	20
8	Mitchell Highway	Between Molong and Cundumbul	28
9	Monaro Highway	Between Bredbo and Cooma	34
10	Mount Ousley Road	Between Bulli and Gwynneville	14
11	New England Highway	Between Muswellbrook and Aberdeen	11
12	New England Highway	Between Muswellbrook and Singleton	46
13	Newell Highway	Between Eumungerie and Gilgandra	27
14	Newell Highway	Between Forbes and West Wyalong	94
15	Newell Highway	Between Peak Hill and Tomingley	17
16	Oxley Highway	Between Gunnedah and Tamworth	60
17	Pacific Highway	Between Ballina and Wardell	TBC
18	Pacific Highway	Between Harwood and New Italy	35
19	Pacific Highway	Between Kew and Port Macquarie	21
20	Pacific Highway	Between Nabiac and Taree	24
21	Pacific Highway	Between Port Macquarie and Kempsey	40
22	Pacific Highway	Between Tyndale and Harwood	TBC
23	Pacific Highway	Between Urunga and Valla	13
24	Pacific Highway	Between Woodburn and Wardell	20
25	Picton Road	Between Wilton and Cataract	16

## Heavy vehicle crashes and infringements at operational point-to-point enforcement locations for 2011 and 2012

Road	Section	Approx length (km)	Warning commencement	Enforcement commencement	Before installation heavy vehicle crashes (2006 - 2010)			After installation heavy vehicle crashes 2011			After installation heavy vehicle crashes 2012			Total Infringements 2011	Total Infringements 2012
					Fatalities	Injuries	Total	Fatalities	Injuries	Total	Fatalities	Injuries	Total		
Federal Hwy	Between Goulburn and Collector	20	30 May 2011	Aug 2011	0	3	7	0	0	1	0	1	1	62	223
Golden Hwy	Between Sandy Hollow and Merriwa	34	1 Mar 2012	Jun 2012	0	4	4	-#	-#	-#	0	1	1	-#	13
Great Western Hwy	Between Meadow Flat and Raglan	27	31 May 2010	Nov 2010	1*	8*	11*	0	1	3	1	1	2	21	24
Gwydir Hwy	Between Glen Innes and Inverell	60	25 Oct 2011	Feb 2012	0	2	4	-#	-#	-#	0	0	0	-#	7
Hume Hwy	Between Coolac and Yass	75	26 Aug 2011	Oct 2011	2	12	32	1	3	8	0	4	7	21	562
Hume Hwy	Between Gundagai and Coolac	20	26 Aug 2011	Oct 2011	1	6	16	0	0	0	0	0	0	27	384
Monaro Hwy	Between Bredbo and Cooma	34	17 May 2011	Nov 2011	1	0	3	0	0	0	0	1	2	0	9
New England Hwy	Between Muswellbrook and Aberdeen	11	16 Dec 2011	Mar 2012	0	2	3	-#	-#	-#	0	1	1	-#	1
New England Hwy	Between Muswellbrook and Singleton	46	20 Dec 2011	Mar 2012	1	4	12	-#	-#	-#	1	4	12	-#	6
Newell Hwy	Between Eumungerie and Gilgandra	27	22 Dec 2011	Mar 2012	2	2	7	-#	-#	-#	0	3	4	-#	140
Newell Hwy	Between Peak Hill and Tomingley	17	22 Dec 2011	Mar 2012	2	1	3	-#	-#	-#	0	0	0	-#	40
Oxley Hwy	Between Gunnedah and Tamworth	60	30 Nov 2011	Jan 2012	3	2	7	-#	-#	-#	1	0	1	-#	8
Pacific Hwy	Between Harwood and New Italy	35	31 Mar 2010	Mar 2011	4	16	30	1	5	7	0	1	5	113	19
Pacific Hwy	Between Kew and Port Macquarie	21	17 Aug 2012	Oct 2012	1	20	30	-#	-#	-#	1	1	3	-#	0
Pacific Hwy	Between Nabcac and Taree	24	5 Aug 2011	Oct 2011	1	7	25	0	0	3	1	2	3	23	84
Pacific Hwy	Between Port Macquarie and Kempsey	40	14 Dec 2011	Feb 2012	0	9	34	-#	-#	-#	0	1	2	-#	2
Pacific Hwy	Between Urunga and Valla	13	29 Sep 2012	Dec 2012	2*	8*	14*	-#	-#	-#	1	0	1	-#	0
Pacific Hwy	Between Woodburn and Wardell	20	28 Jun 2011	Aug 2011	3	12	22	1	1	3	1	2	4	29	95
Picton Rd	Between Wilton and Cataract	16	17 Oct 2012	Dec 2012	5	5	16	-#	-#	-#	0	1	2	-#	0

\* Before data for Great Western Highway between Meadow Flat and Raglan are for 2005 – 2009; before data for Pacific Highway between Urunga and Valla are for Jul 2006 – June 2011.

# Data are not provided for periods where point-to-point cameras were not installed at the location.



## Summary

There are 25 lengths that are part of the point-to-point enforcement program with 19 lengths rolled out by the end of 2012:

- two lengths were installed in 2010
- 13 lengths were installed in 2011
- four lengths were installed in 2012

Of the remaining six point-to-point lengths, two were installed in early 2013 and four are being rolled out later in 2013. There are eight lengths that have enforced for the entire 2012 review period; however this has been for a period of two years or less and is too early to assess the effectiveness of individual enforcement lengths.

Only one point-to-point length, Great Western Highway between Meadow Flat and Raglan, has enforced for a full two year period (2011 and 2012). This length commenced in warning mode in May 2010 and commenced infringement in November 2010. At this length, in the five year period before installation (2005-2009) there were 11 heavy vehicle crashes resulting in one fatality and eight injuries. In the two year post installation period (2011-2012) there were five heavy vehicle crashes resulting in one fatality and two injuries. There have been 45 speeding infringements issued at this length.

A total of 1,617 speeding infringements were issued at point-to-point lengths in 2012. The low number of infringements issued within each of these lengths shows that there has been a high level of compliance with the speed limit. Roadworks and camera maintenance may influence the number of infringements issued.

**Point-to-point speed infringements to December 2012**

