



Transport
for NSW

ANNUAL NSW SPEED CAMERA PERFORMANCE REVIEW

NSW Centre for Road Safety

OCTOBER 2014

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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,¹ 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.

This report also addresses the NRMA Motoring & Services' recommendation for an assessment of all high infringing speed camera locations across NSW.

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 each program. Broadly speaking camera effectiveness is measured by two key criteria:

- the reduction in crashes and casualties, caused by the speed camera slowing drivers down, and
- the reduction in infringement rates, caused by the speed camera slowing drivers down.

Typically at least five years of crash and casualty data are required to make an assessment of a camera's effectiveness. The red-light speed camera and point-to-point enforcement programs are in their early stages, with most 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 assess reliably 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 2013	Program effectiveness
Mobile	640 locations Approximately 930 hours of enforcement per month	<p>Overall, the trend in road fatalities and annual speed surveys demonstrates that the mobile speed camera program continues to deliver positive road safety benefits, compared with results prior to the reintroduction of the mobile speed camera program in 2010.</p> <p><u>Road Toll</u></p> <ul style="list-style-type: none"> • The provisional 2013 road toll of 339 fatalities on NSW roads is the lowest annual figure since 1924 (with 309 fatalities). This is also 25 per cent lower than in 2009 (with 453 fatalities), before the reintroduction of the mobile speed camera in 2010. <p><u>Speed Survey</u></p> <ul style="list-style-type: none"> • Results from the 2013 speed surveys show speeding continues to remain below the level observed in 2009, prior to the reintroduction of the mobile speed camera program in 2010. The percentage of light vehicles exceeding the speed limit by up to 10km/h in 2013 was lower when comparing 2013 results to those from 2009 to 2011. The comparisons of the 2013 results with the 2012 results were more mixed, with further reductions in most speed zones, but slight increases in some

¹ 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 2013	Program effectiveness
		<p>zones.</p> <ul style="list-style-type: none"> The percentage of light vehicles exceeding the speed limit by more than 10km/h in 2013 reduced compared to 2012 in most speed zones, with the exception of speeding in 50km/h and 70km/h zones. The results for light vehicles exceeding the speed limit by more than 10km/h, with the exception of speeding in 90km/h zones, were lower than the 2009 results, before the mobile speed camera program was reintroduced in 2010. Significant gains were achieved in reducing heavy vehicles exceeding the speed limit by more than 10 km/h, with the lowest percentages achieved over the entire five year review period in most zones. <p><u>Mobile Speed Camera</u></p> <ul style="list-style-type: none"> Operating on the same program capacity as 2012, a total of 13,766 infringements were issued from mobile speed camera enforcement in 2013. Over 99 per cent of vehicles passing mobile speed cameras are not infringed for speeding. This high rate of compliance has remained consistent since 2010 when the program was reintroduced.
Red-light speed	144 cameras at 125 intersections	<p>Preliminary analysis of the red-light speed camera program show encouraging results in changing driver behaviour at signalised intersections with red-light speed camera enforcement.</p> <p>Overall, when comparing the five years before red-light speed cameras were installed to the post installation period for each camera location there has been:</p> <ul style="list-style-type: none"> a 24 per cent reduction in crashes; a 49 per cent reduction in pedestrian casualties; and a 36 per cent reduction in all casualties at these locations. <p>This reduction in casualties represents a saving of \$70.3 million to the community.</p> <p>The top 10 highest infringing red-light speed cameras all had high compliance rates with more than 99 per cent of drivers passing the cameras without being infringed for red-light running and or speeding. Where cameras have been operating for longer than two years, infringements had mostly decreased over time.</p>
Fixed	132 cameras at 107 locations*	<p>Overall, when comparing the five years before the fixed speed cameras were installed to the most recent five years there has been:</p> <ul style="list-style-type: none"> a 42 per cent reduction in the number of crashes; a 90 per cent reduction in fatalities; and a 40 per cent reduction in injuries at these camera locations. <p>These reductions in casualties represent a saving of \$445.74 million to the community.</p> <p>Of the 95* fixed speed camera locations that were reviewed, 93 were found to be effective. The remaining two were identified for further review, these are:</p> <ul style="list-style-type: none"> Richmond Road, Berkshire Park Great Western Highway, Hartley

Camera type	Size of NSW program as at 31 December 2013	Program effectiveness
		The 10 highest infringing fixed speed cameras were all found to be effective in reducing crashes and casualties. All had high compliance rates with more than 99 per cent of drivers passing the cameras without being infringed for speeding.
Point-to-point	21 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 107 fixed speed camera locations, seven locations operate in warning mode and five locations are 'high risk' locations (typically located in tunnels). These locations were not included in the fixed speed camera analysis.

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 published annually to ensure that the programs remain transparent to the community.

Introduction

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 and perhaps 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 in NSW.

Speeding increases the risk of having a crash, and increases the risk of serious injury or death in the event of a crash. 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 and is a commonly employed method of speed enforcement in many best practice road safety jurisdictions throughout the world. 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.

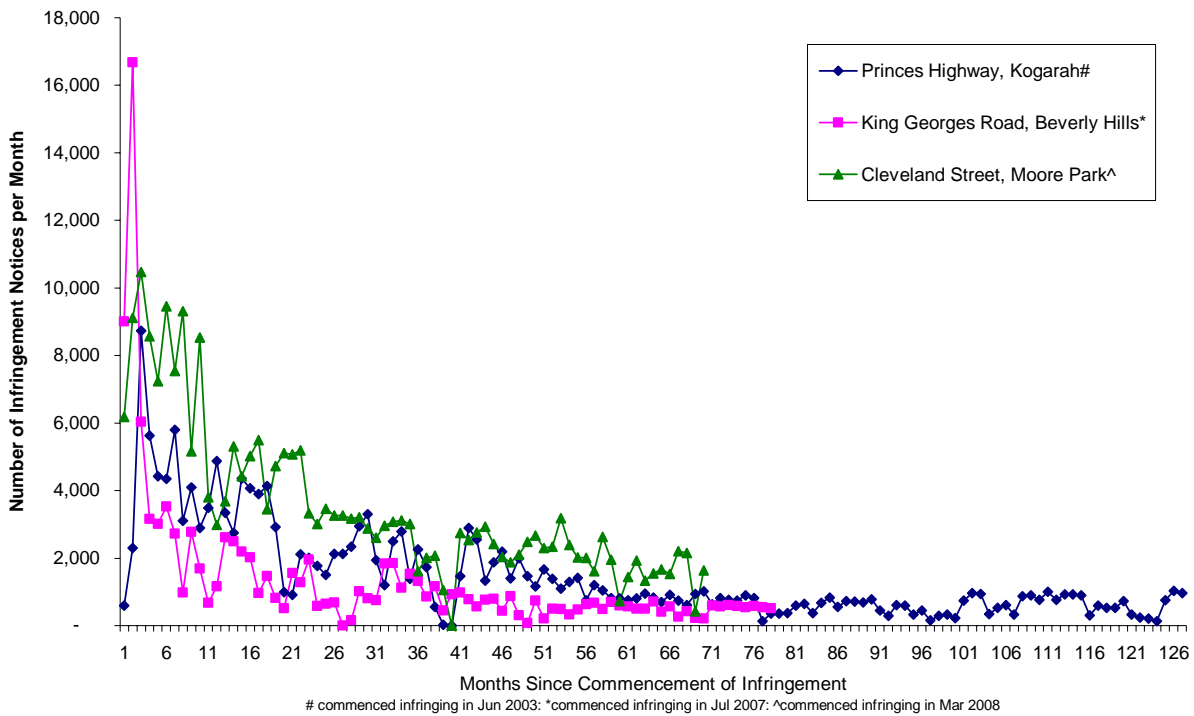
Speed enforcement activities aim to increase the perceived threat of being caught speeding and in doing so help to reduce the mean travel speed on our roads, and therefore reducing the risk of being involved in a fatal or injury crash for all road users. Automated camera enforcement supplements enforcement conducted by police and can also operate in locations that are difficult for police to enforce. The NSW Police Force routinely requests locations to be considered for automated 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 that depicts the number of infringements per month since the commencement of enforcement at three of the highest infringing 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.

Number of Fixed Speed Camera Infringement Notices per Month for Sample of Cameras



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 2013
Mobile	General network deterrence	First introduced in 1991. Ceased operation in December 2008 and re-introduced in 2010	640 locations Approx 930 hours of enforcement per month
Red-light Speed	Location specific (To address high risk intersections)	2009	144 cameras at 125 intersections
Fixed	Location specific (To address black spot/high risk)	1997	132 cameras at 107 locations*
Point-to-Point	Route enforcement (For heavy vehicles only)	2010	21 lengths

* Of the 107 fixed speed camera locations, seven locations operate in warning mode and five locations are 'high risk' locations (typically located in tunnels). These locations were not included in the fixed speed camera analysis.

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 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 crashes.

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 Traffic 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 Freight 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 camera infrastructure has since been removed from 11 of these locations. A program of alternative safety works has commenced at the remaining locations. When these alternative safety works have been completed, the speed camera and signage will

be removed. Cameras at seven of these locations remain in warning mode following safety concerns expressed by the community.

An additional two fixed speed cameras were also approved for decommissioning at Cowpasture Road, Green Valley and New England Highway, Kootingal following the 2012 Annual NSW Speed Camera Performance Review. Cowpasture Road was upgraded in December 2010 from a two lane road to a four lane divided carriageway with traffic signals at key intersections. Since the upgrade, the crash rate at this location has reduced, as has the severity of crashes. The camera at Cowpasture Road, Green Valley was removed in 2013. Similarly, at the New England Highway, Kootingal location the safety review found a very low number of crashes and minimal ongoing road safety concerns, and recommended that the speed camera could be better used at another high risk location on the road network. When alternative safety works have been completed at this location, the speed camera and signage will be removed.

In 2012, the speed camera located at the M2 Tunnel (M2 Motorway) was also decommissioned due to the completion of major road works that improved road safety at the location and the relatively short length of the tunnel.

Following the results of the 2013 Annual NSW Speed Camera Performance Review, five locations were identified for comprehensive review based on the crash data analysis. These locations were: Hume Highway, Ashfield (school zone); Hume Highway, Bankstown (school zone); Fairfield Street, Fairfield East; McCaffrey Drive, Rankin Park; and Pacific Highway, Sandgate.

Reviews of these five fixed speed camera locations were completed in December 2013. The review team, led by an independent road safety auditor included CRS, councils, nearby schools, NRMA Motoring and Services, the NSW Police Force and local communities. The review recommended that the two speed cameras at Pacific Highway, Sandgate be decommissioned while cameras at the remaining four locations be retained as they continue to provide road safety benefits.

At Pacific Highway, Sandgate, the safety review found that while the number of speeding infringements had consistently reduced at this location, the number of injury crashes and the number of injuries had increased. The review found that the two speed cameras at this location were not performing their required function and recommended they be removed. These cameras will be removed once a program of road safety works is 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

2013 Road toll data

The crash data used in this annual review include crashes which occurred between 1 January 2013 and 31 December 2013. 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.

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 crashes² 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 an assessment of a camera's effectiveness.³ Since the red-light speed camera and point-to-point enforcement programs have been operational for less than four 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.

Crash data results for injuries for the six quarters from July 2010 to the end of 2011 were over estimated due to a coding practice change in the injury recording process. The coding practice change resulted in an over enumeration of around nine per cent for this period, mostly amongst vehicle occupants, and may influence the results of casualties and injuries for the evaluation period across the speed camera programs. Where a camera appears to not be performing, CRS will review the crash data to determine if the camera has been affected by the coding practice change.

Red-light speed cameras

Preliminary analysis of the red-light speed camera program has been conducted by intersection, rather than by camera. At the end of 2013, there was a total of 144 red-light speed cameras operating at 125 intersections around Sydney, Newcastle and Wollongong with 18 intersections having two or more 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 2013. 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

² More information about how crash data is processed in NSW is available online at www.roadsafety.transport.nsw.gov.au.

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

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.⁴ It is expected that the simultaneous enforcement of speeding by these red-light cameras will reduce the likelihood of an increase in rear-end crashes.

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- 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-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_d14.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 2013 (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 107 fixed speed camera locations across NSW, 95 fixed speed camera locations were analysed in this report. Of the 107 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 these locations is available at Appendix D. A further five 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, the M1 Princes Motorway (formerly the F6, Southern Freeway) 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 95 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

⁴Budd, L., Scully, J. & Newstead, S.. (2011). *Evaluation of the Crash Effects of Victoria's Fixed Digital Speed and Red-light Cameras*, Report No. 307, Monash University Accident Research Centre., Publicly available from: <http://www.monash.edu.au/miri/research/reports/muarc307.pdf>.

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 (2009 - 2013) 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 five 'high risk' camera locations, crash data has been reported for the 2013 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) Effective (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 \$6.465 million per fatality, and \$0.115 million per injury.⁵
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).

⁵ Transport for NSW Principle and Guidelines for Economic Appraisal of Transport Investment and Initiatives, 2013

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 specific types of crashes that occurred at the location. Where there was additional information which indicated the camera was delivering a road safety benefit, this is indicated in the report and the camera is classified as being effective.

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 calendar 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 2013 (i.e. four 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 (2009 - 2013).
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

At the end of 2013, there 21 point-to-point enforcement lengths: two lengths were installed in 2010; 13 lengths were installed in 2011; four lengths were installed in 2012; and two lengths were installed in 2013. The remaining four point-to-point lengths will be rolled out in 2014. There are eight lengths that have enforced for the entire 2012 - 2013 review periods; however this has still been for a period of three 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 2013 annual speed surveys were conducted at 175 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 are not undertaken at specific speed camera enforcement locations, therefore at camera locations infringement data is used as a proxy for speed data in this review. Speed surveys are undertaken at a sample of speed camera enforcement locations so that speeding behaviour can be assessed for these programs.

Infringement data

All fines from speed cameras are directed to the Community Road Safety Fund to pay for all road safety programs across the state.

Recent 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 publicly available through the NSW Office of State Revenue (<http://www.osr.nsw.gov.au/info/statistics>).

Results and discussion

This review has found that across the four programs, speed cameras are continuing to improve road safety in NSW. Early results from the red-light speed, mobile speed and point-to-point camera 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, with less than five years of operation, it is still too early to assess the longer term effectiveness of these new programs. 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 89 lives and an estimated community saving of around \$575 million.

The immediate impact of the reintroduced mobile speed cameras is evident. The significant reduction in fatalities (and speed-related fatalities) in 2010, 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 ongoing impact of the mobile speed camera program is reflected in the provisional 2013 road toll. The provisional 2013 road toll is 339 persons killed on NSW roads. This result is the lowest annual figure since 1924 (with 309 fatalities). This is also 25 per cent lower than in 2009 (with 453 fatalities), before the reintroduction of the mobile speed camera in 2010. Speed-related crashes over 2009 to 2013 have also gradually decreased over this period.

Results from the 2013 speed surveys show speeding continues to remain below the level observed in 2009, prior to the reintroduction of the mobile speed camera program in 2010. The percentage of light vehicles exceeding the speed limit by up to 10km/h in 2013 was lower when comparing 2013 results to those from 2009 to 2011. The comparisons of the 2013 results with the 2012 results were more mixed, with further reductions in most speed zones, but slight increases in some zones.

The percentage of light vehicles exceeding the speed limit by more than 10km/h in 2013 reduced compared to 2012 in most speed zones, with the exception of speeding in 50km/h and 70km/h zones. The results for light vehicles exceeding the speed limit by more than 10km/h, with the exception of speeding in 90km/h zones, were lower than the 2009 results, before the mobile speed camera program was reintroduced in 2010.

Percentage of light vehicles exceeding the speed limit, 2009-2013

Posted Speed Limit	Light Vehicles Exceeding the Speed Limit – by up to 10 km/h					Light Vehicles Exceeding the Speed Limit +10 km/h				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
40 km/h School Zone	46.4%	44.0%	45.1%	42.0%	43.4%	23.0%	17.5%	19.7%	18.4%	17%
40 km/h	30.2%	27.8%	27.2%	32.0%	26.6%	4.5%	3.4%	3.7%	6.0%	3.4%
50 km/h	48.8%	46.4%	46.6%	42.8%	43.3%	16.8%	12.6%	13.2%	13.0%	14.1%
60 km/h	32.3%	28.8%	28.2%	29.9%	25.9%	7.3%	5.4%	5.8%	7.8%	6.3%
70 km/h	35.9%	31.3%	30.2%	28.2%	29.5%	10.4%	6.6%	6.3%	7.3%	8.2%
80 km/h	29.8%	26.3%	26.1%	24.8%	21.1%	8.8%	6.3%	6.6%	7.1%	6.2%
90 km/h – small sample [^]	29.6%	38.0%	38.5%	22.9%	24.8%	9.0%	11.8%	13.4%	10.0%	10.1%
100 km/h	34.5%	32.2%	34.4%	31.0%	27.6%	8.2%	9.0%	8.9%	9.4%	7.9%
110 km/h	40.8%	37.5%	38.9%	41.2%	33.9%	9.3%	6.4%	7.0%	11.4%	6%

[^] Small samples may result in greater fluctuations year to year.

*Note Heavy vehicle speed limit is 100 km/h and results presented indicate the percentage of heavy vehicles exceeding 100km/h in this section.

The percentage of heavy vehicles exceeding the speed limit by up to 10km/h has overall reduced compared to the previous year. Significant gains were achieved in reducing heavy vehicles exceeding the speed limit by more than 10 km/h, achieving the lowest percentages over the entire five year period in 40km/h school zones, 50km/h, 80km/h, 100km/h and 110km/h zones. Heavy vehicles continue to have lower proportions exceeding the speed limit than light vehicles.

Percentage of heavy vehicles exceeding the speed limit, 2009-2013

Posted Speed Limit	Heavy Vehicles Exceeding the Speed Limit – by up to 10 km/h					Heavy Vehicles Exceeding the Speed Limit + 10 km/h				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
40 km/h School Zone	42.2%	36.2%	43.3%	39.5%	39.7%	10.1%	10.2%	12.6%	8.1%	2.6%
40 km/h	26.6%	22.8%	21.0%	29.9%	21%	5.4%	3.6%	3.0%	6.2%	7.1%
50 km/h	45.6%	44.7%	42.5%	40.4%	38.3%	16.7%	12.5%	10.7%	10.0%	7.8%
60 km/h	26.7%	25.8%	25.4%	25.4%	22.7%	5.0%	3.9%	4.5%	9.6%	4.1%
70 km/h	28.6%	27.3%	23.7%	21.4%	24.1%	5.7%	4.2%	3.5%	3.6%	3.9%
80 km/h	23.6%	21.2%	23.2%	19.4%	18.2%	9.8%	5.1%	5.9%	6.2%	4.0%
90 km/h – small sample [^]	27.2%	41.3%	34.8%	22.6%	30.6%	6.3%	14.0%	13.6%	11.2%	8.5%
100 km/h	34.5%	34.1%	34.0%	33.4%	26.2%	3.2%	4.8%	4.8%	5.8%	2.2%
110 km/h*	48.1%	39.8%	44.9%	8.8%	5.4%	8.1%	12.9%	8.8%	3.2%	1.2%

[^] Small samples may result in greater fluctuations year to year.

*Note Heavy vehicle speed limit is 100 km/h and results presented indicate the percentage of heavy vehicles exceeding 100km/h in this section.

Overall, the trend in road fatalities and annual speed surveys demonstrates that the 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. The general decrease in speeding observed in the annual speed surveys, over the past five years, provides evidence that mobile speed cameras provide a general deterrence to drivers.

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.

As announced as part of the *NSW Speed Camera Strategy*, the mobile speed camera program is expanding in 2014 and once completed, will result in about 45 marked vehicles operating for 7,000 enforcement hours per month. 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 2013 there were a total of 13,766 infringements resulting in \$2.59 million in fines from mobile speed camera enforcement. From June 2012, there was a decrease in infringements that 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 recognise 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. In 2013, the number of infringements issued remained at a consistent level over the year.

Since the program was reintroduced in 2010, the compliance rate of vehicles passing a mobile speed camera that are not infringed for speeding remains high. In 2013, over 99 per cent of vehicles passing mobile cameras were not infringed for speeding.

An increase in the volume of infringements is anticipated as the program is expanded to 7000 hours of enforcement per month. Following the program increase the number of infringements is expected to stabilise and return to a downward trend as driver behaviour changes.

CRS has developed and implemented a speed camera public education campaign that has supported the rollout of the mobile speed camera program. CRS evidence shows that enforcement and strong public education campaigns change driver behaviour and help prevent speed-related crashes and trauma through awareness of enforcement.

Red-light speed cameras

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

Overall, there has been a 24 per cent reduction in crashes and a 36 per cent reduction in casualties at the 125 red-light speed camera locations since the cameras were installed compared with a five year period prior to installation. Of the total casualties, there has been a 49 per cent reduction in pedestrian casualties at red light speed camera locations. This reduction in casualties represents a savings of \$70.3 million to the community

There has also been a reduction in the three main intersection crash types with a 37 per cent reduction in adjacent crashes; a 34 per cent reduction in right-through crashes; and a 10 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 cameras reduce more severe right-angle crashes, rear-end crashes can sometimes increase. The addition of speed enforcement to red-light cameras is a countermeasure that assists in addressing the small increase in rear-end crashes at red-light speed camera locations. As can be seen from the results, it also reduces pedestrian casualties due to a decrease in vehicle speeds.

In 2013 there were a total of 236,481 infringements resulting in total fines of \$74.75 million at red-light speed camera intersections. In NSW, the penalty for running a red-light is higher than most speeding penalties because the consequences of this behaviour pose a greater risk. Red-light running can lead to severe T-bone and pedestrian crashes where the front of a car impacts with a pedestrian or the less protected side of a car. Generally, around 60 per cent of offences and 80 per cent of fines at red light speed camera locations are attributed to running a red light. Of the total red-light speed camera infringements for 2013: 135,944 (57%) infringements and \$57.78 million in fines were for red-light offences; and 100,533 (43%) infringements and \$16.94 million in fines were for speeding offences.

As part of the *NSW Speed Camera Strategy*, the number of intersections with red-light speed cameras will expand to 200 by December 2015. As the red-light speed camera program continues to roll out, an increase in the volume of infringements is anticipated. However, following the program increase the number of infringements is expected to stabilise and return to a downward trend as driver behaviour changes.

At this stage, red-light speed 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 fines at these locations. 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 also indicate that the expected road safety benefits are being achieved when compared with the evaluation of a similar program in Victoria⁶. 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 crash and casualty data are required to make an assessment of a camera's effectiveness.

The 2013 review identified the below four locations where there has been a fatality since camera operation:

⁶Budd, L., Scully, J. & Newstead, S.. (2011). *Evaluation of the Crash Effects of Victoria's Fixed Digital Speed and Red-light Cameras*, Report No. 307, Monash University Accident Research Centre., Publicly available from: <http://www.monash.edu.au/miri/research/reports/muarc307.pdf>. Annual NSW Speed Camera Performance Review 2014

- 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

These fatalities occurred in 2012. No fatalities were identified in the current review period (2013 calendar year). While the cameras at these locations will not be considered for removal, the Centre for Road Safety conducted an initial investigation into the nature of these fatal crashes, with site investigations conducted at Griffiths and Turton Road, Lambton, and Corrimal Street and Burelli Street, Wollongong.

The investigation at O’Riordan Street and Gardeners Road, Mascot identified no safety deficiencies, and revealed the intersection will be upgraded in the near future as part of re-development work associated with Green Square. No safety deficiencies were also identified at the intersection at Anzac Parade and Lang Road, Moore Park.

Following the site investigation at Griffiths Road and Turton Road, Lambton, the traffic light display for eastbound motorists was upgraded. A mast arm has been installed which slightly overhangs the kerbside lane to improve the visibility of traffic lights to oncoming vehicles. A speed review will also be conducted at this location in 2014.

Following the site investigation at Corrimal Street and Burelli Street, Wollongong, additional pedestrian protection was provided by installing red arrows to control vehicles waiting to turn into adjacent streets. An upgrade to the line marking on Corrimal Street was also completed.

The review identified the 10 red-light speed camera locations with the highest number of infringements detected in 2013. The list is shown at the end of **Appendix B**. Most of the 10 speed camera locations are on main roads with high traffic volumes. As the red-light speed camera program has not been in operation for five years, it is too early to assess the effectiveness of these cameras. However, all had high compliance rates with more than 99 per cent of drivers passing the cameras without being infringed for red-light running and/or speeding.

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 40 per cent reduction in injuries at camera locations. In the five years before the cameras were installed there were 4,212 crashes, resulting in 56 fatalities and 2,254 injuries. In the current five year analysis period there were 2,496 crashes resulting in 6 fatalities and 1,370 injuries. This reduction in casualties represents a savings of \$445.74 million to the community. In 2013 a total of 312,580 infringements were issued resulting in total fines of \$62.91 million at fixed speed camera locations.

Based on the analysis of 95 fixed speed camera locations, eight locations were identified for a preliminary desktop review based on meeting at least one of the crash analysis criteria outlined in the Evaluation method section. These locations were:

- M1 Pacific Motorway, Bar Point
- Richmond Road, Berkshire Park
- Bolong Road, Bomaderry
- Southern Freeway, Gwynneville (southbound)
- Great Western Highway, Hartley
- Pittwater Road, North Narrabeen (school zone)
- Lanyon Drive, Queanbeyan
- Victoria Road, Rydalmere (school zone)

Preliminary reviews of these locations were undertaken to gain an understanding of exactly what had occurred at each location. Based on the preliminary reviews, Richmond Road, Berkshire Park and Great

Western Highway, Hartley were identified for safety reviews to be undertaken by CRS. Currently, there are road works underway to upgrade the Great Western Highway, Hartley location, which includes the installation of a point-to-point enforcement length. As these upgrades will improve road safety, this location will not be reviewed until after the completion of road works at this location. The cameras at the other six locations were deemed effective, based on their performance across the entire range of crash analysis criteria. Hence, a total of 93 out of the 95 fixed speed camera locations found to be effective. This positive result is not unexpected, given the review is now in its third year and has systematically identified ineffective fixed speed cameras for decommissioning.

Safety reviews involve a comprehensive examination of 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 identified 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 Freight 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**.

The review also identified the 10 fixed speed camera locations with the highest number of infringements detected in 2013, excluding cameras located in high-risk locations, such as tunnels. The list is shown at the end of **Appendix C**.

Most of the 10 speed camera locations are on main roads with high traffic volumes. All of these locations were found to be effective in the annual review, delivering crash and casualty reductions. All had high compliance rates with more than 99 per cent of drivers passing the cameras without being infringed for speeding.

Point-to-point speed cameras

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

There were 21 lengths of the point-to-point enforcement program rolled out by the end of 2013. However, it is too early to assess the effectiveness of individual point-to-point enforcement lengths as two lengths were installed in 2010, 13 lengths were installed in 2011, five were installed in 2012 and one was installed in 2013. Only one point-to-point length, Great Western Highway between Meadow Flat and Raglan, has enforced for a full three year period (2011 - 2013). 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 three year post installation period (2011-2013) there were five heavy vehicle crashes resulting in one fatality and two injuries. Infringements issued at this length remain low and have reduced since 2012 indicating an increase in driver speed compliance within the point-to-point length.

A total of 1,267 speeding infringements were issued resulting in total fines of \$501,776 at point-to-point lengths in 2013. 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 high⁷. For example, rates of infringement associated with point-to-point

⁷ 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.
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enforcement (light and heavy vehicles) on the Hume Highway, Victoria have been reported at 1-2 per cent.⁸

Future of NSW speed camera programs

The NSW CRS 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 CRS 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 it is too early to assess the effectiveness of the red-light speed, mobile speed and point-to-point speed camera programs, the early results from these programs are encouraging, with evidence of changes in driver behaviour. This is also reflected in an improvement in the provisional road toll for 2013. It is expected that the expansion of the red-light speed and mobile speed camera programs will deliver even greater results than the performance of these programs in 2013. While meaningful analyses of these programs will not be possible for a few more years, CRS will continue to annually monitor their performance.

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

Appendices

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

NSW Road toll data

In August 2011, the review of the NSW mobile speed camera program¹ 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 446 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 89 lives and an estimated community saving of around \$575 million (based on willingness-to-pay methodology).

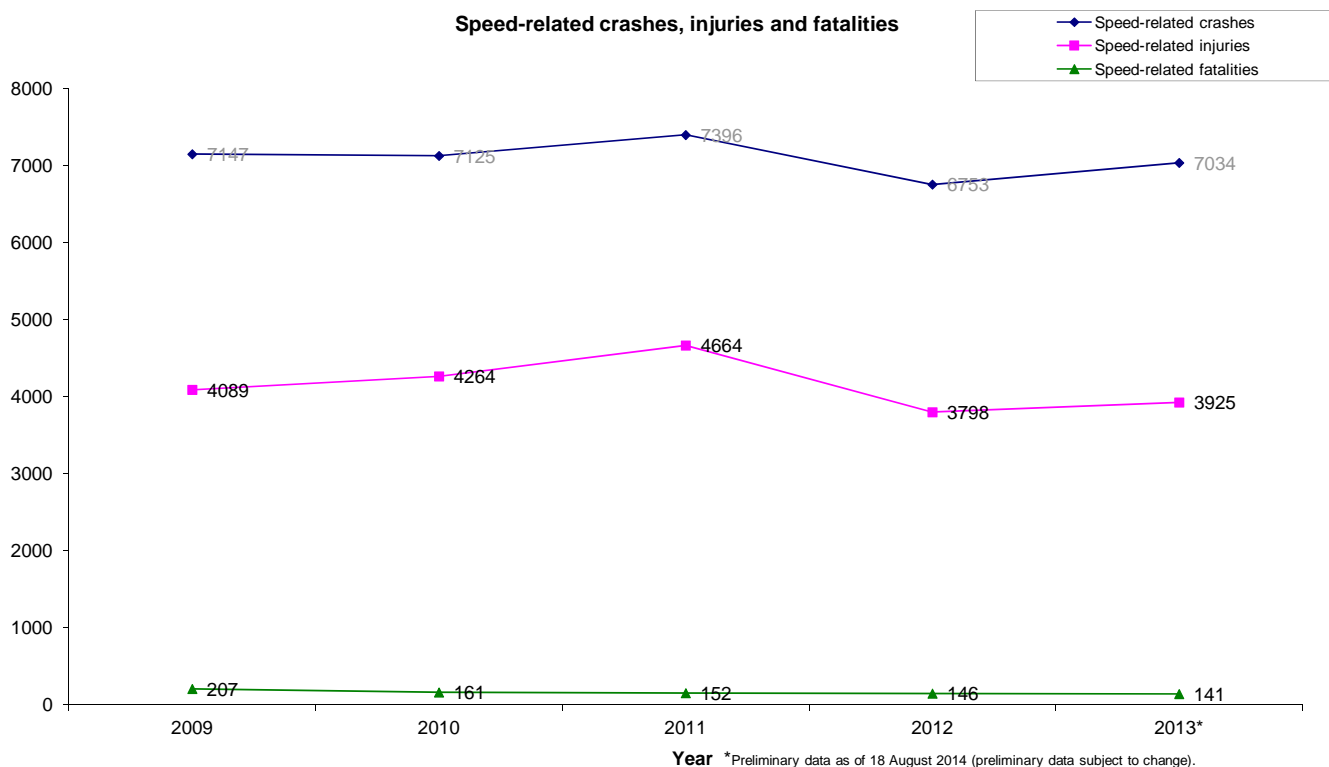
The ongoing impact of the mobile speed camera program is reflected in the provisional 2013 road toll. There were 339 persons killed on NSW roads in 2013 (provisional figure). The 2013 provisional road toll is the number of fatalities recorded for 2013 as at 1 January 2014. The provisional 2013 road toll 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 2013 provisional figure.

The 2013 result represents the lowest annual figure since 1924 (with 309 fatalities). Current NSW road toll levels are significant given the tripling of the population in NSW, the thirty-six fold increase in licence holders and the fifty fold increase in registered motor vehicles since 1924. The 2013 fatality rate per population (4.6) is also the lowest since records began in 1908. However, speed continues to remain the biggest killer on NSW road, with 42 per cent of fatalities attributable to speed in 2013. More can be done to further drive reductions in the NSW road toll, and mobile speed cameras will continue to play an important role.

Speed related crashes, injuries and fatalities

The positive impact of the mobile speed camera program to date is also reflected in the reduction of speed-related crashes. In 2013, there were 7,034 speed-related crashes. While these crashes increased compared to 2012 results, crash data for 2013 shows a reduction in speed-related crashes compared to 2009 results (7147), before the mobile speed camera program was reintroduced. This trend is also observed for speed-related injuries. The results show that there has been a decrease in speed-related injuries in comparison to 2009 (4089), with 3925 speed-related injuries recorded in 2013. Since the introduction of the mobile speed camera program, speed-related fatalities have decreased each year that the program has been in operation. In 2013, speed-related fatalities reduced by 32% when compared to 2009 results.

¹ NSW Centre for Road Safety (2011). NSW Mobile Speed Camera Review. NSW Centre for Road Safety.



2013 Annual speed surveys

The results represent a summary of annual speed survey results from 2009-2013. 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 the Centre for Road Safety 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 2013 annual speed surveys were conducted at 175 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.

Mean speed and 85th percentile speed survey results, 2009-2013

Posted Speed Limit	Light Vehicles Mean Speeds (km/h)					Light Vehicles 85 th Percentile Speeds (km/h)				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
40 km/h School Zone	45.1	43.6	44.2	43.3	43.2	52.7	50.9	51.4	50.2	50.2
40 km/h	38.9	38.4	38.3	39.3	38.1	44.6	44.0	43.8	44.7	43.5
50 km/h	53.6	52.1	52.3	51.4	51.9	61.1	59.1	59.4	58.5	58.6
60 km/h	58.7	57.7	57.4	58.1	57.1	65.6	64.2	64.3	65.0	63.8
70 km/h	69.6	67.9	67.8	67.6	67.9	77.8	75.8	75.6	75.3	75.6
80 km/h	77.8	76.1	76.4	77.2	75.4	85.9	84.5	86.4	85.0	83.3
90 km/h – small sample [^]	88.1	91.1	90.9	86.5	86.9	96.7	99.0	99.2	95.2	95.0
100 km/h	98.8	98.6	99.1	98.4	97.2	106.5	106.2	106.7	106.0	104.7
110 km/h	109.9	108.8	109.2	109.8	107.9	118.0	116.6	116.7	117.2	115.6

Posted Speed Limit	Heavy Vehicles Mean Speeds (km/h)					Heavy Vehicles 85 th Percentile Speeds (km/h)				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
40 km/h School Zone	41.9	41.2	42.4	40.8	41.0	48.3	47.1	49.2	46.4	46.5
40 km/h	38.6	37.7	37.3	39.1	37.3	44.2	42.7	42.4	44.9	42.5
50 km/h	53.2	51.8	51.2	50.3	50.2	60.3	58.6	58.1	57.2	56.5
60 km/h	56.4	56.2	55.8	57.2	55.3	63.6	63.2	63.0	65.0	62.6
70 km/h	66.1	65.4	64.9	64.2	65.0	75.5	74.4	73.4	72.9	73.6
80 km/h	76.3	72.0	72.9	75.5	71.9	89.6	81.6	81.9	83.9	80.8
90 km/h – small sample [^]	85.0	91.1	90.0	85.6	86.6	94.5	99.4	98.9	95.5	95.0
100 km/h	97.4	98.0	98.0	97.6	95.9	103.5	104.4	104.4	104.0	102.1
110 km/h*	100.7	101.8	100.6	101.8	99.0	106.4	109.0	106.8	107.4	105.1

[^] Small samples may result in greater fluctuations year to year.

*Note Heavy vehicle speed limit is 100 km/h and results presented indicate the percentage of heavy vehicles exceeding 100km/h in this section.

Percentage of vehicles exceeding the speed limit, 2009-2013

Posted Speed Limit	Light Vehicles Exceeding the Speed Limit – by up to 10 km/h					Light Vehicles Exceeding the Speed Limit +10 km/h				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
40 km/h School Zone	46.4%	44.0%	45.1%	42.0%	43.4%	23.0%	17.5%	19.7%	18.4%	17%
40 km/h	30.2%	27.8%	27.2%	32.0%	26.6%	4.5%	3.4%	3.7%	6.0%	3.4%
50 km/h	48.8%	46.4%	46.6%	42.8%	43.3%	16.8%	12.6%	13.2%	13.0%	14.1%
60 km/h	32.3%	28.8%	28.2%	29.9%	25.9%	7.3%	5.4%	5.8%	7.8%	6.3%
70 km/h	35.9%	31.3%	30.2%	28.2%	29.5%	10.4%	6.6%	6.3%	7.3%	8.2%
80 km/h	29.8%	26.3%	26.1%	24.8%	21.1%	8.8%	6.3%	6.6%	7.1%	6.2%
90 km/h – small sample [^]	29.6%	38.0%	38.5%	22.9%	24.8%	9.0%	11.8%	13.4%	10.0%	10.1%
100 km/h	34.5%	32.2%	34.4%	31.0%	27.6%	8.2%	9.0%	8.9%	9.4%	7.9%
110 km/h	40.8%	37.5%	38.9%	41.2%	33.9%	9.3%	6.4%	7.0%	11.4%	6%

Posted Speed Limit	Heavy Vehicles Exceeding the Speed Limit – by up to 10 km/h					Heavy Vehicles Exceeding the Speed Limit + 10 km/h				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
40 km/h School Zone	42.2%	36.2%	43.3%	39.5%	39.7%	10.1%	10.2%	12.6%	8.1%	2.6%
40 km/h	26.6%	22.8%	21.0%	29.9%	21%	5.4%	3.6%	3.0%	6.2%	7.1%
50 km/h	45.6%	44.7%	42.5%	40.4%	38.3%	16.7%	12.5%	10.7%	10.0%	7.8%
60 km/h	26.7%	25.8%	25.4%	25.4%	22.7%	5.0%	3.9%	4.5%	9.6%	4.1%
70 km/h	28.6%	27.3%	23.7%	21.4%	24.1%	5.7%	4.2%	3.5%	3.6%	3.9%
80 km/h	23.6%	21.2%	23.2%	19.4%	18.2%	9.8%	5.1%	5.9%	6.2%	4.0%
90 km/h – small sample [^]	27.2%	41.3%	34.8%	22.6%	30.6%	6.3%	14.0%	13.6%	11.2%	8.5%
100 km/h	34.5%	34.1%	34.0%	33.4%	26.2%	3.2%	4.8%	4.8%	5.8%	2.2%
110 km/h*	48.1%	39.8%	44.9%	8.8%	5.4%	8.1%	12.9%	8.8%	3.2%	1.2%

[^] Small samples may result in greater fluctuations year to year.

*Note Heavy vehicle speed limit is 100 km/h and results presented indicate the percentage of heavy vehicles exceeding 100km/h in this section.

Light vehicles

In 2013, light vehicle speed survey results indicate:

- 50km/h speed zones
 - 43 per cent of drivers were travelling up to 10km/h above the posted speed limit, and a further 14 per cent were exceeding the speed limit by 10km/h or more.
 - The 85th percentile speed was 59km/h, the mean speed was 52km/h.
- 100km/h speed zones
 - 28 per cent of drivers were travelling up to 10km/h above the posted speed limit, and a further eight per cent were exceeding the speed limit by 10km/h or more.
 - The 85th percentile speed was 105km/h, the mean speed was 97km/h.

Heavy vehicles

In 2013, heavy vehicle speed survey results indicate:

- 50km/h speed zones
 - 38 per cent of drivers were travelling up to 10km/h above the posted speed limit, and a further eight 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
 - 26 per cent of drivers were travelling up to 10km/h above the posted speed limit, and a further two per cent were exceeding the speed limit by 10km/h or more.
 - The 85th percentile speed was 102km/h, the mean speed was 96km/h.

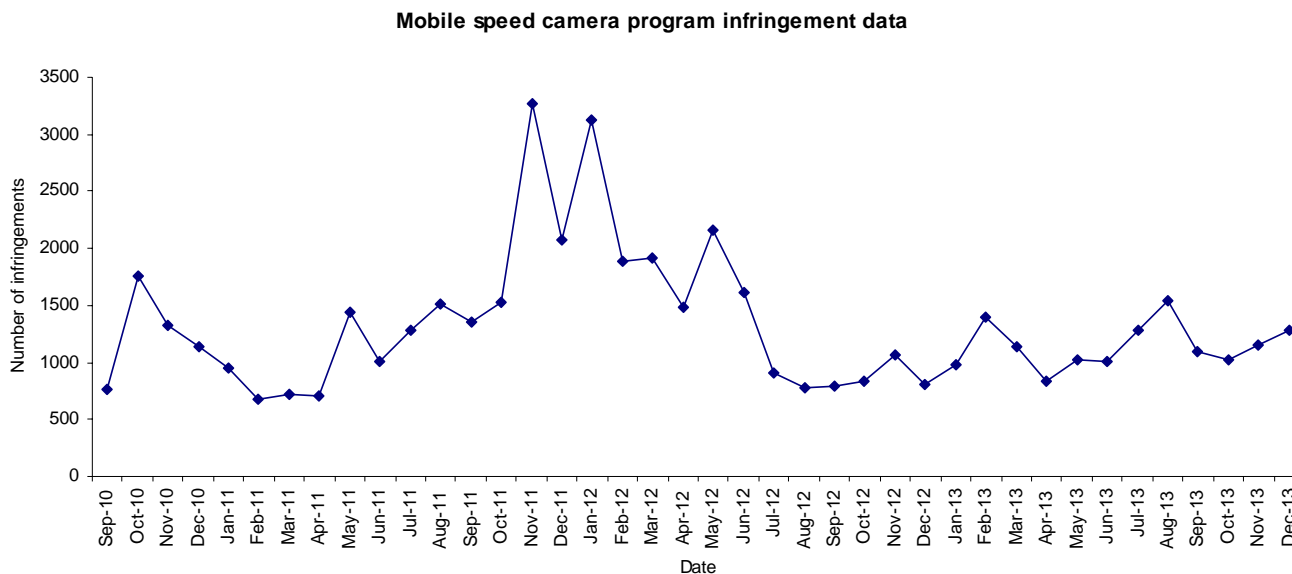
Trends in speed survey results

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 statistically 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.

When looking at the percentage of light vehicles exceeding the speed limit by up to 10km/h in 2013, there has been a continued suppression of speeding when comparing results from 2009 to 2011. However, there have been slight increases in some zones compared to 2012. The percentage of light vehicles exceeding the speed limit by more than 10km/h in 2013 has reduced compared to 2012, with the exception of speeding in 50km/h and 70km/h zones, where there was a slight increase in speeding in these zones. Nonetheless, the results for light vehicles exceeding the speed limit by more than 10km/h, with the exception of speeding in 90km/h zones, were lower than the 2009 results, prior to the reintroduction of the mobile speed camera program in 2010.

The percentage of heavy vehicles exceeding the speed limit by up to 10km has overall reduced compared to the previous year. Significant gains have been achieved in reducing heavy vehicles exceeding the speed limit by more than 10 km/h, achieving the lowest percentages over the entire five year period in 40km/h school zones, 50km/h, 60km/h, 80km, 100km/h and 110km/h zones. Heavy vehicles continue to have lower proportions exceeding the speed limit than light vehicles.

Mobile speed camera infringements



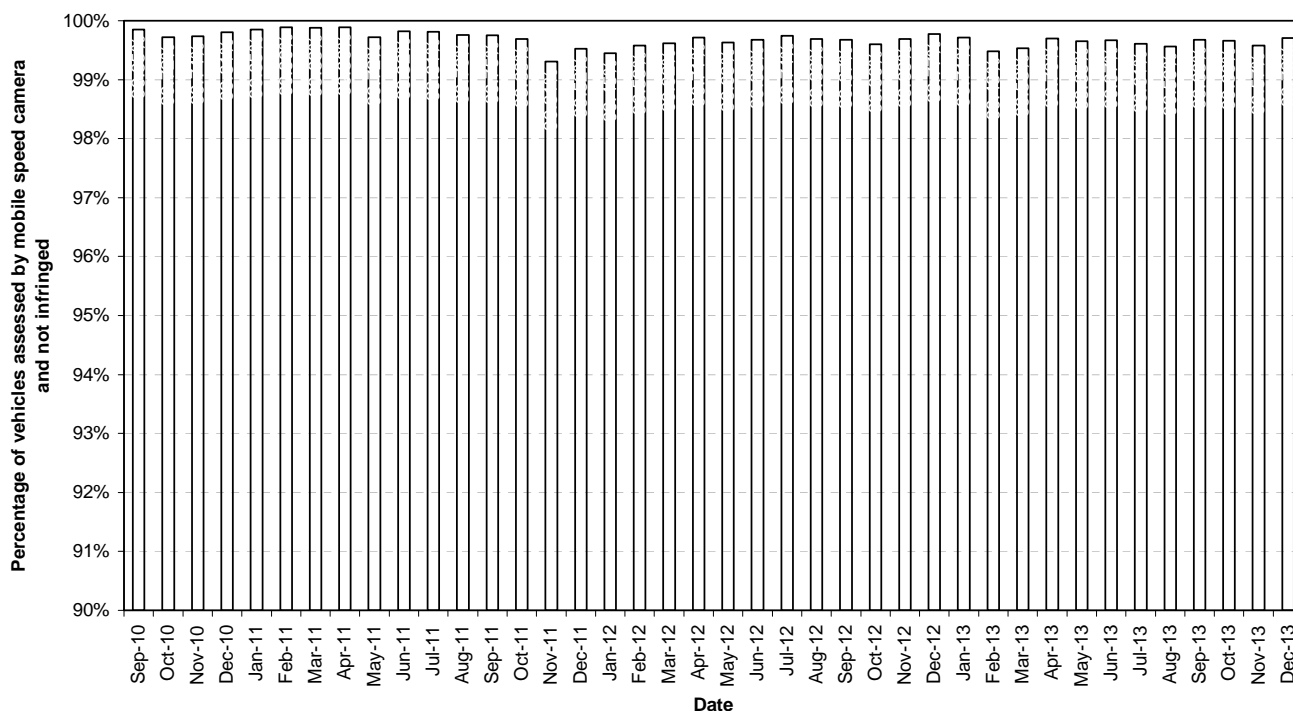
In 2013 there were a total of 13,766 infringements issued from mobile speed camera enforcement resulting in a total fines of \$2.59 million. The total number of infringements in 2013 reduced by 21 per cent compared to the total number of infringements in 2012.

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. The total number of approved sites is 640 with all selected sites published on the Centre for Road Safety website. The above graph depicting the mobile speed camera program infringement data shows that in 2011 there were two months where there were 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 remain in the same place and continually enforce 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. In 2013, the number of infringements issued remained at a consistent level over the year.

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. This high rate of compliance has remained consistent since 2010 when the program was reintroduced.

Compliance rate of vehicles at mobile speed camera locations



CRS has developed and implemented a speed camera public education campaign that has supported the rollout of the mobile speed camera program. CRS evidence shows that enforcement and strong public education campaigns change driver behaviour and help prevent speed-related crashes and trauma through awareness of enforcement.

Summary

Overall, the trend in road fatalities and annual speed surveys demonstrates that the current mobile speed camera program continues to deliver positive road safety benefits. The general decrease in speeding observed in the annual speed surveys, over the past five years, provides evidence that the general deterrence provided by mobile speed cameras can be enhanced by a larger program.

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 and time of speed enforcement.

By the end of 2013, the mobile speed camera program expanded to include 13 marked vehicles operating across 640 locations over approximately 930 hours of enforcement per month. The program is expanding in 2014, and once complete will include 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 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. However, in the months following the use of new sites, 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

	Location	Road
1	Adamstown	Park Avenue at Northcott Drive
2	Alexandria	Collins Street at O'Riordan Street
3	Alexandria / Waterloo	McEvoy Street at Botany Road
4	Ashfield	Frederick Street at Hume Highway
5	Auburn	Chisholm Road at Mona Street
6	Auburn	Silverwater Road at M4 (Westbound)
7	Bankstown	Edgar Street at Marion Street
8	Bankstown	Meredith Street at Hume Highway (School Zone)
9	Bankstown	Stacey Street at Hume Highway
10	Baulkham Hills	Windsor Road at Old Northern Road / Seven Hills Road
11	Belfield	Burwood Road at Punchbowl Road
12	Bexley	Forest Road at Harrow Road
13	Blacktown	Bungarribee Road at Balmoral Street
14	Blacktown	Great Western Highway at Reservoir Road
15	Blacktown	Lancaster Street at Kildare Street (School Zone)
16	Blacktown	Newton Road at Flushcombe Road (School Zone)
17	Blacktown	Sunnyholt Road at Main Street
18	Bondi Junction	Old South Head Road at Bondi Road
19	Bradbury	Moore Oxley Bypass at The Parkway
20	Burwood / Concord	Parramatta Road at Burwood Road
21	Cabramatta	Cumberland Highway at Cabramatta Road West
22	Cabramatta	Cumberland Highway at St Johns Road
23	Campbelltown	Kellicar Road at Narellan Road
24	Campbelltown	Moore-Oxley Bypass at Broughton Street
25	Campsie	Canterbury Road at Bexley Road
26	Campsie	Canterbury Road at Thorncraft Parade
27	Canley Vale	Sackville Street at Canley Vale Road
28	Caringbah	The Kingsway at Gannons Road
29	Castle Hill	Showground Road at Victoria Avenue
30	Chester Hill / Sefton	Waldron Road at Hector Street
31	Concord	Broughton Street at Crane Street
32	Crows Nest	Pacific Highway at Hume Street
33	Croydon Park	Georges River Road at Croydon Avenue
34	Darlinghurst	Craigend Street at McLachlan Avenue
35	Dee Why	Pittwater Road at Harbord Road
36	Eastwood	Blaxland Road at May Street
37	Fairfield	Hamilton Road at The Boulevarde
38	Fairfield	The Horsley Drive at Polding Street
39	Figtree	Princes Highway at O'Briens Road
40	Five Dock	Fairlight Street at Ramsay Road
41	Five Dock	Parramatta Road at Arlington Street
42	Granville	Parramatta Road at Good Street
43	Granville	Woodville Road at M4 On Ramp
44	Guildford	Woodville Road at Guildford Road
45	Haberfield	Dobroyd Parade at Mortley Avenue
46	Haberfield	Parramatta Road at Sloane Street
47	Haberfield	Ramsay Street at Wattle Street
48	Hamilton	Tudor Street at Beaumont Street
49	Hamilton East	Pacific Highway at Parry Street
50	Haymarket	George Street at Pitt Street / Quay Street
51	Hunters Hill	Ryde Road at Pittwater Road
52	Kensington	Anzac Parade at Todman Avenue
53	Kingsgrove	Bexley Road at William Street
54	Kingsgrove	Kingsgrove Road at Forsyth Street
55	Kirrawee	Acacia Road at President Avenue
56	Kogarah Bay	Park Road at Princes Highway
57	Lakemba	Punchbowl Road at Wangee Road
58	Lambton	Griffiths Road at Turton Road
59	Lansdowne / Villawood	Henry Lawson Drive / Woodville Road at Hume Highway
60	Leichhardt	City West Link at James Street
61	Lidcombe	Olympic Drive at Vaughan Street
62	Liverpool	Hume Highway at Elizabeth Drive
63	Liverpool	Memorial Avenue at Bathurst Street
64	Marrickville	Sydenham Road at Victoria Road
65	Mascot	O'Riordan Street at Coward Street

66	Mascot	O'Riordan Street at Gardeners Road
67	Mayfield West	Pacific Highway at Maud Street
68	Mays Hill	Great Western Highway at Coleman Street
69	Milperra	Newbridge Road at Henry Lawson Drive
70	Miranda	The Kingsway at Port Hacking Road
71	Moore Park	Anzac Parade at Lang Road
72	Moore Park / Paddington	Anzac Parade / Flinders Street at Moore Park Road
73	Moorebank	Newbridge Road at Stockton Avenue
74	Mosman	Military Road at Cowles Road
75	Mount Druitt	Great Western Highway at Carlisle Avenue
76	Naremburn	Willoughby Road at Chandos Street
77	North Ryde	Cox's Road at Lane Cove Road (Northbound and Southbound) (School Zone)
78	North Ryde	Wicks Road at Epping Road
79	Northmead	Briens Road at Redbank Road
80	Northmead	Old Windsor Road at Cumberland Highway
81	Paddington	Moore Park Road at Lang Road
82	Paddington / Surry Hills	South Dowling Street at Fitzroy Street / Moore Park Road
83	Parramatta	O'Connell Street at Argyle Street
84	Parramatta	Victoria Road at Church Street
85	Pennant Hills	Pennant Hills Road at Beecroft Road (School Zone)
86	Petersham	Gordon Street at New Canterbury Road
87	Petersham	Parramatta Road at West Street
88	Ramsgate	Rocky Point Road at Ramsgate Road
89	Randwick	Alison Street at Avoca Street
90	Randwick	Avoca Street at Darley Road
91	Redfern	Chalmers Street at Cleveland Street (School Zone)
92	Rockdale	Bestic Street at West Botany Street
93	Rockdale	Princes Highway at Bay Street / The Seven Ways
94	Roselands / Wiley Park	Canterbury Road at King Georges Road
95	Roselands	King Georges Road at Moorefields Road
96	Rozelle	Victoria Road at Evans Street
97	Rozelle	Wellington Street at Victoria Road
98	Ryde	Victoria Road at Devlin Street
99	Seven Hills	Abbott Road at Station Road
100	Silverwater	Silverwater Road at M4 On-ramp (Eastbound)
101	Smithfield	Cumberland Highway at The Horsley Drive
102	Smithfield	The Horsley Drive at Gipps Street
103	Smithfield	Victoria Street at Hassall Street
104	South Penrith	Parker Street at Jamison Road
105	South Wentworthville	Cumberland Highway at Old Prospect Road
106	Spring Hill	Springhill Road (Northbound and Southbound) at Masters Road
107	St Marys	Great Western Highway at Charles Hackett Drive / Pages Road
108	St Marys	Mamre Road at Saddington Street (School Zone)
109	Strathfield	Arthur Street at Centenary Drive
110	Surry Hills	Cleveland Street at South Dowling Street
111	Thornleigh	Pennant Hills Road at Parkes Street
112	Ultimo	Wattle Street at William Henry Street
113	Unanderra	Princes Highway at Five Islands Road
114	Wallsend	Thomas Street at Metcalfe Street
115	Warrawong	King Street (Grand Pacific Drive) at Cowper Street
116	Warwick Farm	Hume Highway at Bigge Street
117	Wentworthville	Great Western Highway at Station Street
118	West Pennant Hills	Pennant Hills Road at Eaton Road
119	West Pymble	Ryde Road at Lady Game Drive
120	Wiley Park	The Boulevarde at King Georges Road (School Zone)
121	Windang	Windang Road at Boronia Avenue
122	Wollongong	Corrimal Street at Burelli Street
123	Wollongong	Gladstone Avenue at Princes Highway
124	Woollahra	Queen Street at Ocean Street
125	Zetland	Bourke Street at Botany Road

Adamstown - Park Avenue at Northcott Drive

- 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

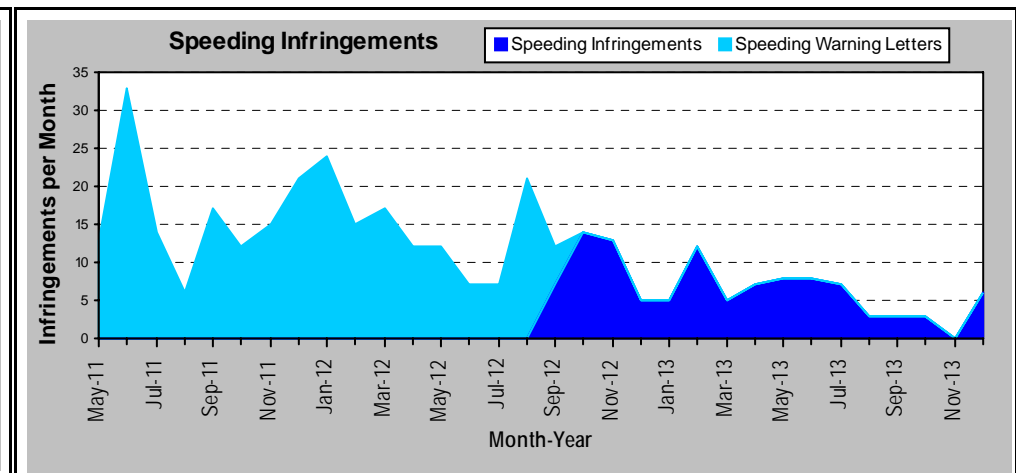
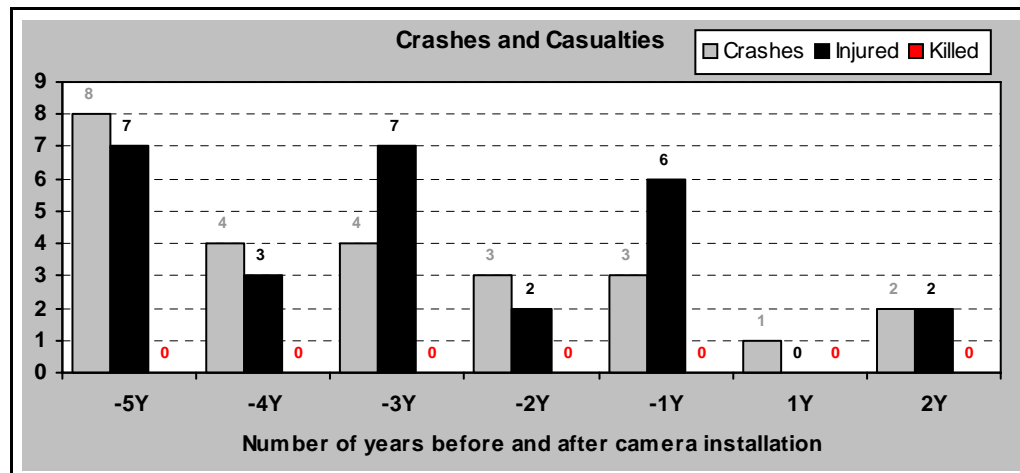
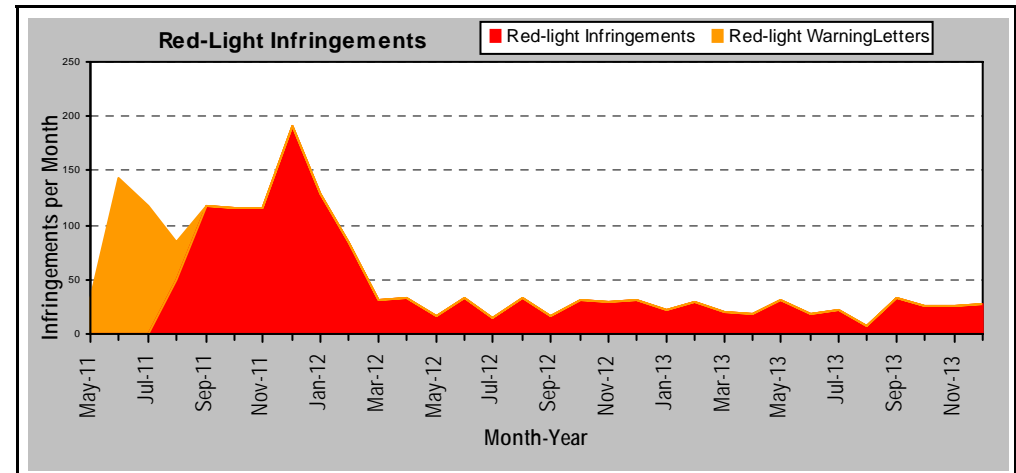
	5 years before installation ¹	2 years and 224 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	25	2	85%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	22	3	74%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	12	0	100%
<i>Rear End Crashes</i>	5	2	23%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Alexandria - Collins Street at O'Riordan Street

- There is one camera at this intersection.
- The camera at the intersection of Collins Street and O'Riordan Street commenced issuing warning letters in October 2013.
- A longer period of time is required to assess 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

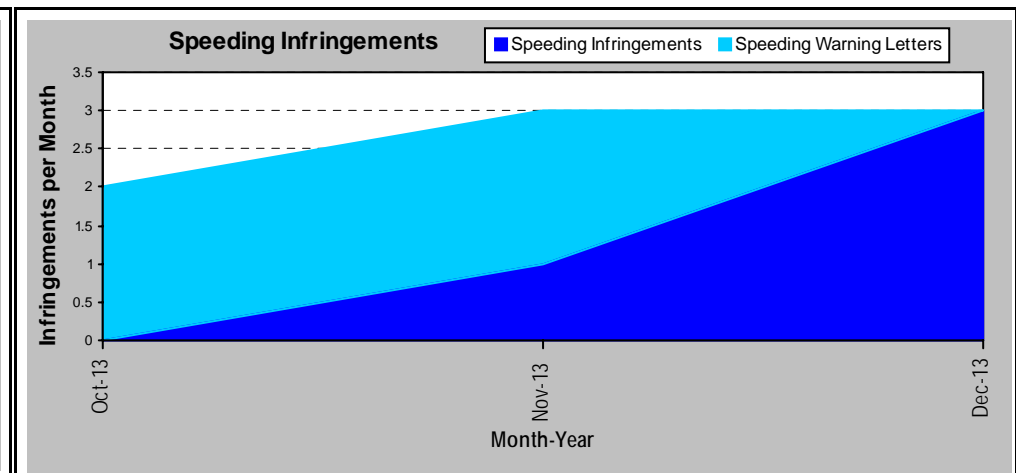
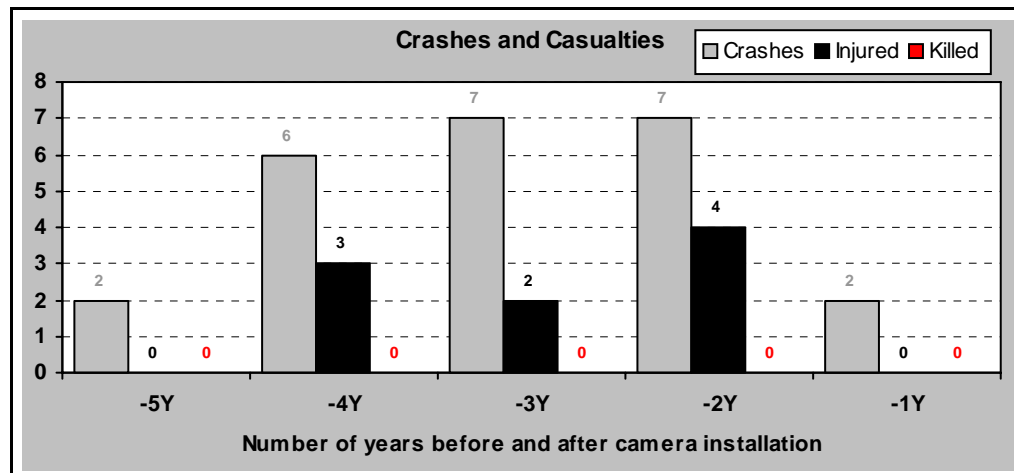
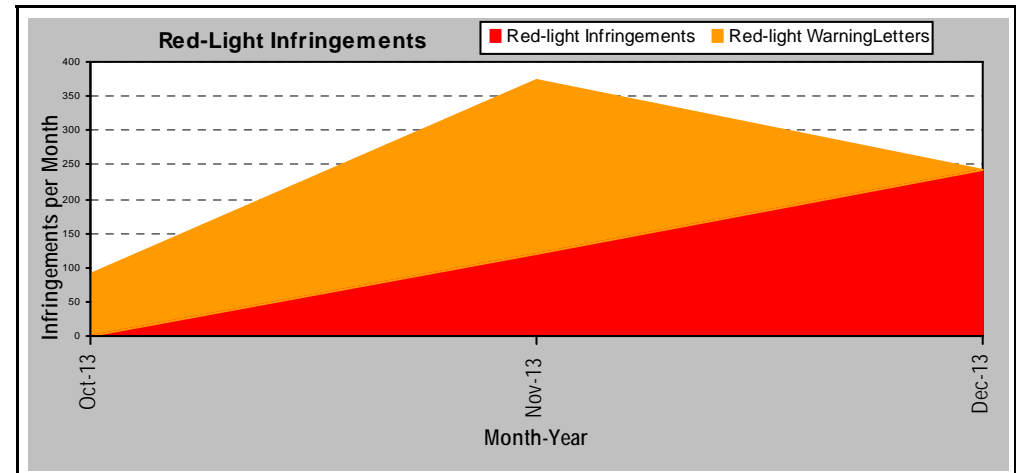
	5 years before installation ¹	71 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	9	0	100%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	24	1	+7%
<i>Adjacent Crashes</i>	8	0	100%
<i>Right Through Crashes</i>	7	0	100%
<i>Rear End Crashes</i>	3	1	+757%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Alexandria / Waterloo - McEvoy Street at Botany Road

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- Both cameras at the intersection of McEvoy Street and Botany Road 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 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

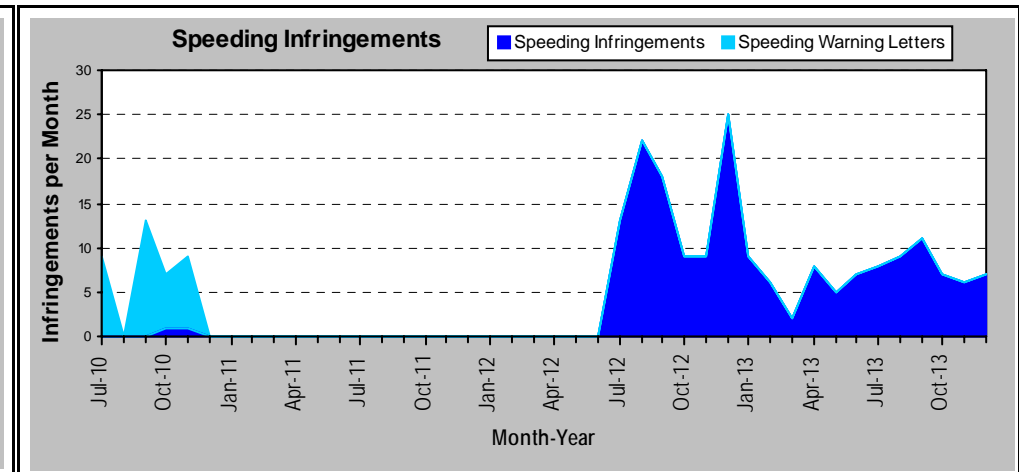
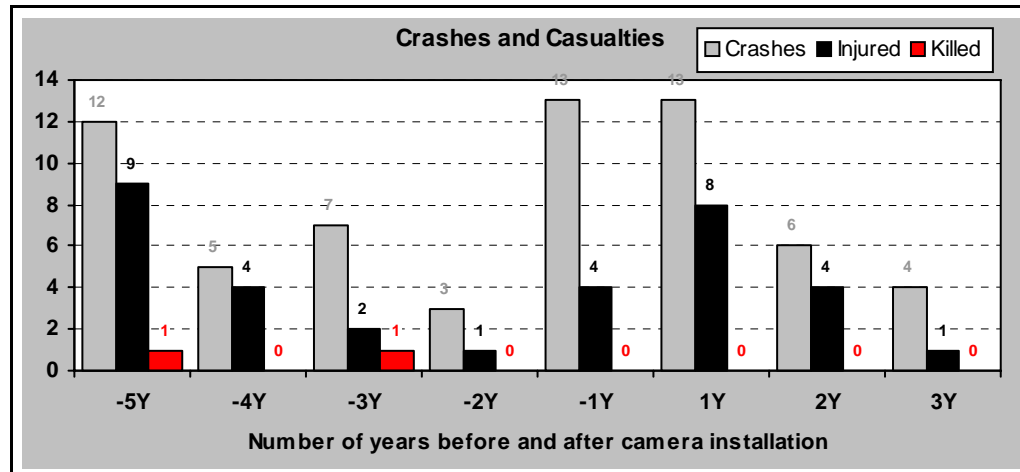
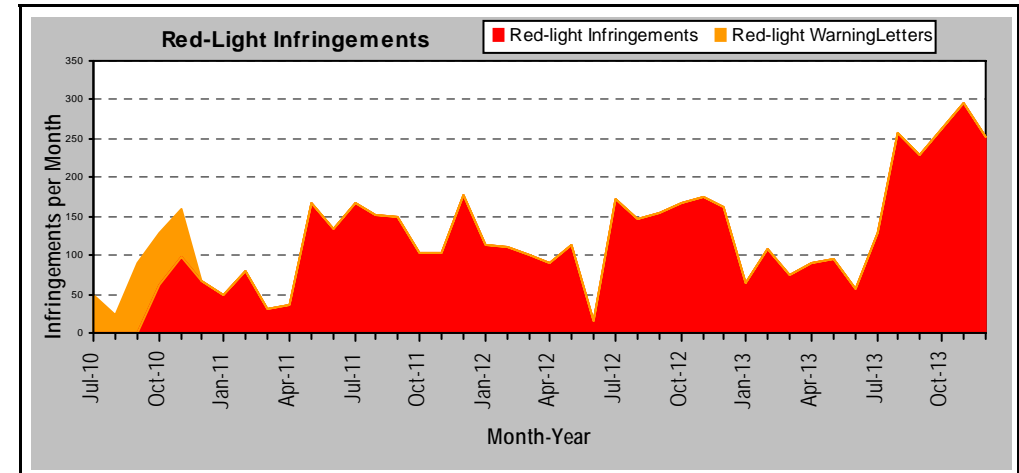
	5 years before installation ¹	3 years and 186 days after installation ²	Percentage reduction ³
Fatalities	2	0	100%
Injuries	20	13	7%
<i>Pedestrian Casualties</i>	6	0	100%
Crashes	40	24	14%
<i>Adjacent Crashes</i>	14	17	+73%
<i>Right Through Crashes</i>	8	2	64%
<i>Rear End Crashes</i>	8	1	82%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Ashfield - Frederick Street at Hume Highway

- 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 casualties and 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

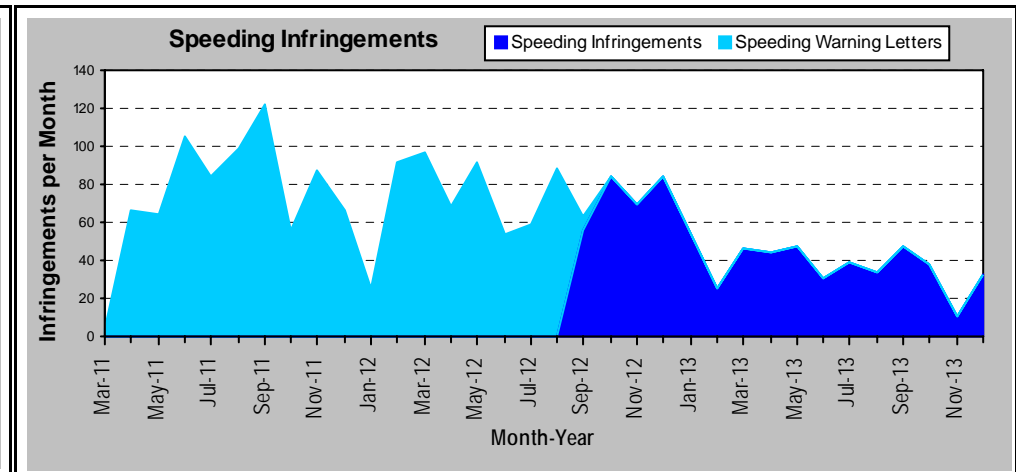
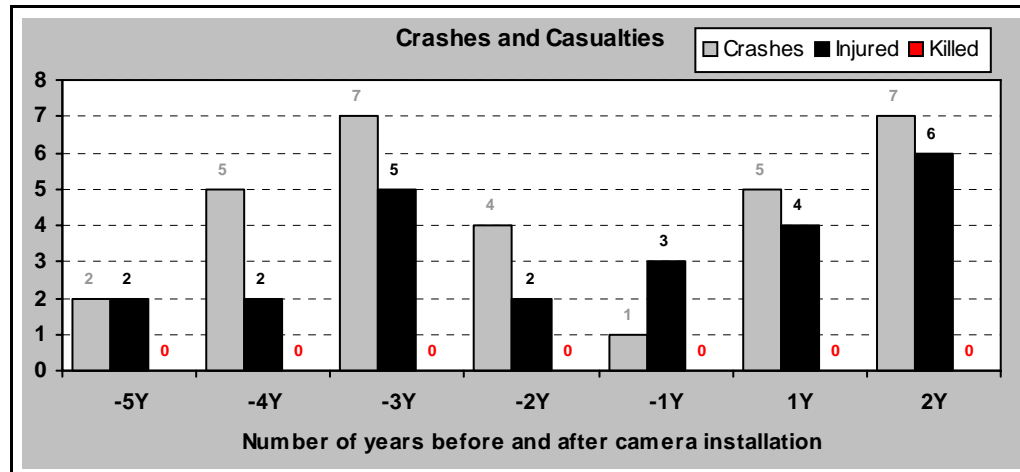
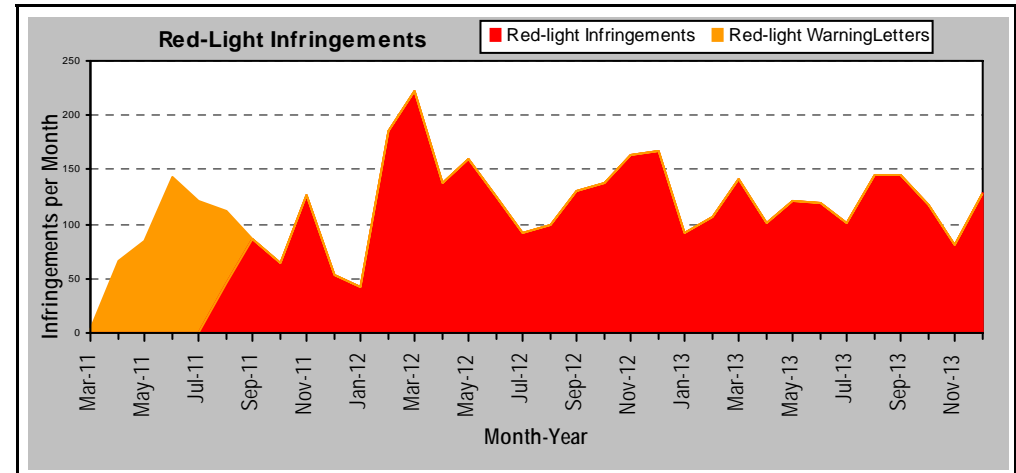
	5 years before installation ¹	2 years and 292 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	14	14	+79%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	19	17	+60%
<i>Adjacent Crashes</i>	5	2	29%
<i>Right Through Crashes</i>	3	3	+79%
<i>Rear End Crashes</i>	8	8	+79%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Auburn - Chisholm Road at Mona Street

- There is one camera at this intersection.
- The camera at the intersection of Chisholm Road and Mona Street commenced issuing warning letters in February 2013.
- 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

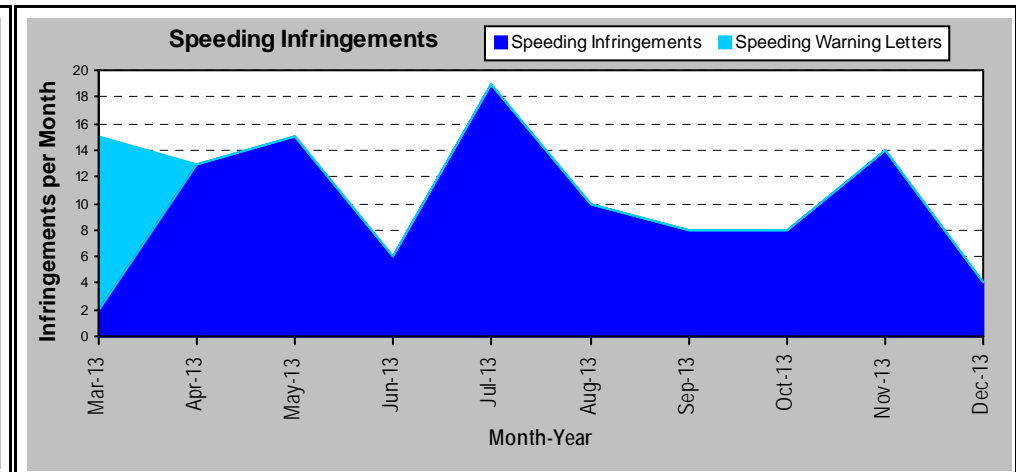
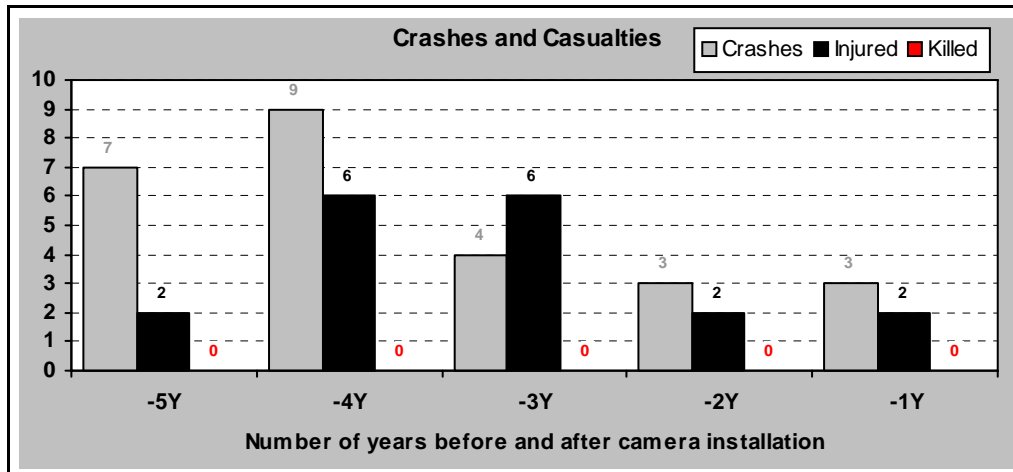
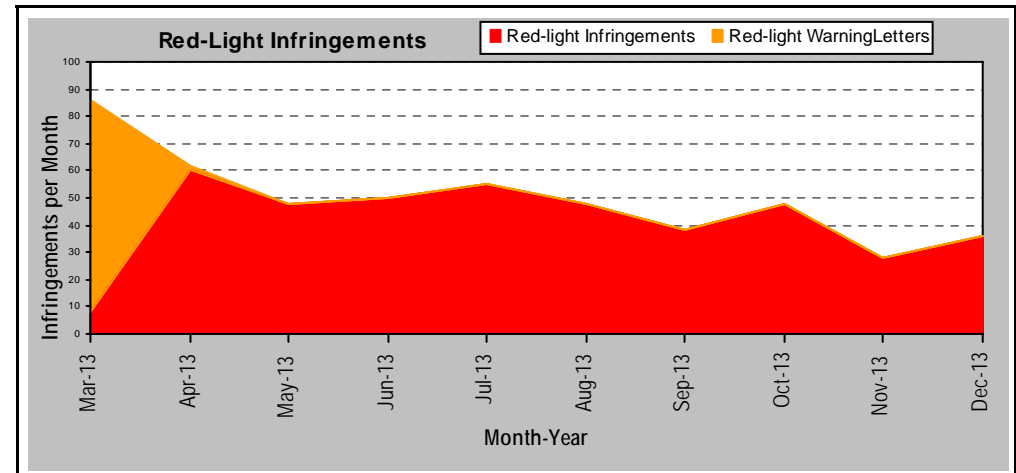
	5 years before installation ¹	309 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	18	1	67%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	26	4	9%
<i>Adjacent Crashes</i>	15	2	21%
<i>Right Through Crashes</i>	4	1	+48%
<i>Rear End Crashes</i>	1	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Auburn - Silverwater Road at M4 (Westbound)

- There are two cameras at this intersection.
- The camera at the intersection of M4 Western Motorway Off-ramp (Westbound) and Silverwater Road commenced issuing warning letters in June 2011.
- The camera at the intersection of Silverwater Road and M4 Western Motorway On-ramp (Westbound) commenced issuing warning letters in July 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

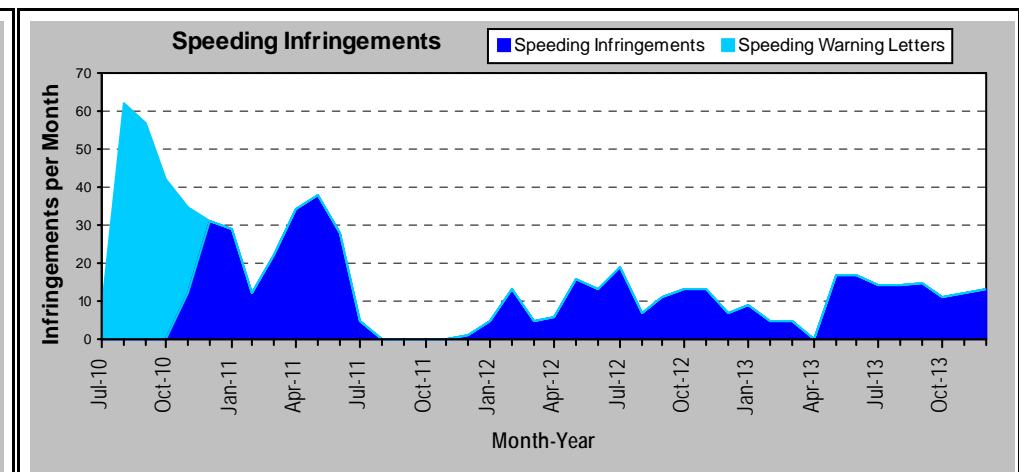
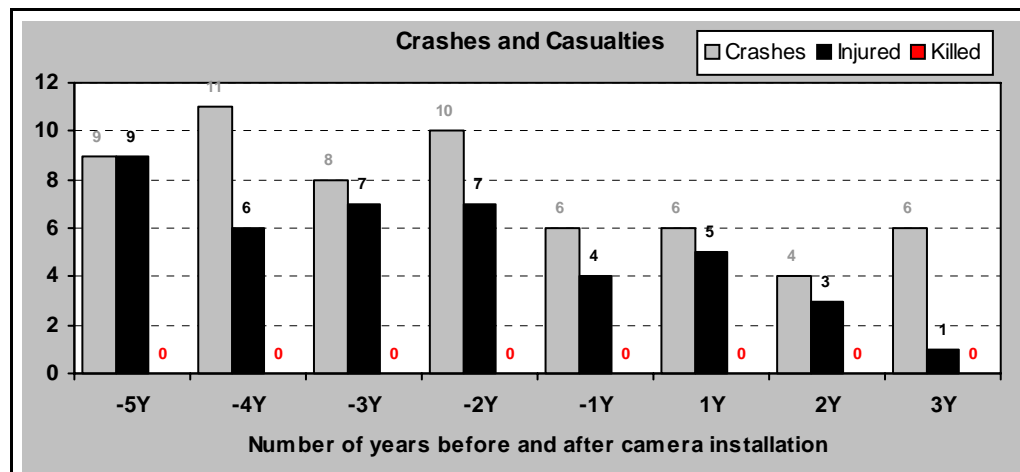
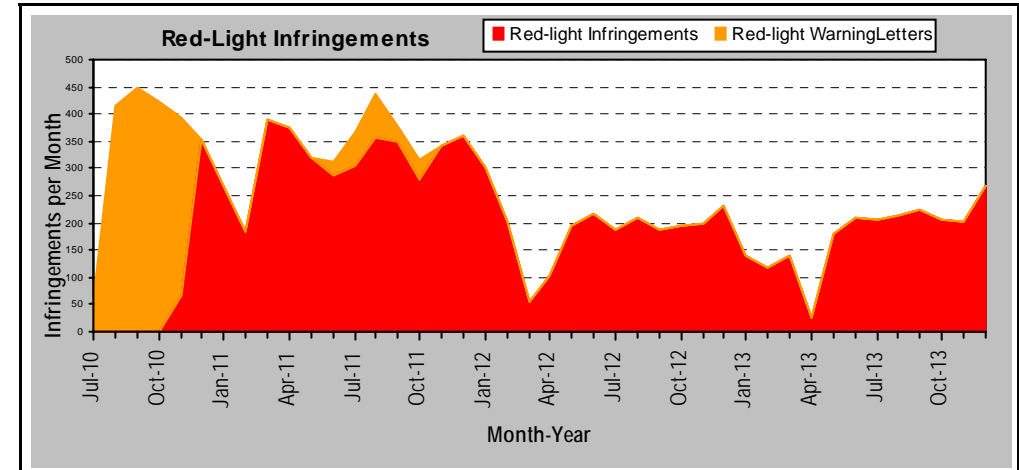
	5 years before installation ¹	3 years and 170 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	33	9	61%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	44	17	44%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	8	8	+44%
<i>Rear End Crashes</i>	15	3	71%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Bankstown - Edgar Street at Marion Street

- There is one camera at this intersection.
- The camera at the intersection of Edgar Street and Marion Street commenced issuing warning letters in August 2013.
- A longer period of time is required to assess 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

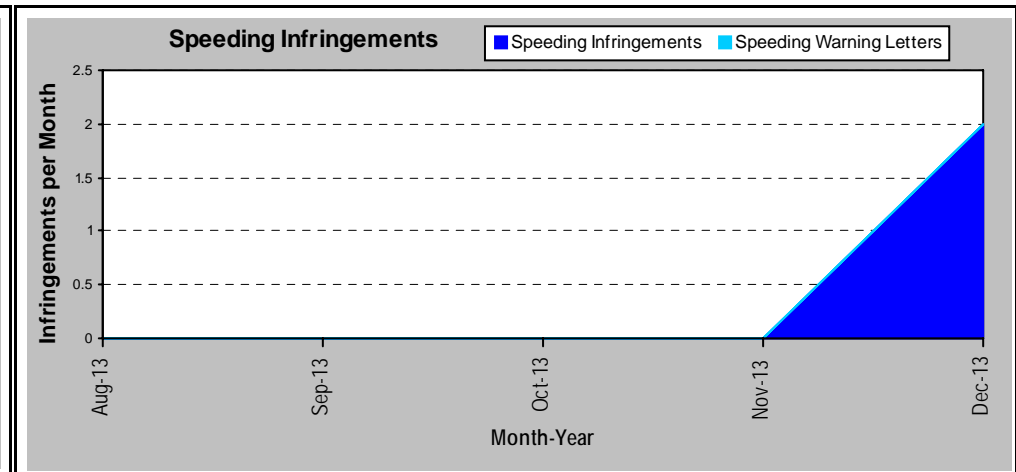
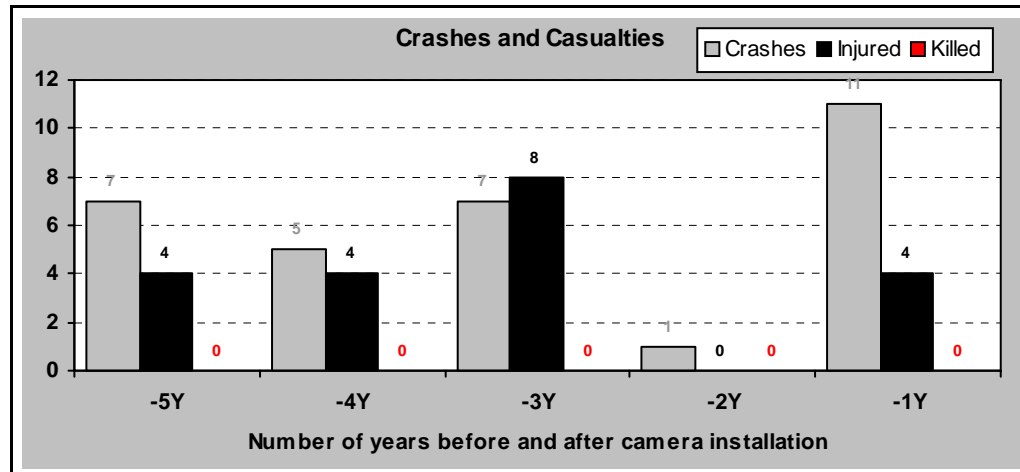
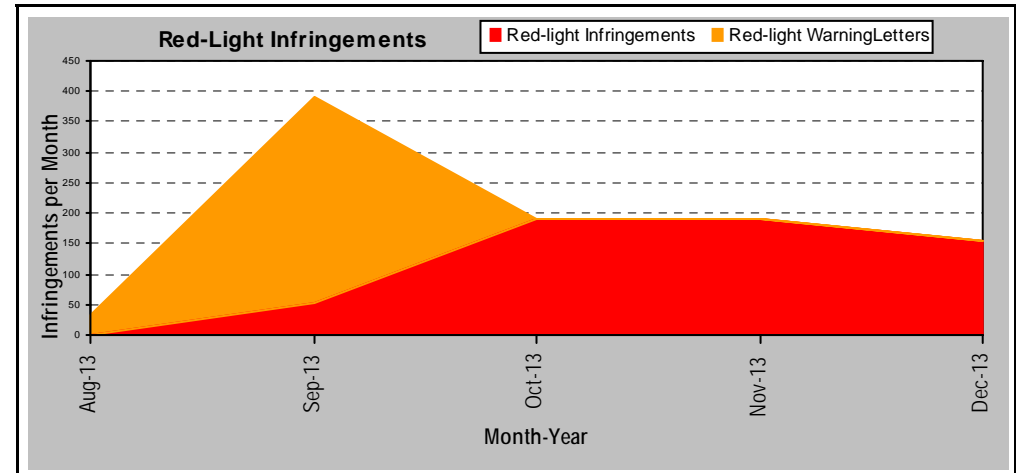
	5 years before installation ¹	127 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	20	0	100%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	31	1	54%
<i>Adjacent Crashes</i>	12	1	+20%
<i>Right Through Crashes</i>	6	0	100%
<i>Rear End Crashes</i>	7	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Bankstown - Meredith Street at Hume Highway (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 Street and Hume Highway commenced issuing warning letters in December 2010.
- While early results indicate a slight increase in casualties and 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. There were no speeding infringements at this intersection up to the end of 2013. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

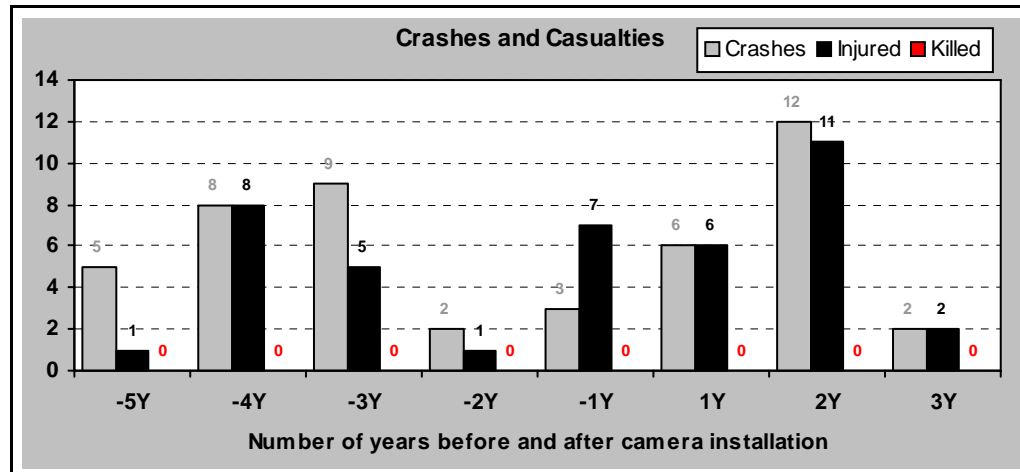
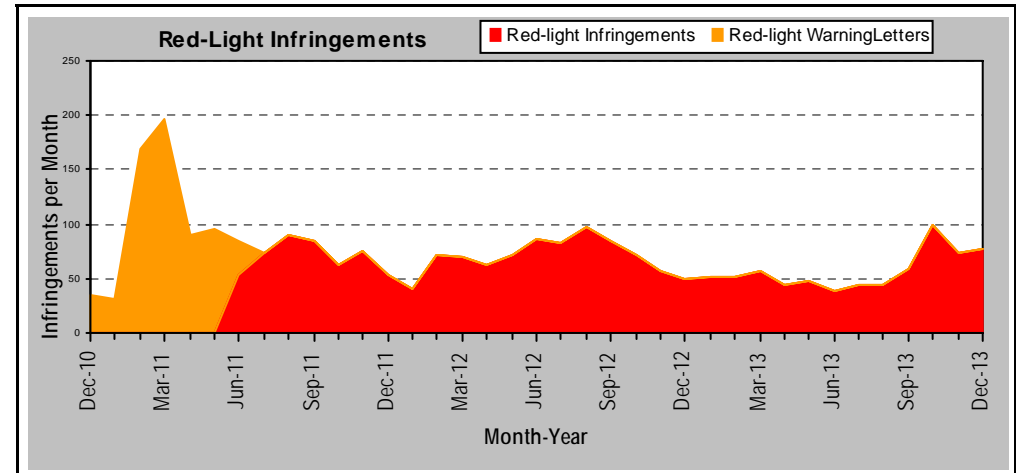
	5 years before installation ¹	3 years and 18 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	22	20	+49%
<i>Pedestrian Casualties</i>	2	3	+146%
Crashes	27	21	+28%
<i>Adjacent Crashes</i>	4	3	+23%
<i>Right Through Crashes</i>	10	12	+97%
<i>Rear End Crashes</i>	9	3	45%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Bankstown - Stacey Street at Hume Highway

- There is one camera at this intersection.
- The camera at the intersection of Stacey Street and Hume Highway commenced issuing warning letters in April 2013.
- 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 since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

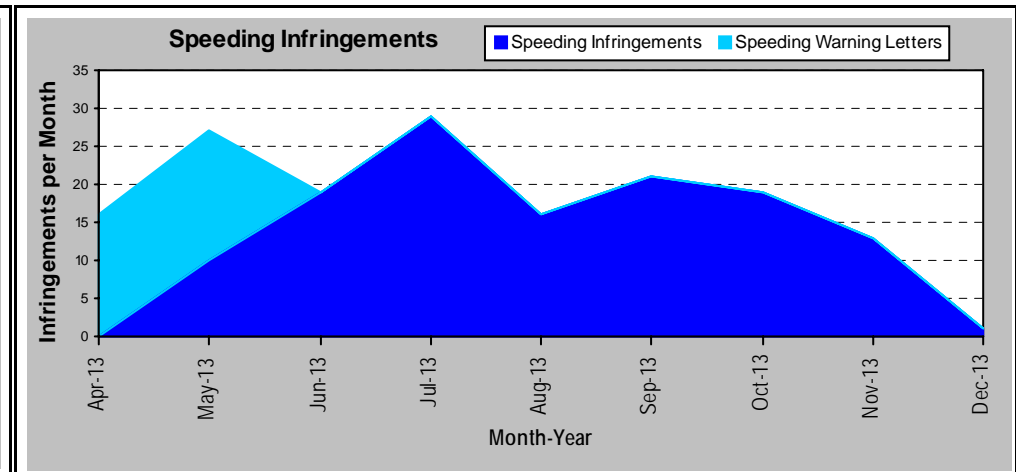
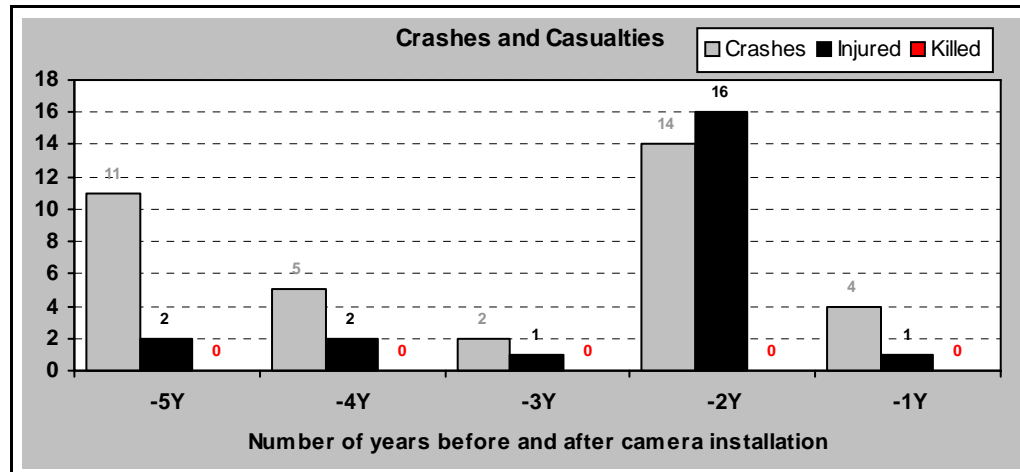
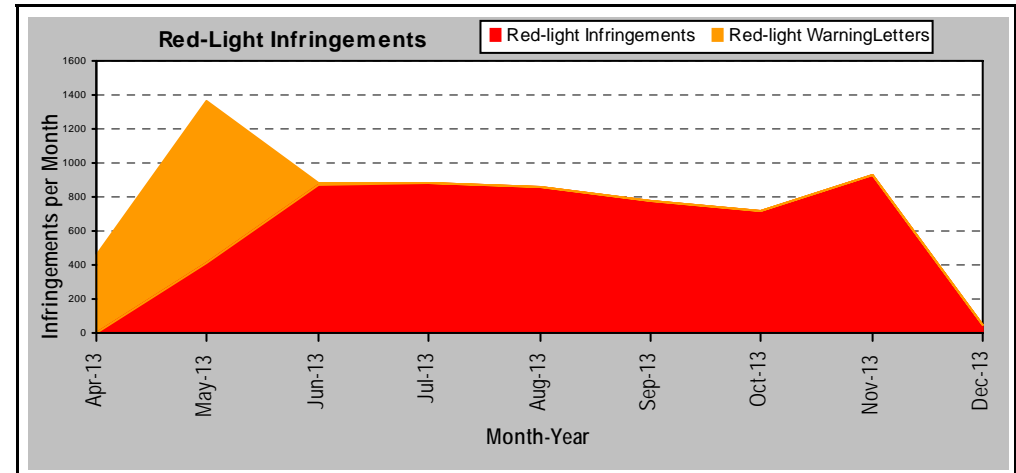
	5 years before installation ¹	256 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	22	0	100%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	36	3	41%
<i>Adjacent Crashes</i>	9	0	100%
<i>Right Through Crashes</i>	5	0	100%
<i>Rear End Crashes</i>	13	2	+10%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Baulkham Hills - Windsor Road at Old Northern Road / Seven Hills Road

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Windsor Road and Old Northern Road commenced issuing warning letters in September 2010.
- The camera at the intersection of Windsor Road and Seven Hills Road 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

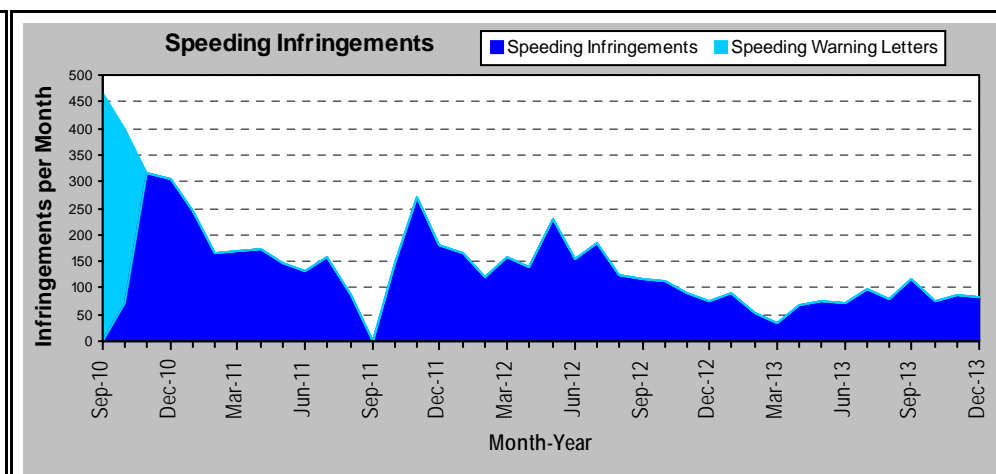
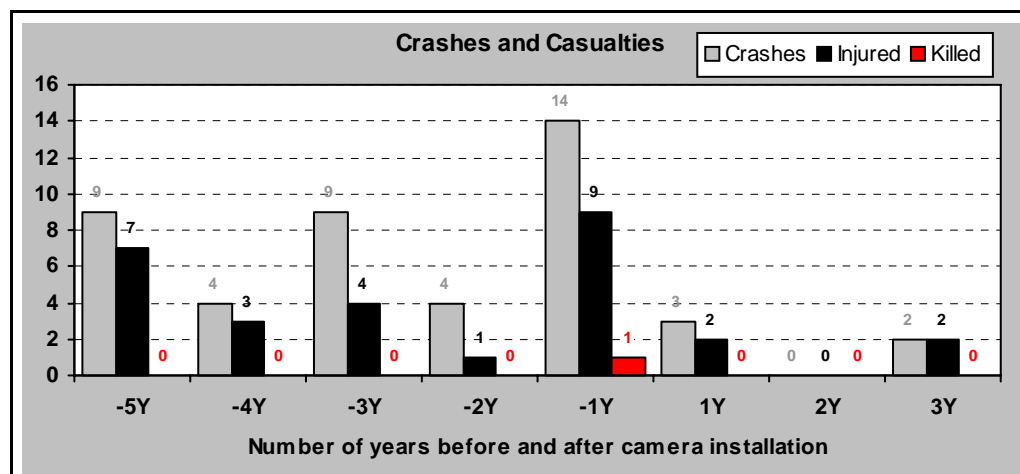
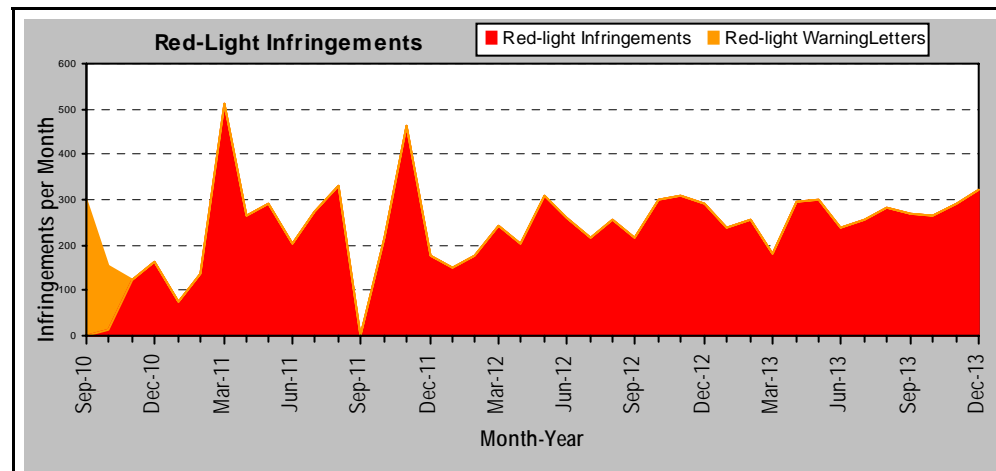
	5 years before installation ¹	3 years and 122 days after installation ²	Percentage reduction ³
Fatalities	1	0	100%
Injuries	24	4	75%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	40	6	77%
<i>Adjacent Crashes</i>	6	2	50%
<i>Right Through Crashes</i>	9	2	67%
<i>Rear End Crashes</i>	13	1	88%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Belfield - Burwood Road at Punchbowl Road

- There is one camera at this intersection.
- The camera at the intersection of Burwood Road and Punchbowl Road commenced issuing warning letters in October 2013.
- A longer period of time is required to assess 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

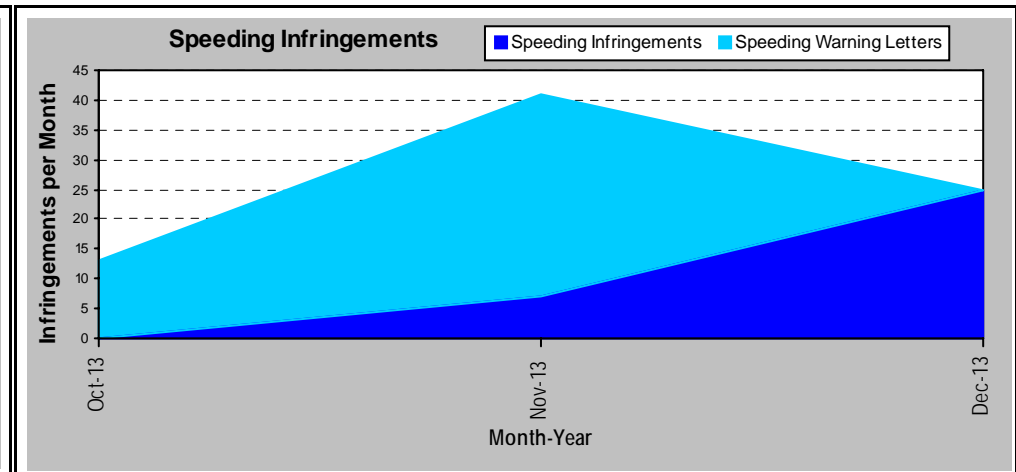
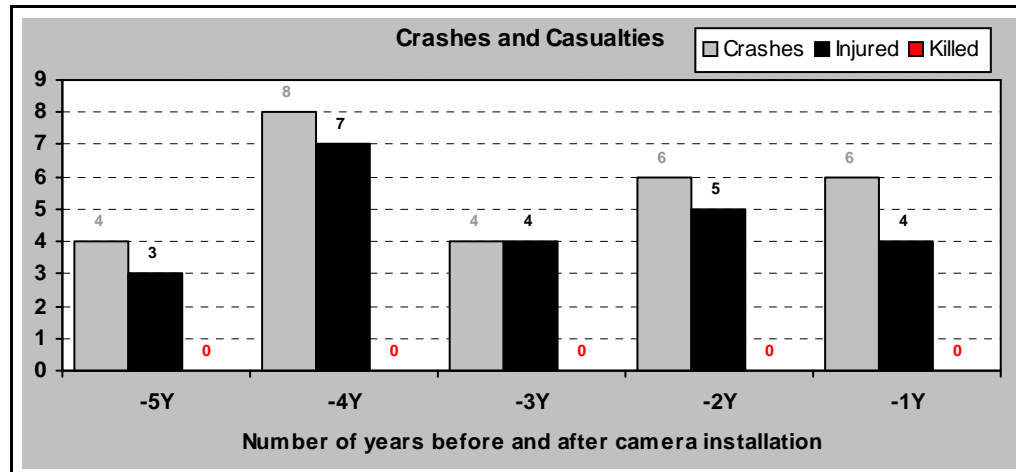
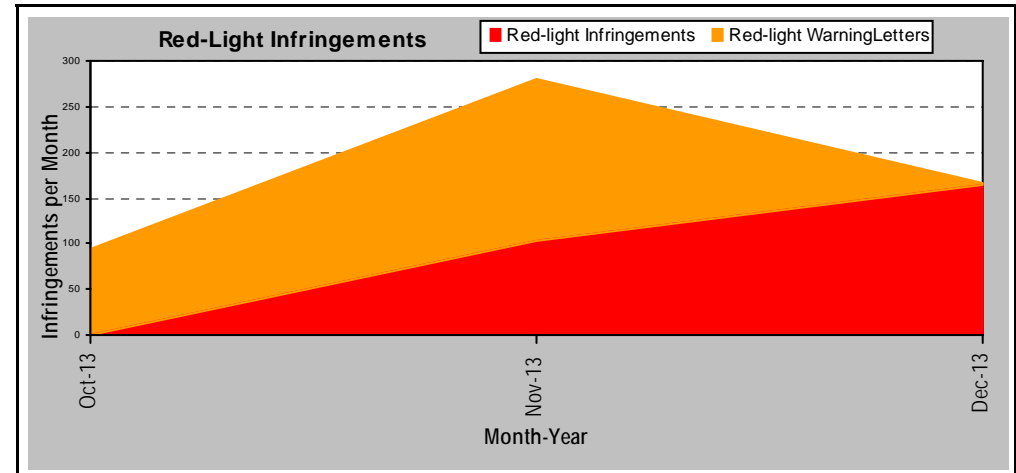
	5 years before installation ¹	71 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	23	1	+12%
<i>Pedestrian Casualties</i>	7	0	100%
Crashes	28	1	8%
<i>Adjacent Crashes</i>	12	0	100%
<i>Right Through Crashes</i>	7	0	100%
<i>Rear End Crashes</i>	2	1	+1186%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Bexley - Forest Road at Harrow Road

- 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. Maintenance and testing of the camera at this intersection commenced in June 2013. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

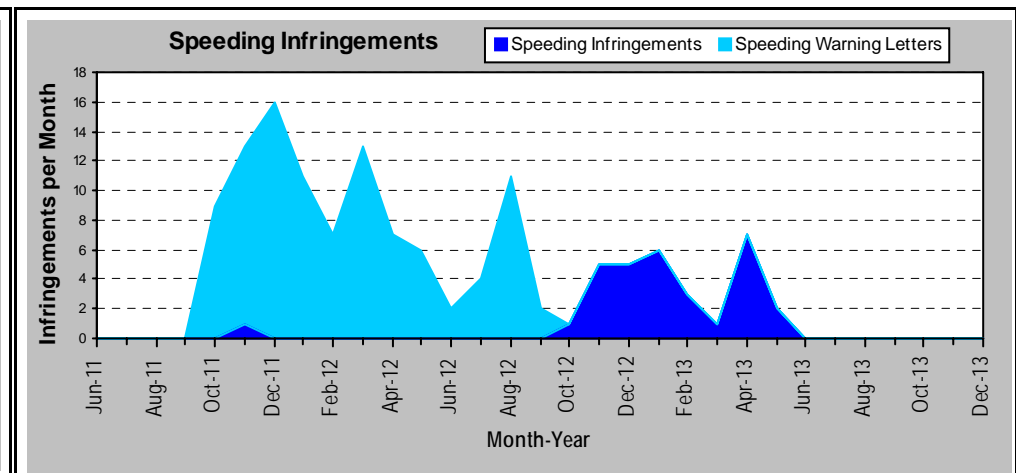
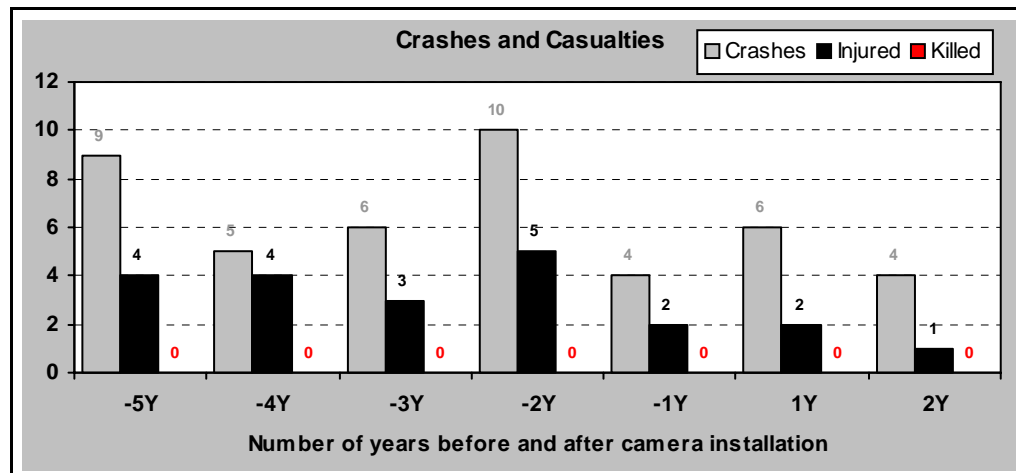
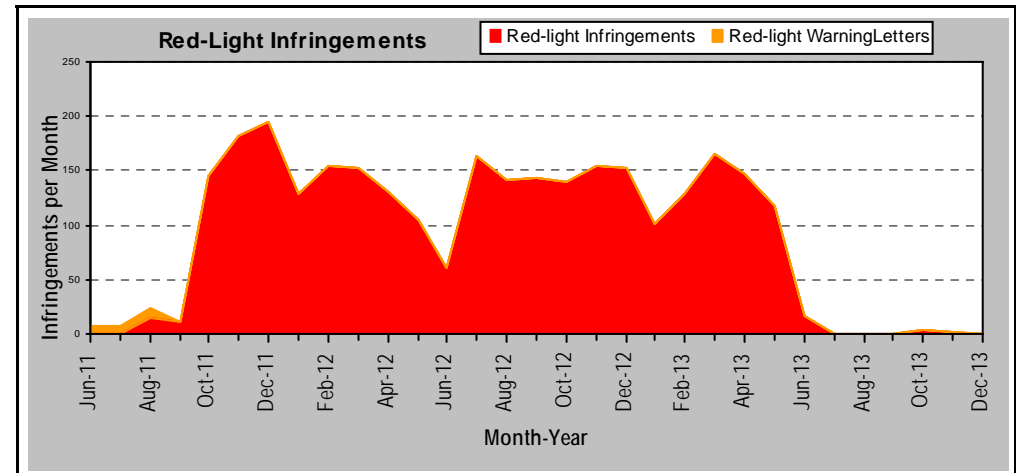
	5 years before installation ¹	2 years and 187 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	18	6	34%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	34	13	24%
<i>Adjacent Crashes</i>	1	1	+99%
<i>Right Through Crashes</i>	10	5	0%
<i>Rear End Crashes</i>	15	3	60%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Blacktown - Bungarribee Road at Balmoral Street

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Bungarribee Road and Balmoral Street commenced issuing warning letters in September 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

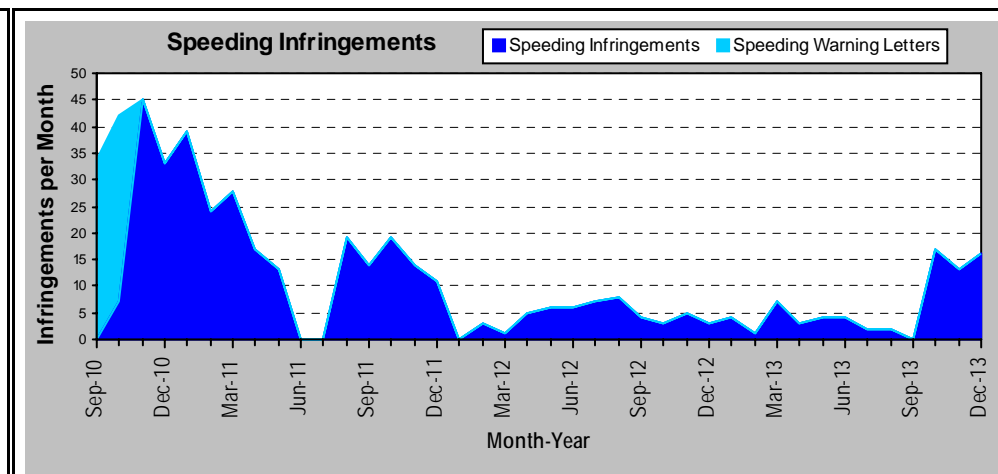
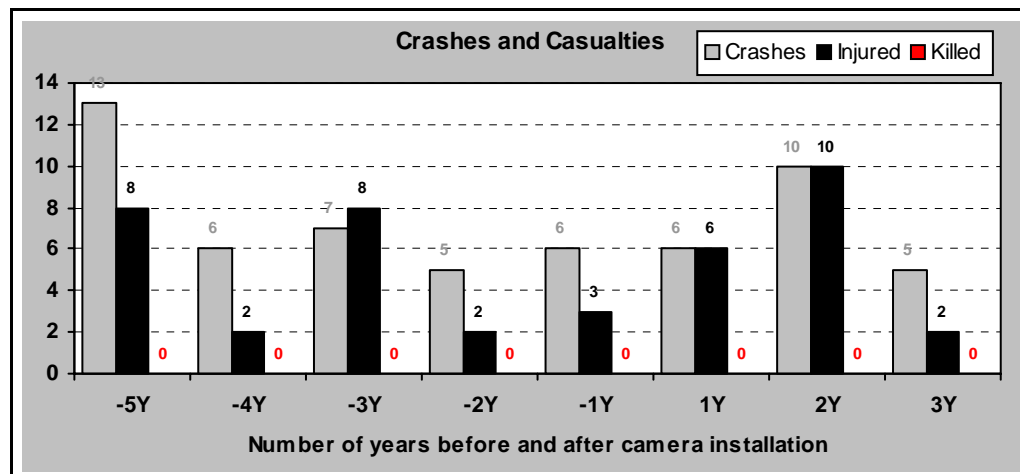
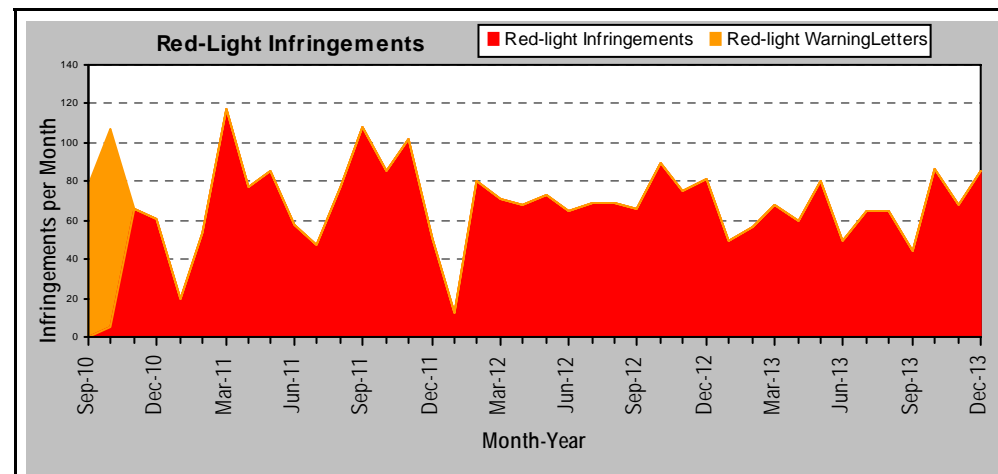
	5 years before installation ¹	3 years and 111 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	23	18	+18%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	37	22	10%
<i>Adjacent Crashes</i>	7	2	57%
<i>Right Through Crashes</i>	12	9	+14%
<i>Rear End Crashes</i>	11	10	+38%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Blacktown - Great Western Highway at Reservoir Road

- 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 Highway and Reservoir Road 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

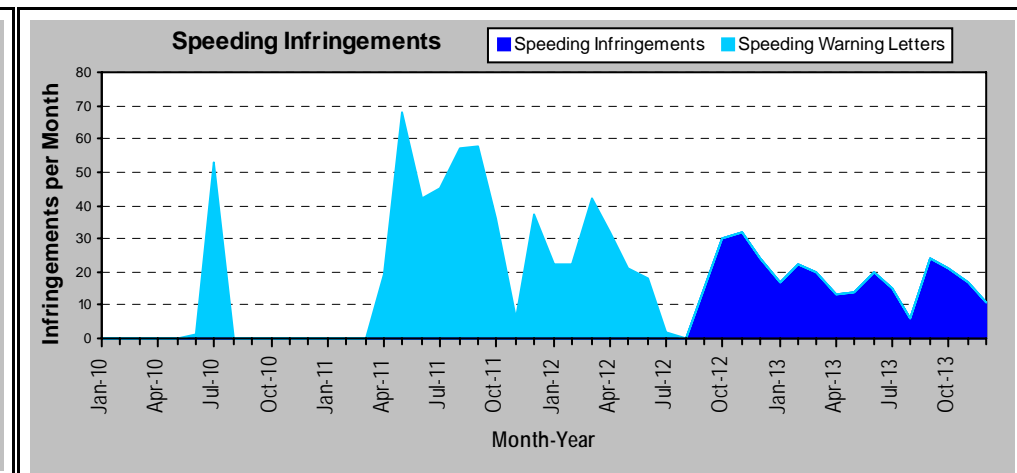
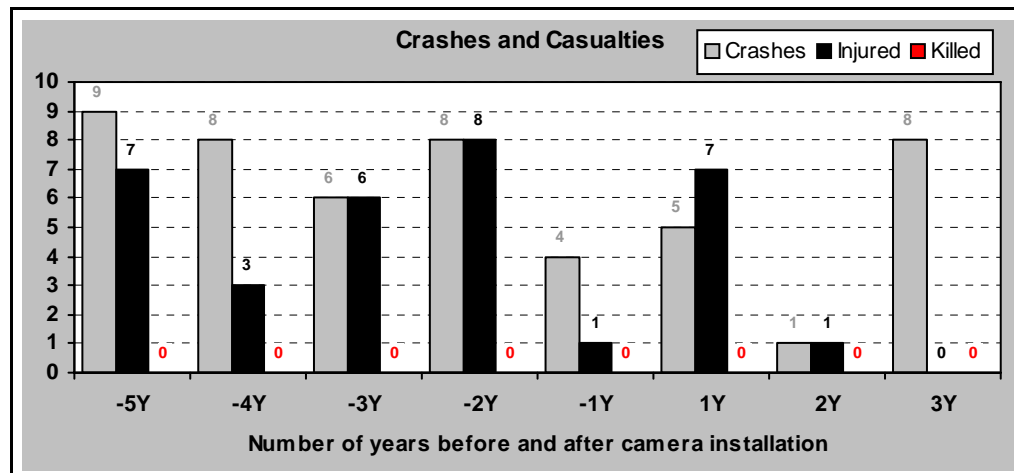
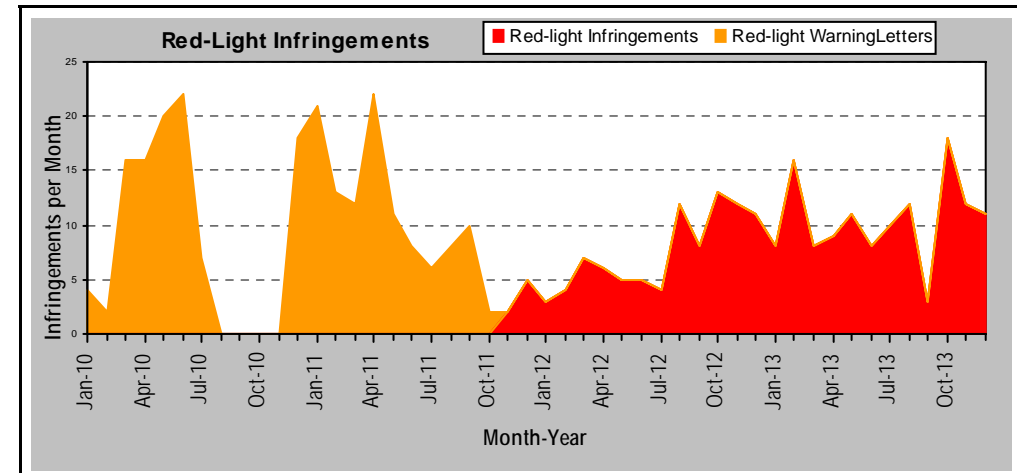
	5 years before installation ¹	3 years and 18 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	25	8	48%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	35	14	34%
<i>Adjacent Crashes</i>	6	1	73%
<i>Right Through Crashes</i>	7	2	53%
<i>Rear End Crashes</i>	8	3	38%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Blacktown - Lancaster Street at Kildare Street (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 Street and Kildare Road 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

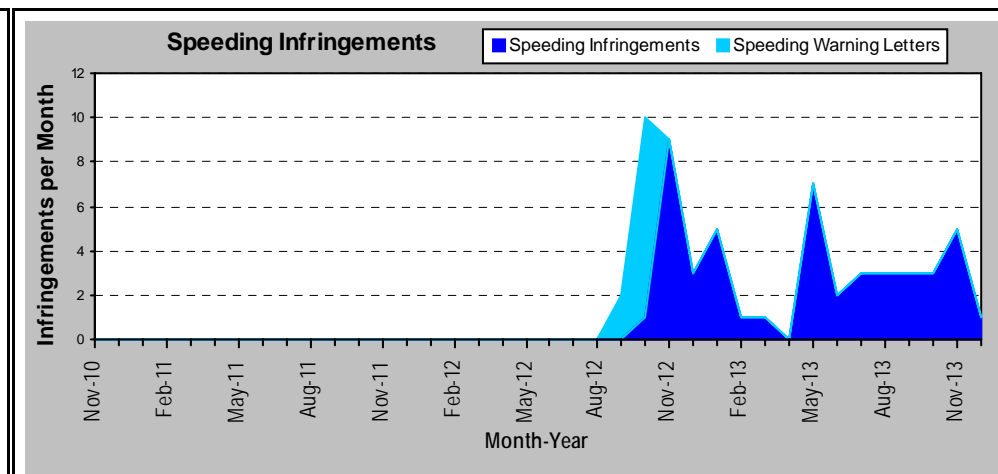
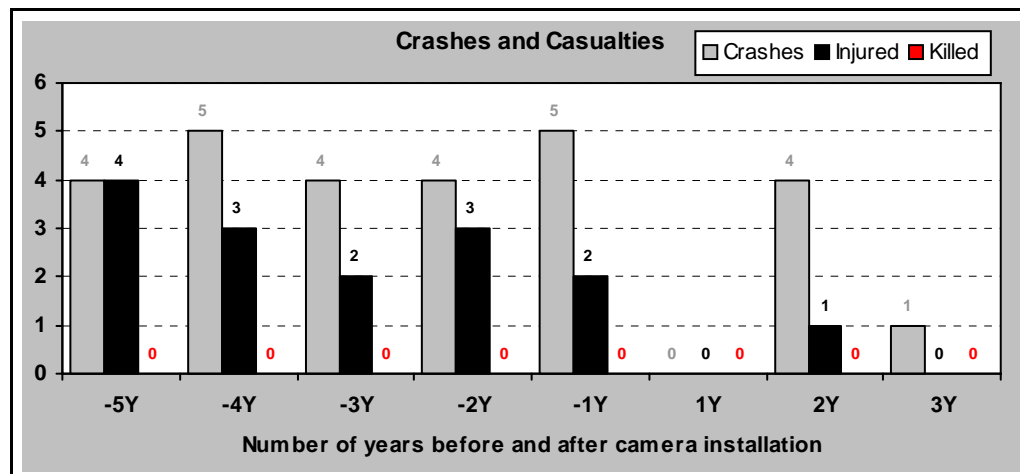
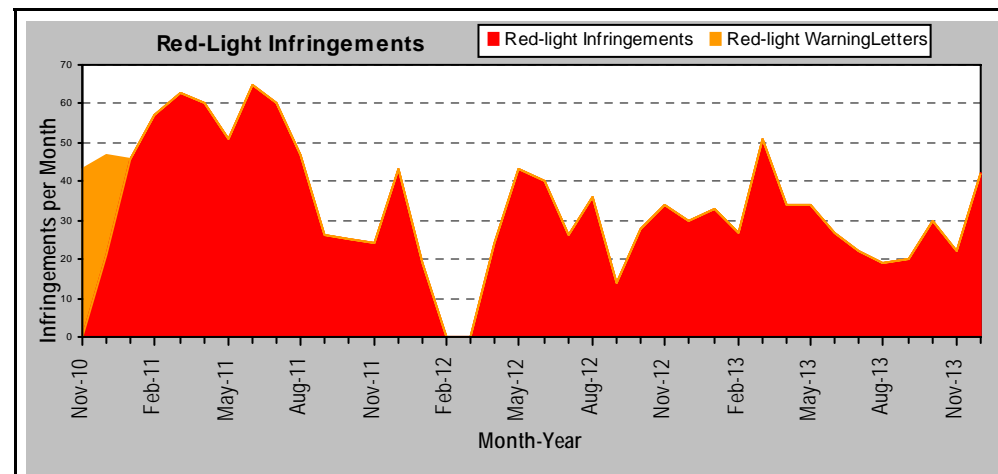
	5 years before installation ¹	3 years and 52 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	14	1	89%
<i>Pedestrian Casualties</i>	2	0	100%
Crashes	22	5	64%
<i>Adjacent Crashes</i>	7	1	77%
<i>Right Through Crashes</i>	6	2	47%
<i>Rear End Crashes</i>	4	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Blacktown - Newton Road at Flushcombe Road (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 Road and Flushcombe Road commenced issuing warning letters in October 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

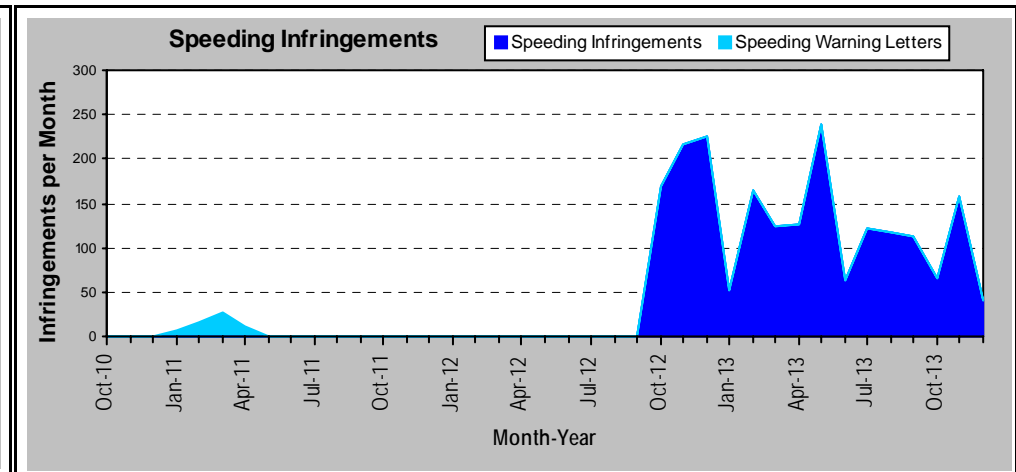
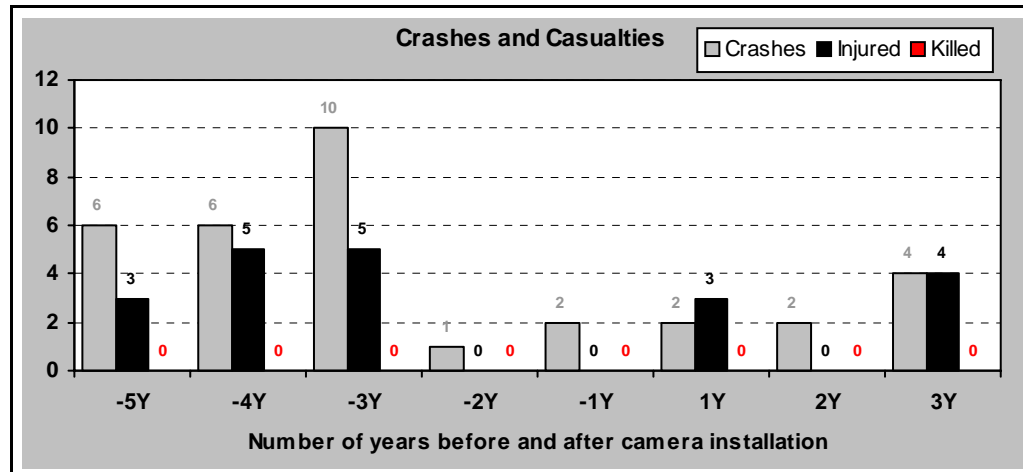
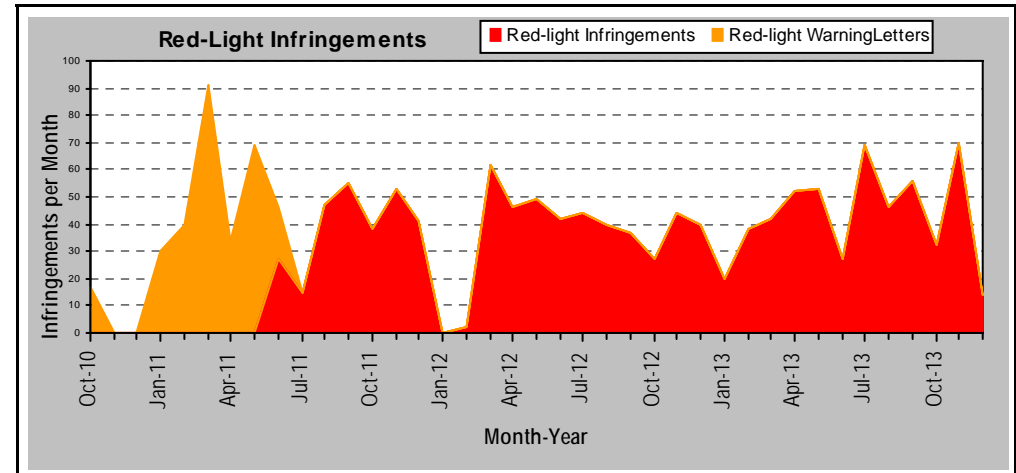
	5 years before installation ¹	3 years and 87 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	13	7	17%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	25	8	51%
<i>Adjacent Crashes</i>	6	3	23%
<i>Right Through Crashes</i>	11	2	72%
<i>Rear End Crashes</i>	5	2	38%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Blacktown - Sunnyholt Road at Main Street

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Sunnyholt Road and Main 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

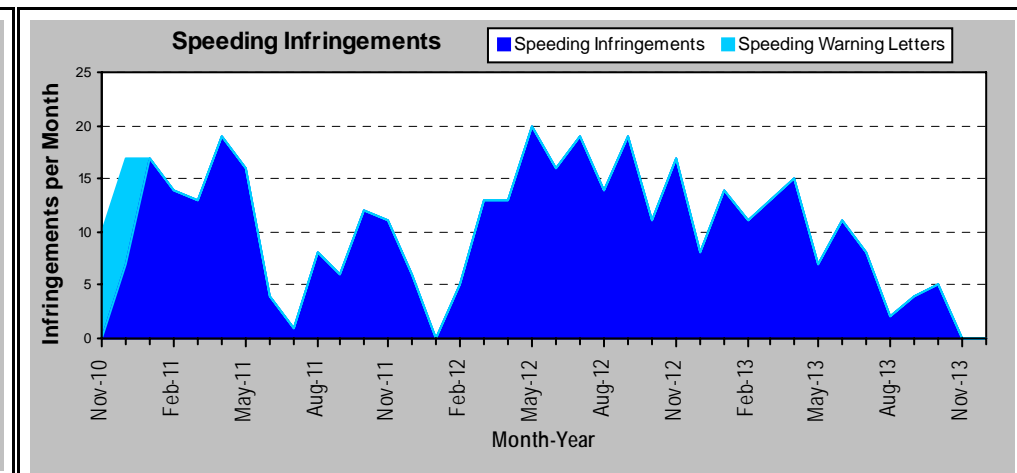
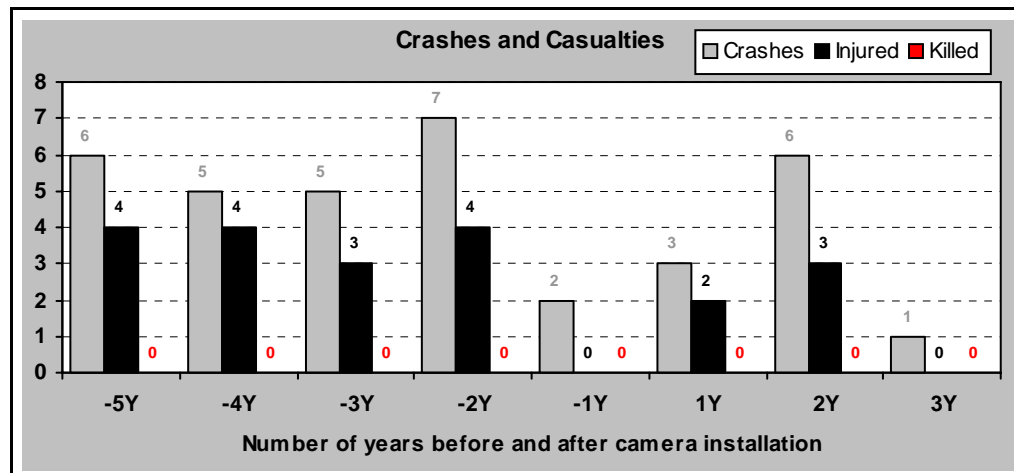
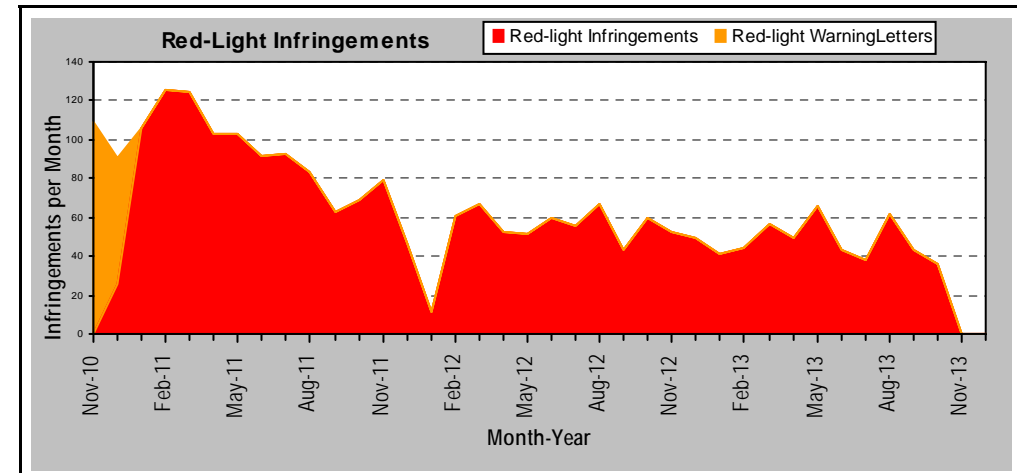
	5 years before installation ¹	3 years and 52 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	15	7	26%
<i>Pedestrian Casualties</i>	8	1	80%
Crashes	25	11	30%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	3	2	+6%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Bondi Junction - Old South Head Road at Bondi Road

- 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 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

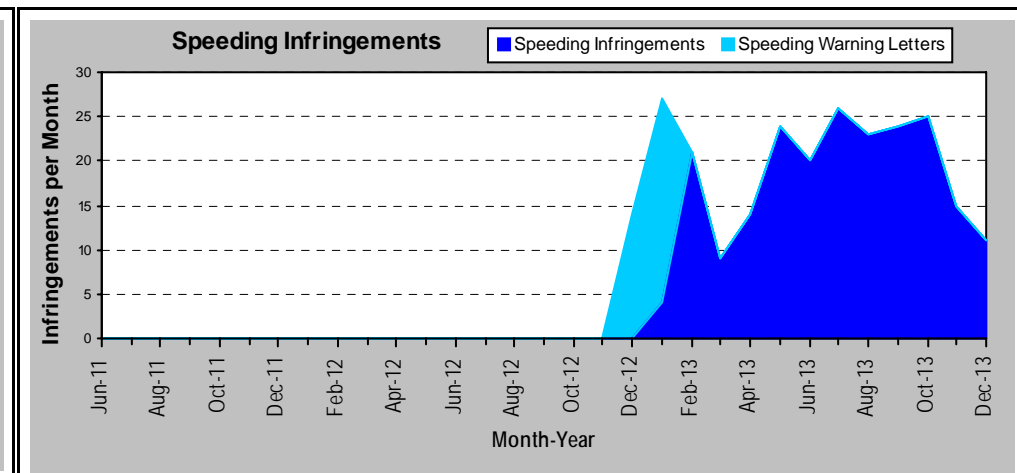
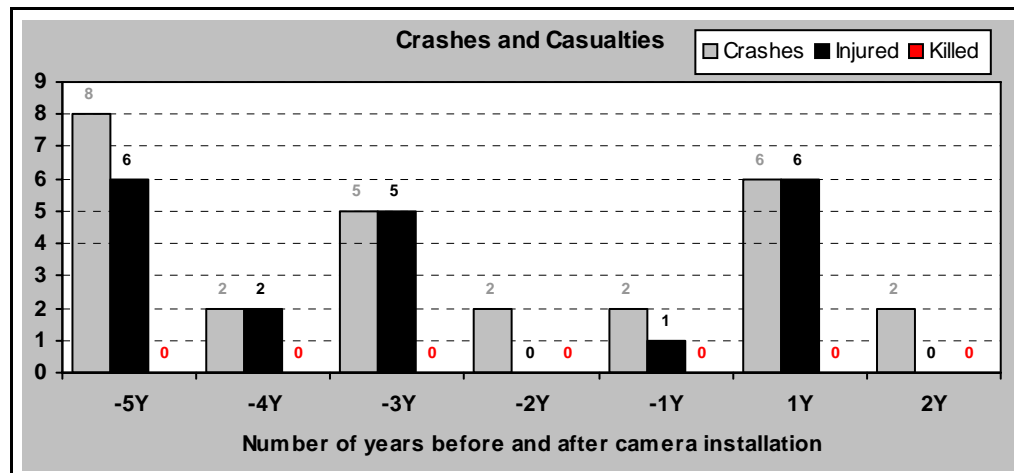
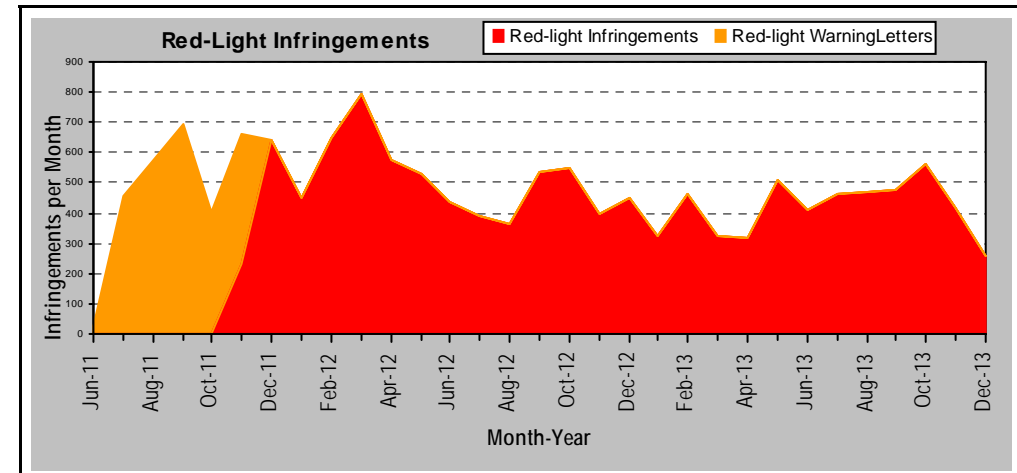
	5 years before installation ¹	2 years and 189 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	14	6	15%
<i>Pedestrian Casualties</i>	2	0	100%
Crashes	19	9	6%
<i>Adjacent Crashes</i>	7	2	43%
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	3	3	+99%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Bradbury - Moore Oxley Bypass at The Parkway

- There is one camera at this intersection.
- The camera at the intersection of Moore Oxley Bypass and The Parkway commenced issuing warning letters in October 2013.
- A longer period of time is required to assess 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

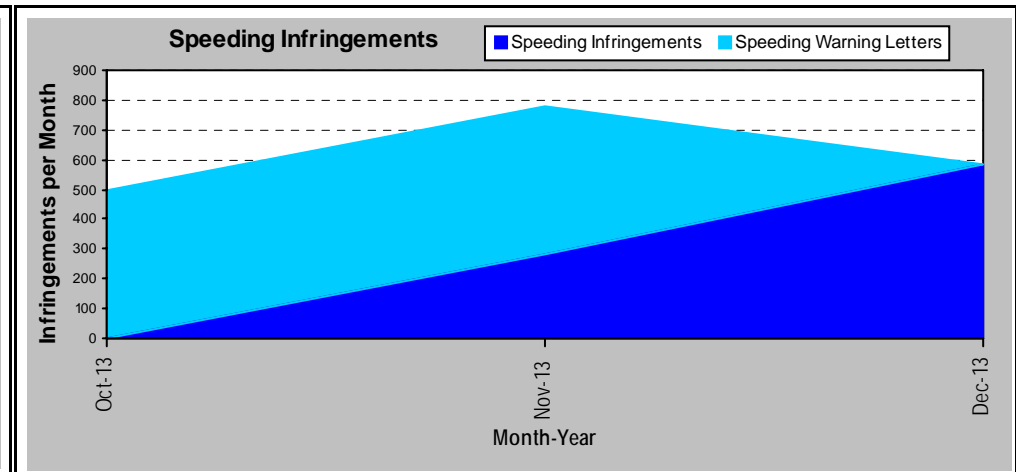
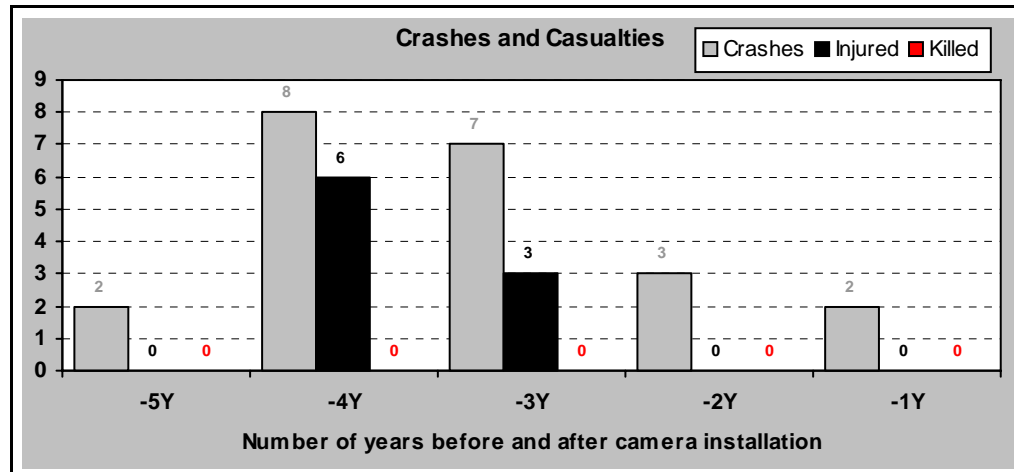
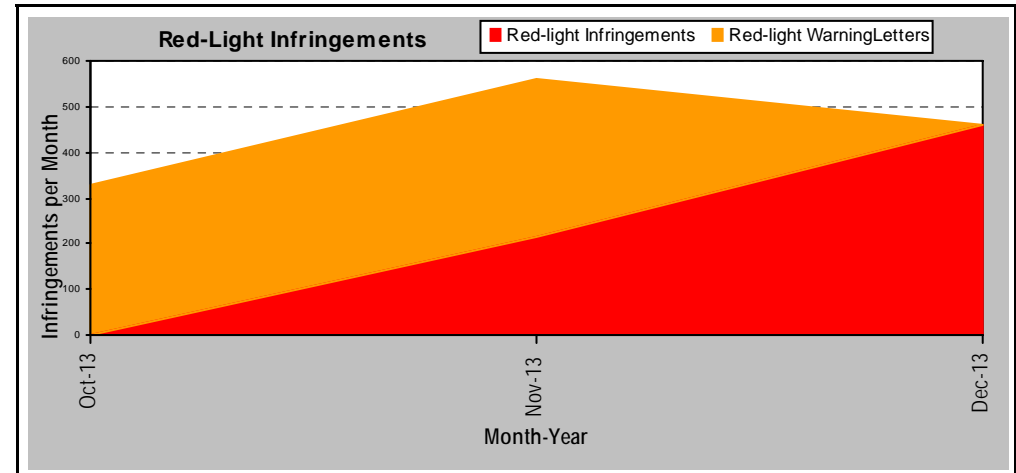
	5 years before installation ¹	75 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	9	2	+441%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	22	4	+343%
<i>Adjacent Crashes</i>	8	0	100%
<i>Right Through Crashes</i>	6	1	+306%
<i>Rear End Crashes</i>	5	3	+1361%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Burwood / Concord - Parramatta Road at Burwood Road

- There are two cameras at this intersection.
- Both cameras at the intersection of Parramatta Road and Burwood Road 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

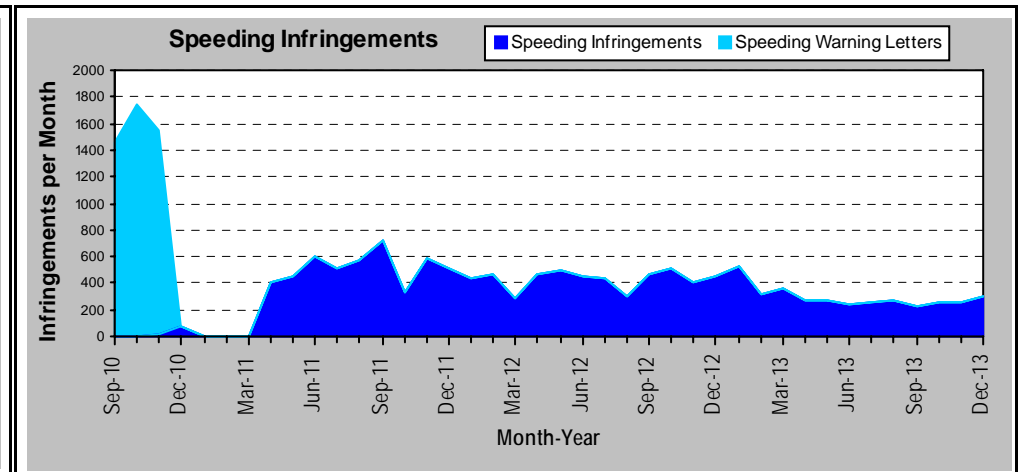
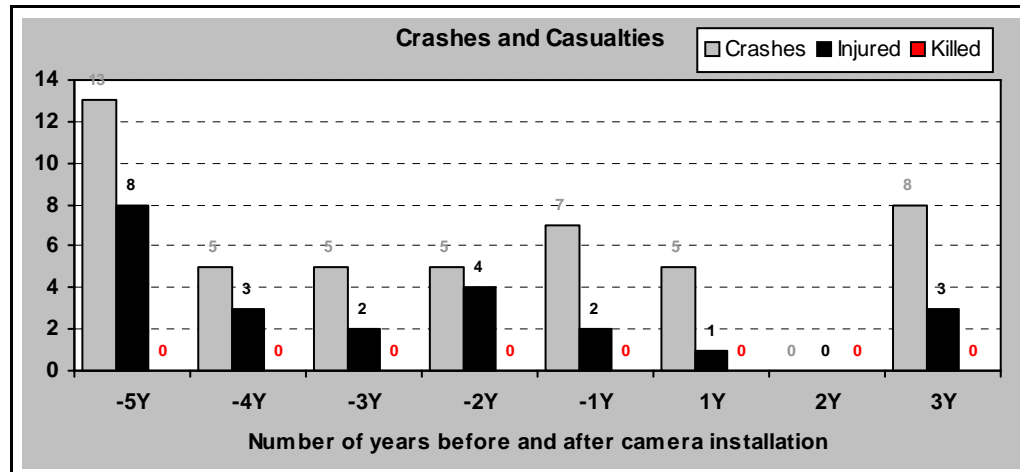
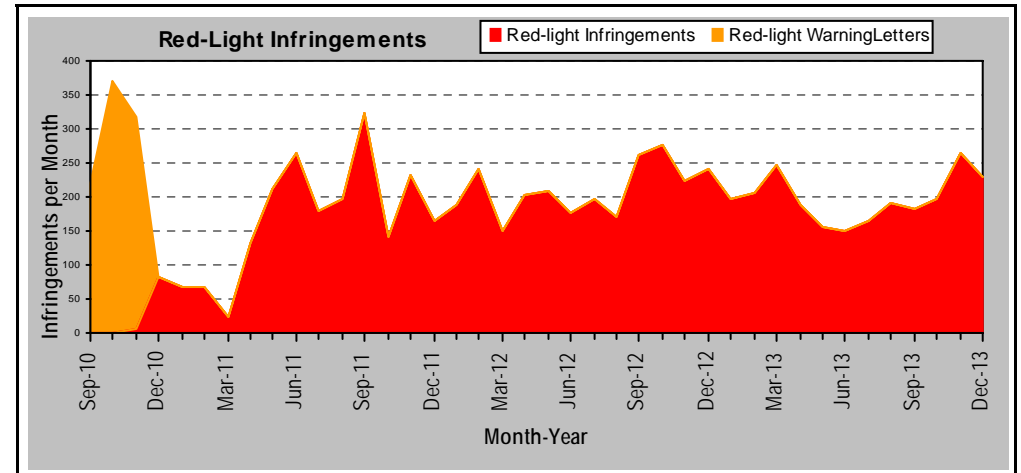
	5 years before installation ¹	3 years and 118 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	19	4	68%
<i>Pedestrian Casualties</i>	3	0	100%
Crashes	35	14	40%
<i>Adjacent Crashes</i>	9	0	100%
<i>Right Through Crashes</i>	1	0	100%
<i>Rear End Crashes</i>	15	9	10%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Cabramatta - Cumberland Highway at Cabramatta Road 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 Highway and Cabramatta Road West commenced issuing warning letters in June 2010.
- While early results indicate a slight increase in casualties and 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

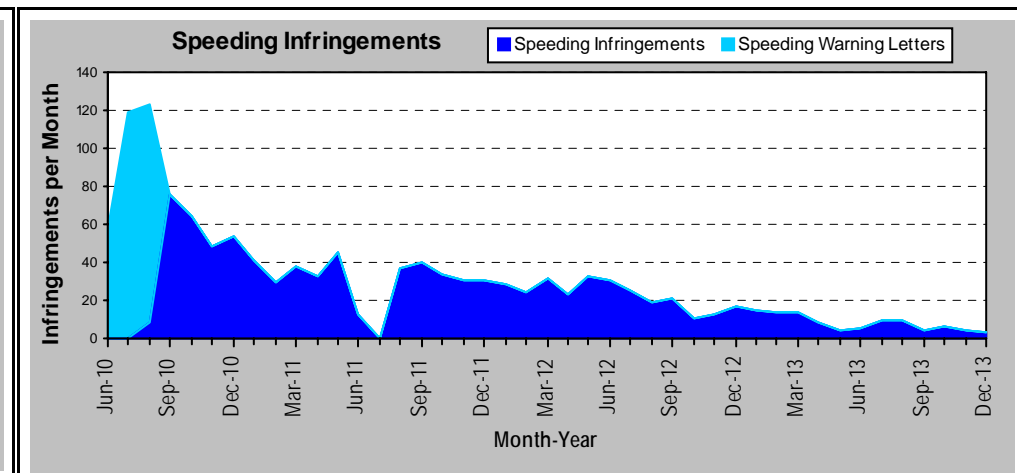
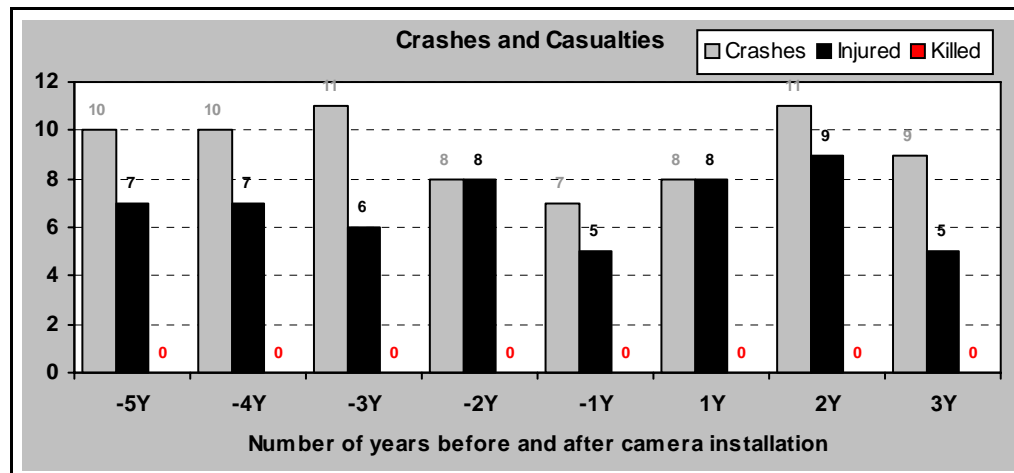
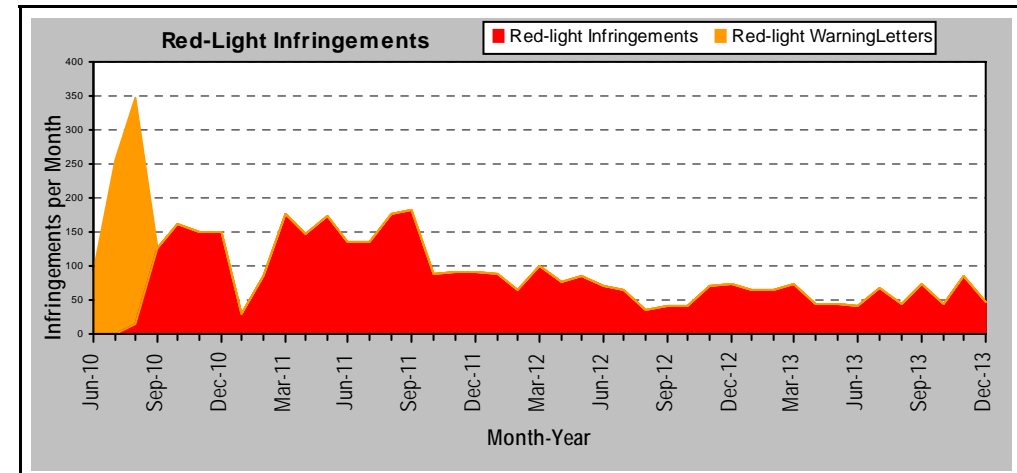
	5 years before installation ¹	3 years and 192 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	33	26	+12%
<i>Pedestrian Casualties</i>	2	0	100%
Crashes	46	34	+5%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	19	12	10%
<i>Rear End Crashes</i>	15	18	+70%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Cabramatta - Cumberland Highway at St Johns Road

- 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 St Johns Road 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

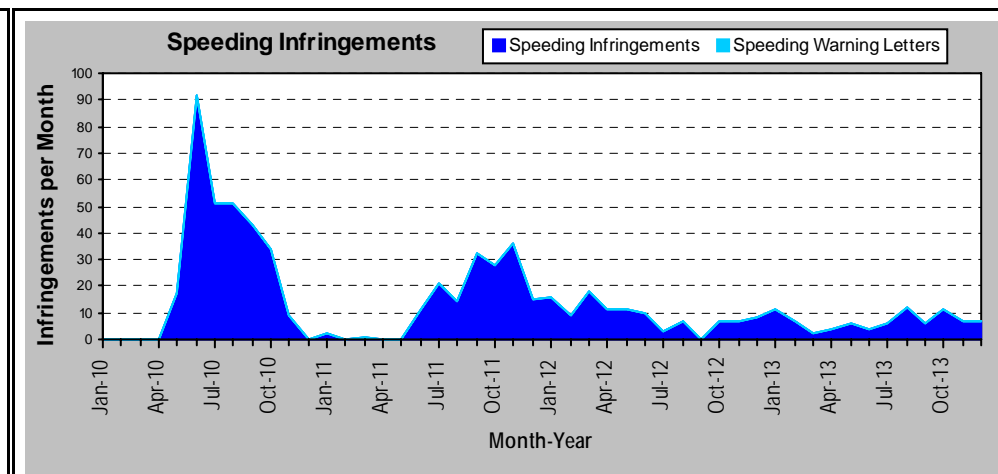
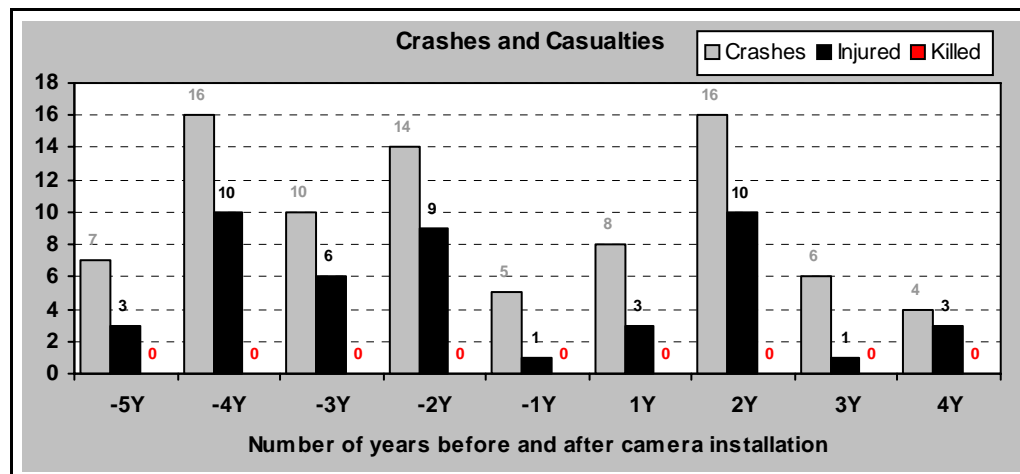
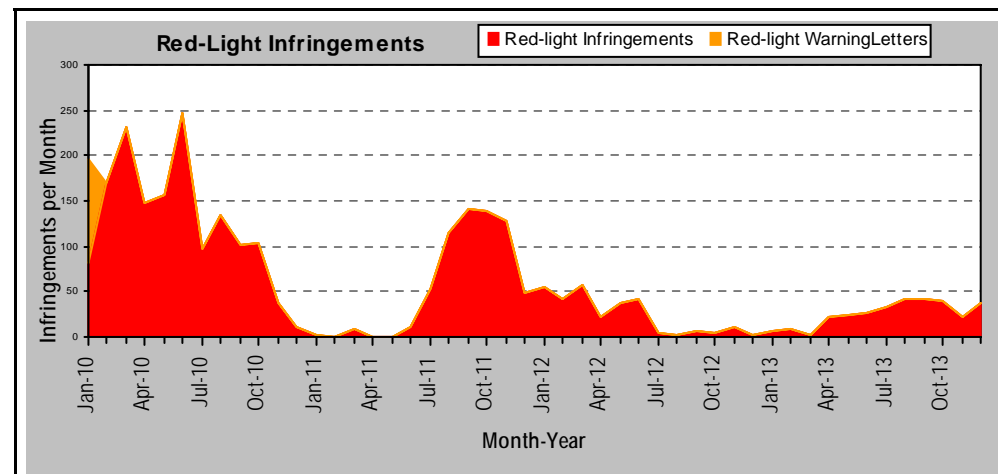
	5 years before installation ¹	4 years and 15 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	29	17	27%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	52	34	19%
<i>Adjacent Crashes</i>	4	2	38%
<i>Right Through Crashes</i>	19	5	67%
<i>Rear End Crashes</i>	20	20	+24%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Campbelltown - Kellicar Road at Narellan Road

- There are two cameras at this intersection.
- Both cameras at the intersection of Kellicar Road and Narellan Road 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 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

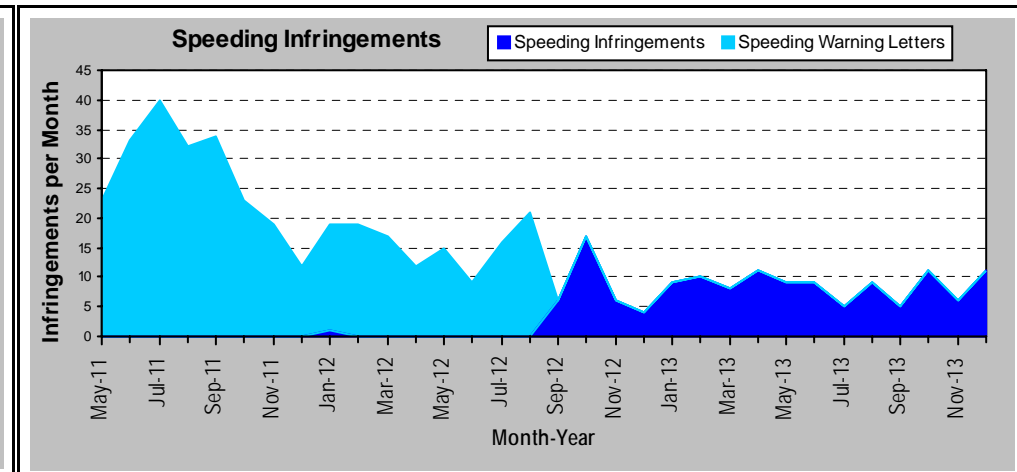
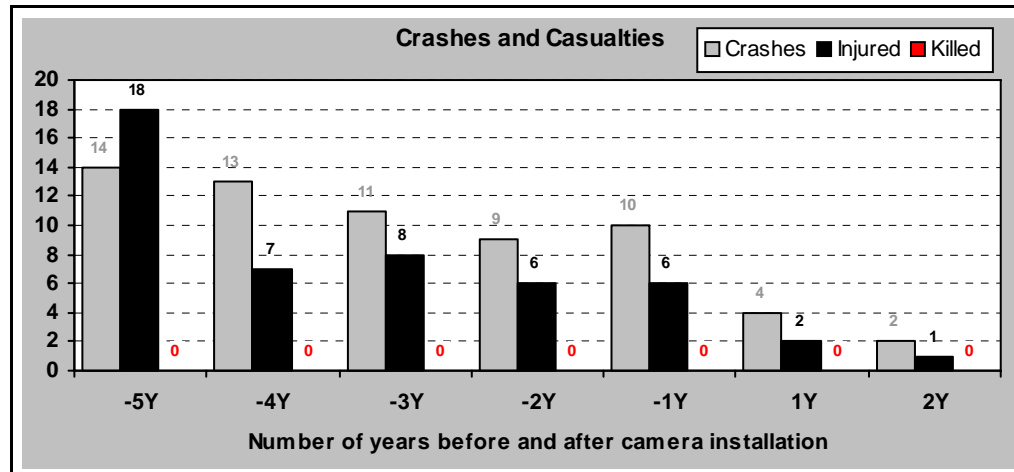
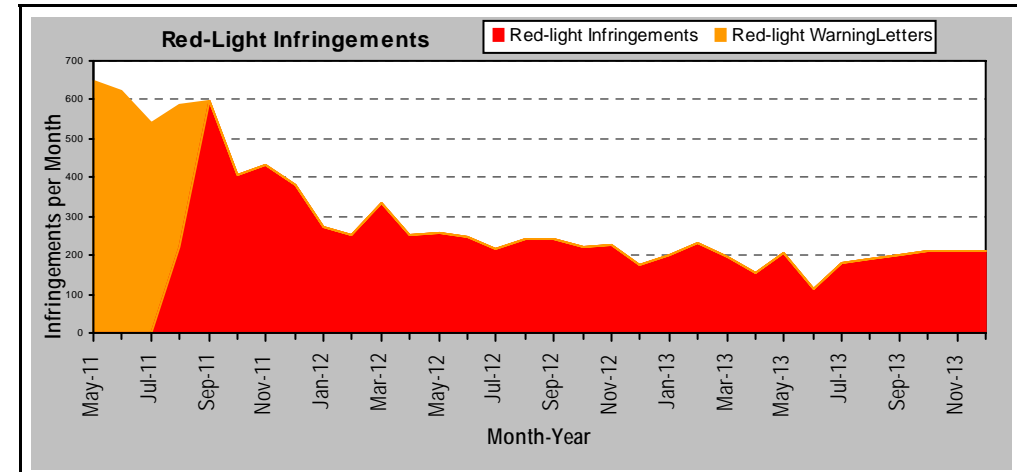
	5 years before installation ¹	2 years and 238 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	45	3	87%
<i>Pedestrian Casualties</i>	6	0	100%
Crashes	57	9	70%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	19	2	80%
<i>Rear End Crashes</i>	12	5	21%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Campbelltown - Moore-Oxley Bypass at Broughton Street

- 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 Street commenced issuing warning letters in June 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

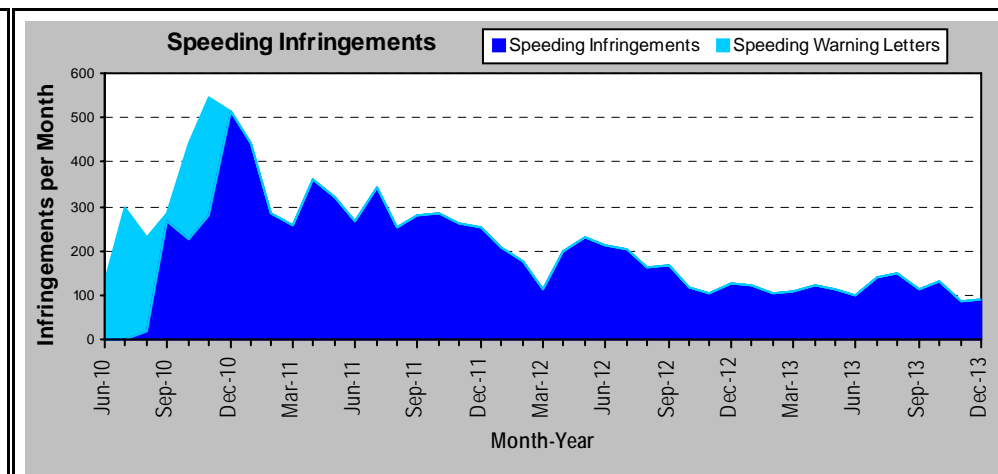
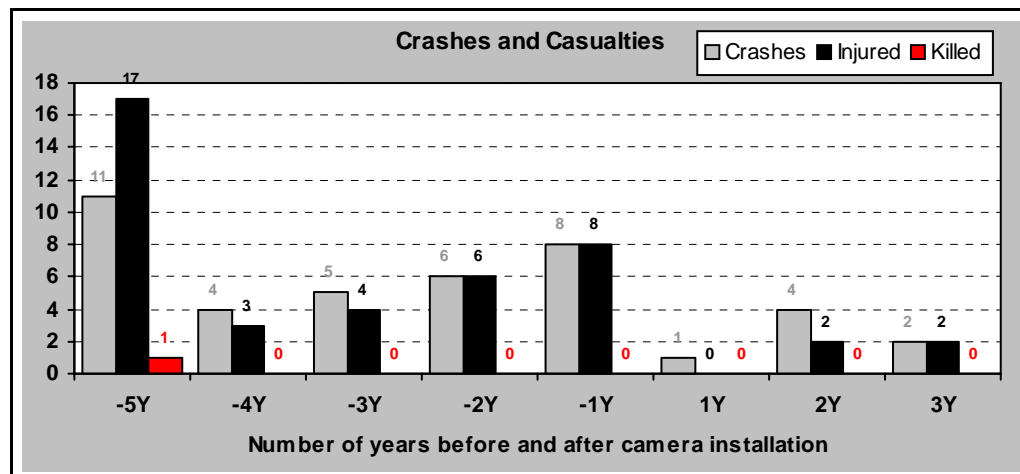
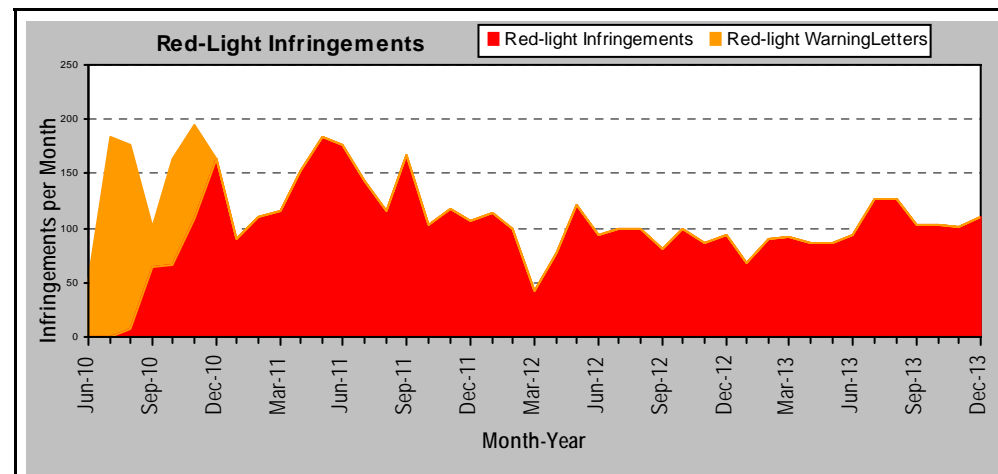
	5 years before installation ¹	3 years and 192 days after installation ²	Percentage reduction ³
Fatalities	1	0	100%
Injuries	38	5	81%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	34	8	67%
<i>Adjacent Crashes</i>	8	1	82%
<i>Right Through Crashes</i>	16	5	56%
<i>Rear End Crashes</i>	9	2	68%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Campsie - Canterbury Road at Bexley Road

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Canterbury Road and Bexley Road 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

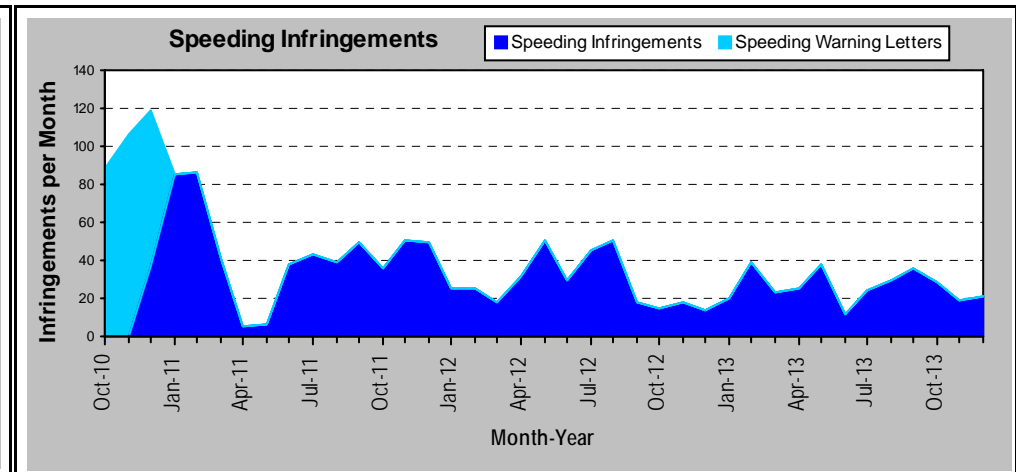
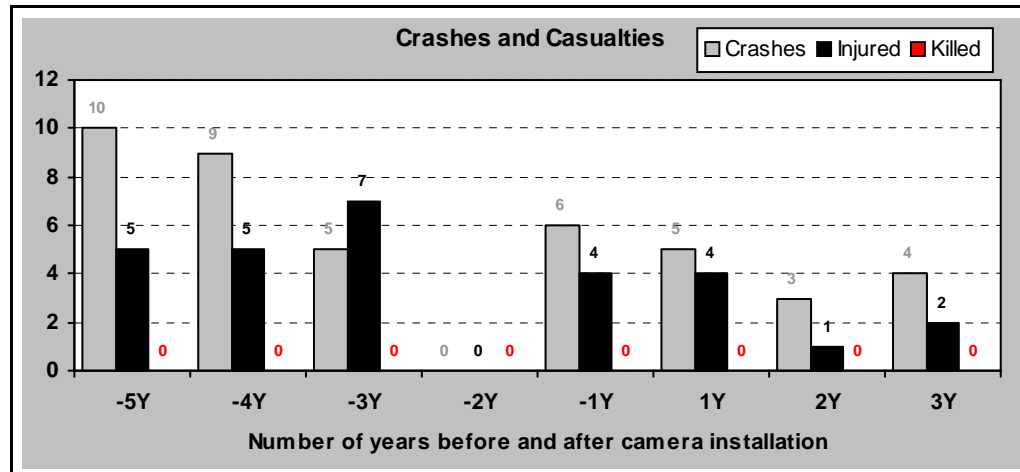
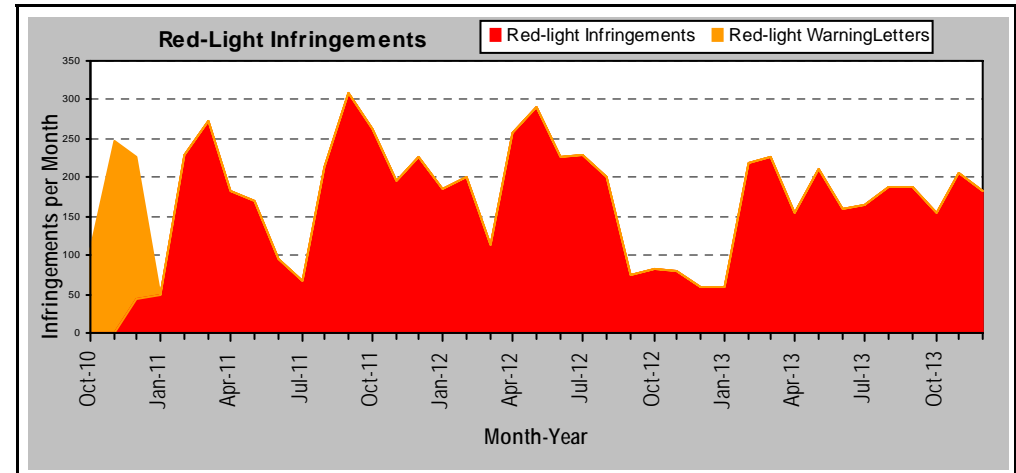
	5 years before installation ¹	3 years and 79 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	21	8	41%
<i>Pedestrian Casualties</i>	1	2	+211%
Crashes	30	14	27%
<i>Adjacent Crashes</i>	4	1	61%
<i>Right Through Crashes</i>	9	5	14%
<i>Rear End Crashes</i>	6	3	22%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Campsie - Canterbury Road at Thorncraft Parade

- There is one camera at this intersection.
- The camera at the intersection of Canterbury Road and Thorncraft Parade commenced issuing warning letters in April 2013.
- 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

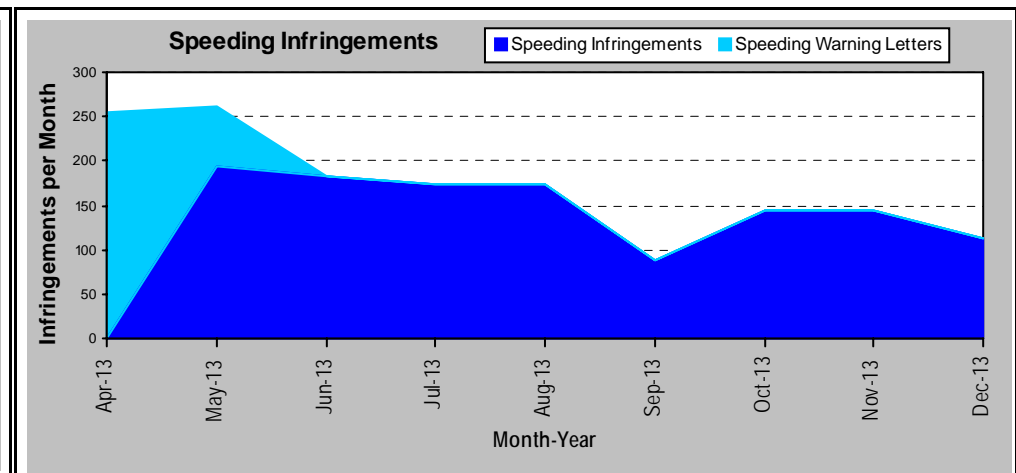
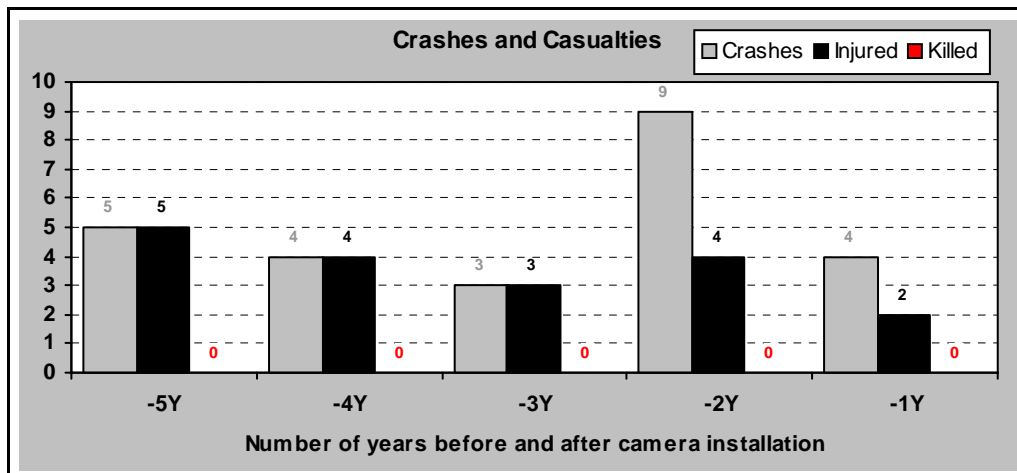
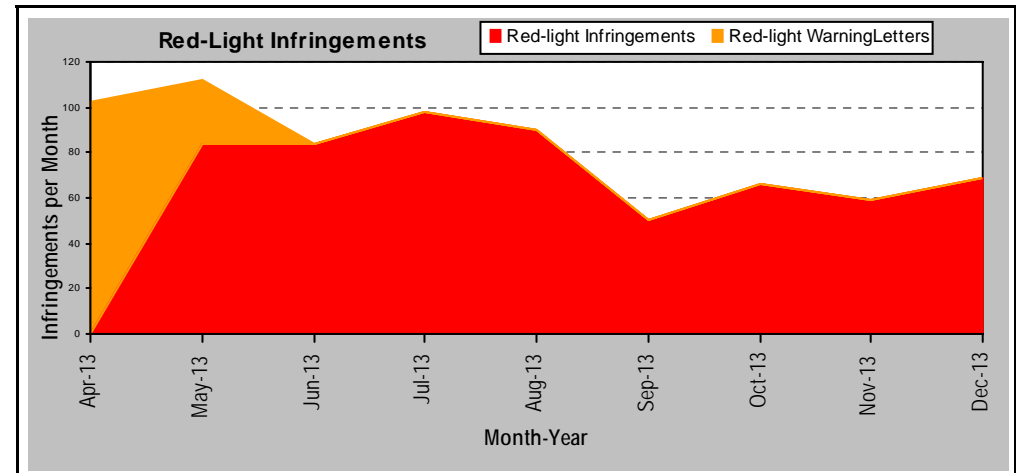
	5 years before installation ¹	270 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	18	2	25%
<i>Pedestrian Casualties</i>	3	1	+125%
Crashes	25	4	+8%
<i>Adjacent Crashes</i>	10	1	32%
<i>Right Through Crashes</i>	7	1	3%
<i>Rear End Crashes</i>	3	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Canley Vale - Sackville Street at Canley Vale Road

- 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 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

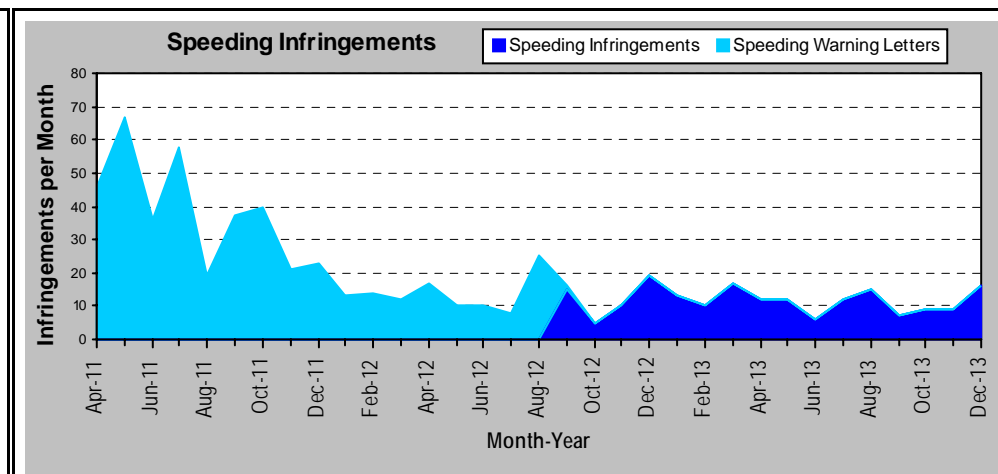
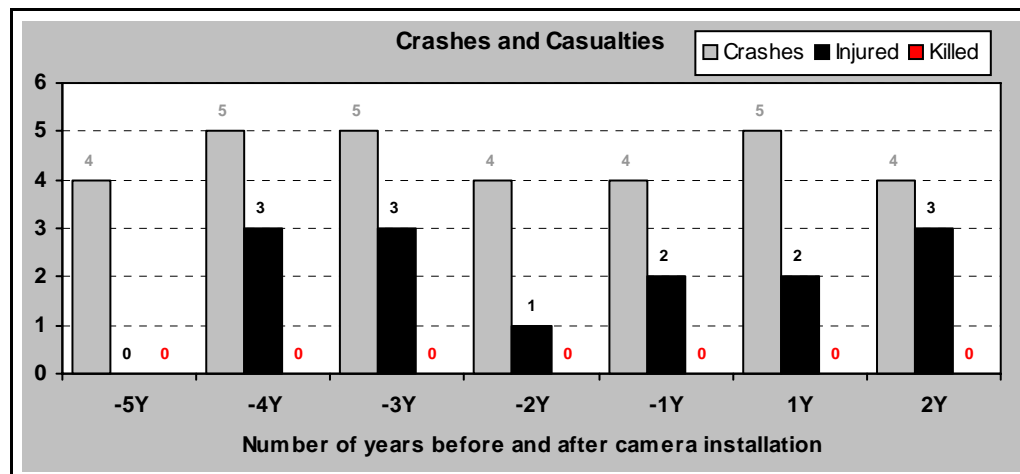
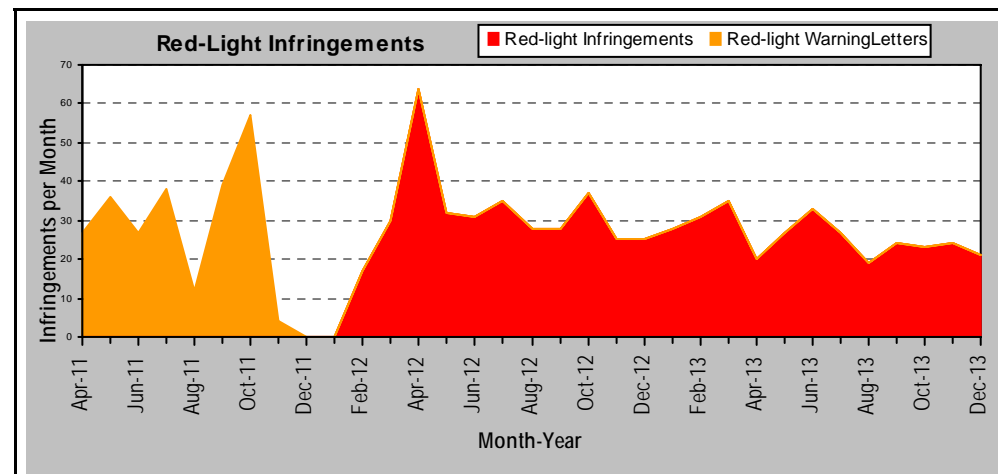
	5 years before installation ¹	2 years and 269 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	9	5	+2%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	22	12	0%
<i>Adjacent Crashes</i>	7	3	22%
<i>Right Through Crashes</i>	8	4	9%
<i>Rear End Crashes</i>	4	3	+37%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Caringbah - The Kingsway at Gannons Road

- 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 Road 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 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

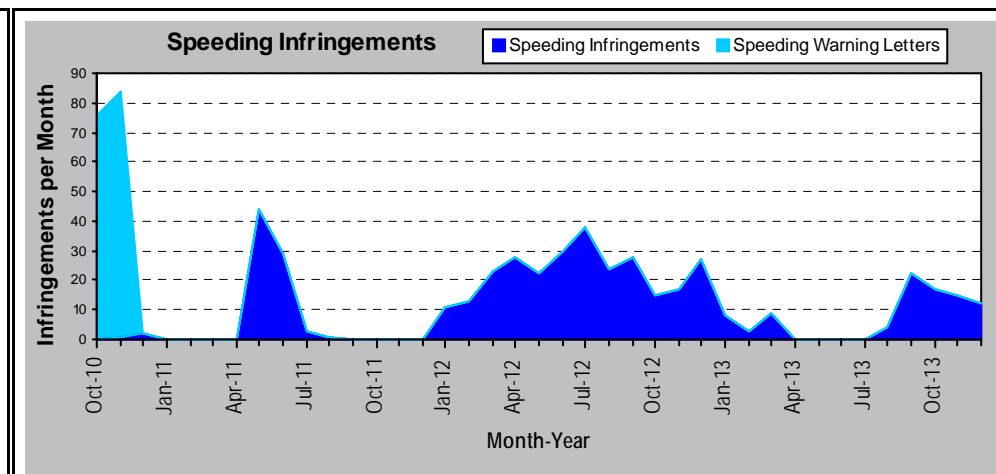
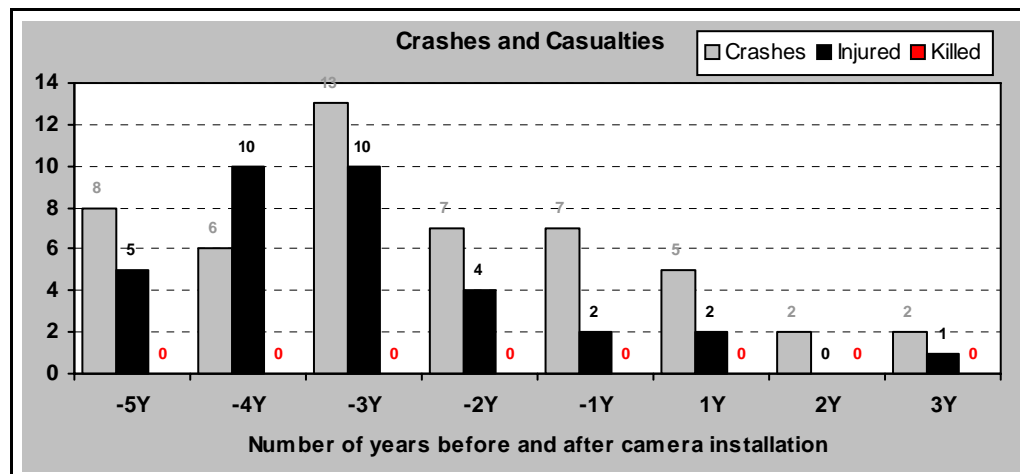
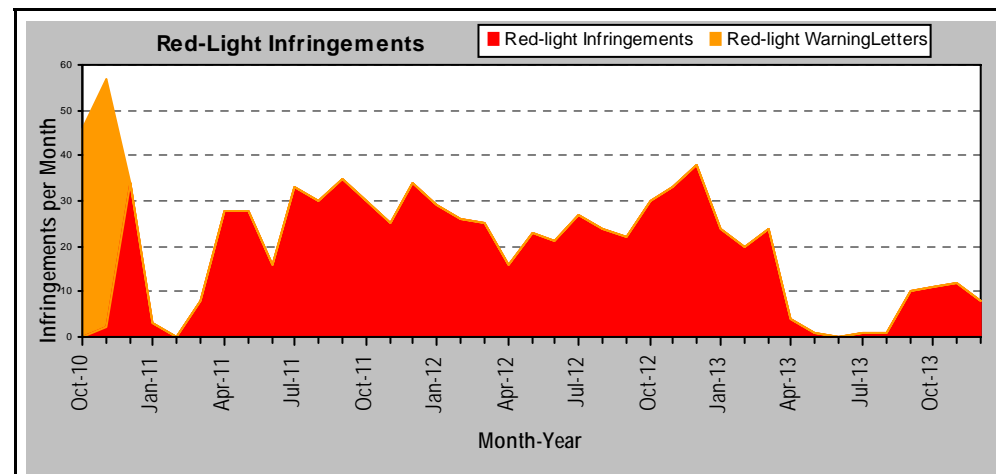
	5 years before installation ¹	3 years and 95 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	31	3	85%
<i>Pedestrian Casualties</i>	3	1	49%
Crashes	41	10	63%
<i>Adjacent Crashes</i>	10	0	100%
<i>Right Through Crashes</i>	18	5	57%
<i>Rear End Crashes</i>	7	2	56%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Castle Hill - Showground Road at Victoria Avenue

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Showground Road and Victoria Avenue commenced issuing warning letters in February 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

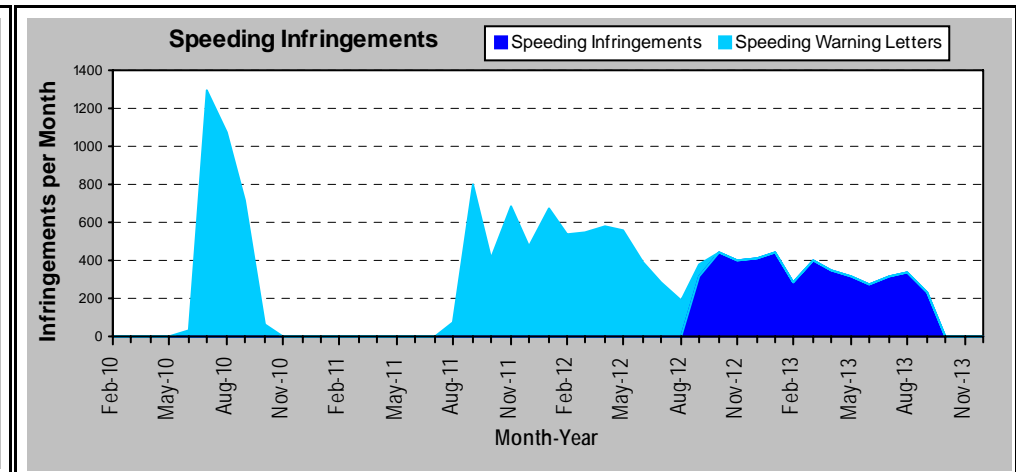
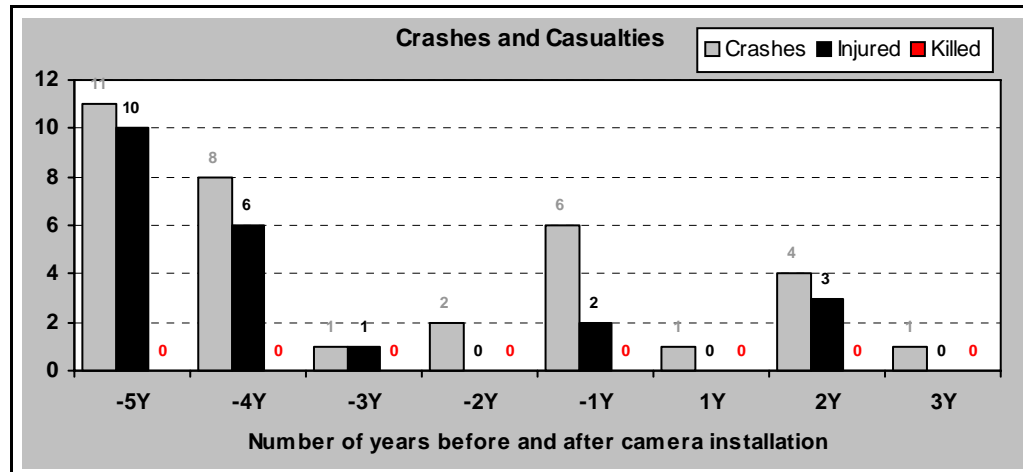
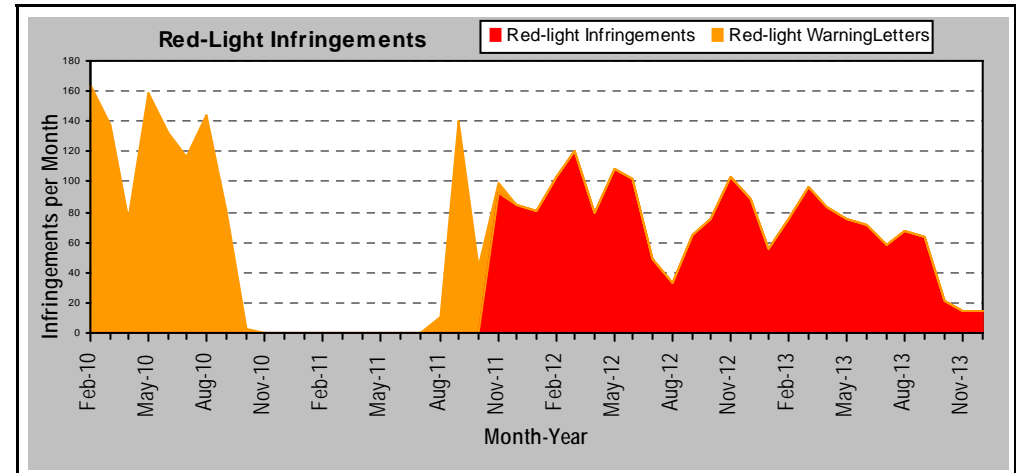
	5 years before installation ¹	3 years and 335 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	19	9	40%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	28	13	41%
<i>Adjacent Crashes</i>	1	1	+28%
<i>Right Through Crashes</i>	10	1	87%
<i>Rear End Crashes</i>	11	8	7%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Chester Hill / Sefton - Waldron Road at Hector Street

- There are two cameras at this intersection.
- The camera at the intersection of Waldron Road and Hector Street commenced issuing warning letters in July 2010.
- The camera at the intersection of Waldron Road and Hector Street 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

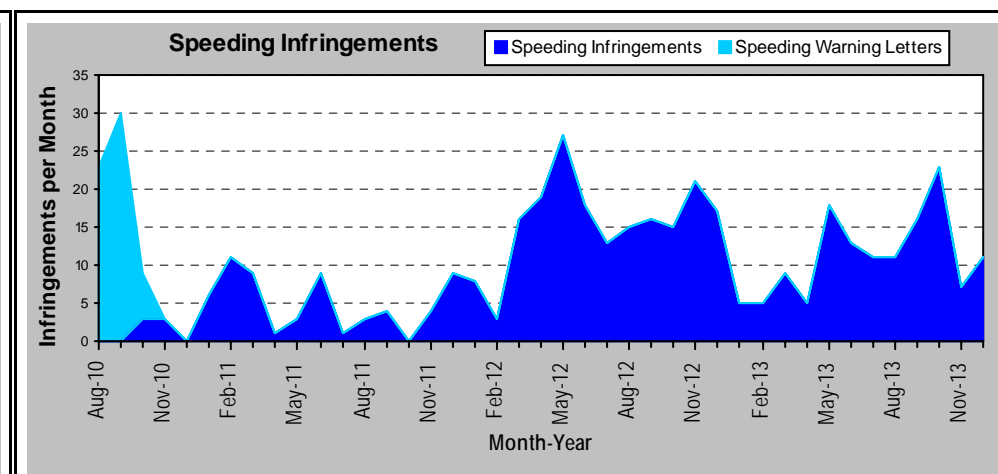
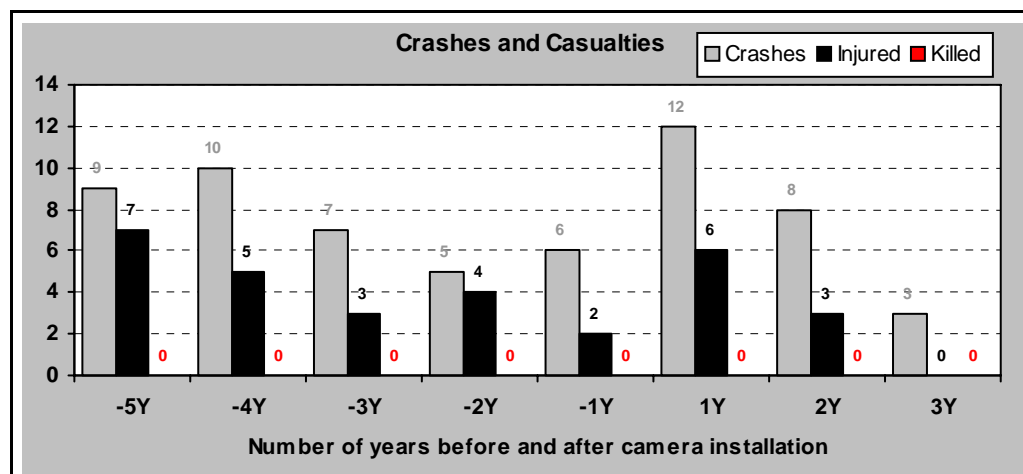
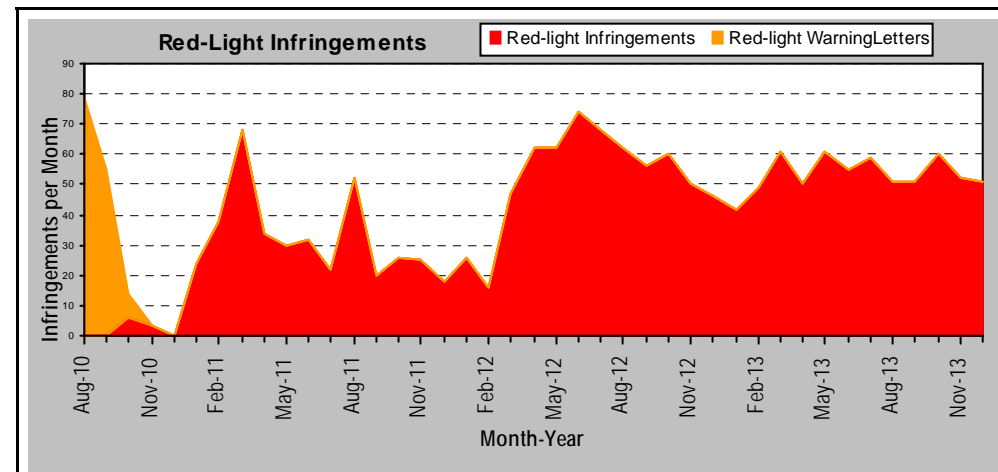
	5 years before installation ¹	3 years and 163 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	21	9	38%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	37	28	+10%
<i>Adjacent Crashes</i>	7	5	+4%
<i>Right Through Crashes</i>	23	18	+14%
<i>Rear End Crashes</i>	3	2	3%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Concord - Broughton Street at Crane Street

- There is one camera at this intersection.
- The camera at the intersection of Broughton Street and Crane Street commenced issuing warning letters in March 2013.
- 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

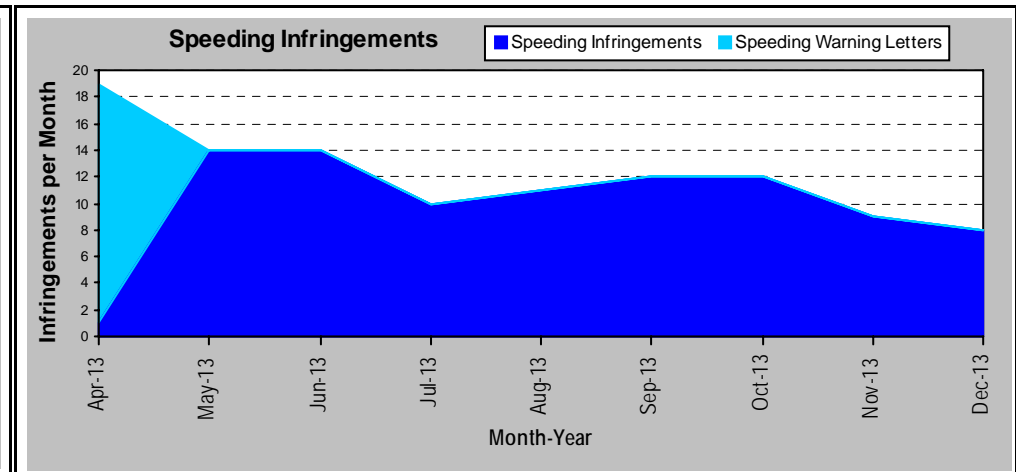
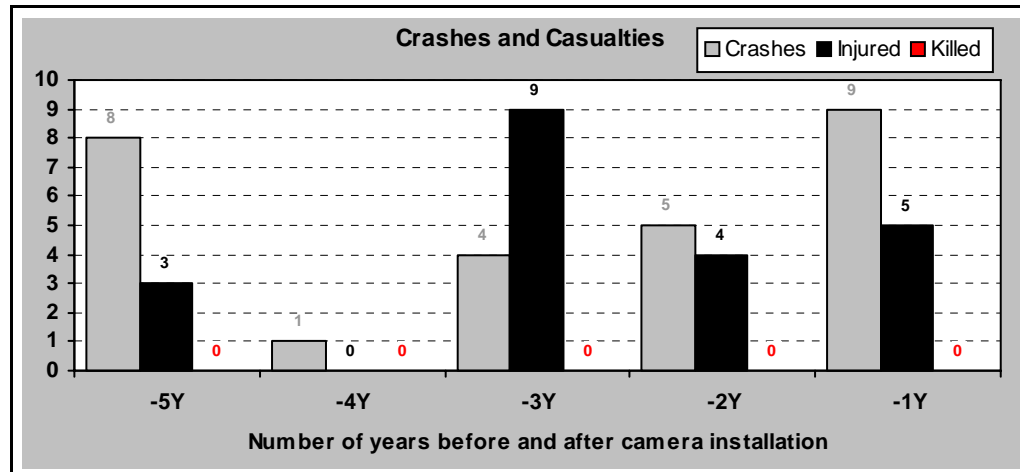
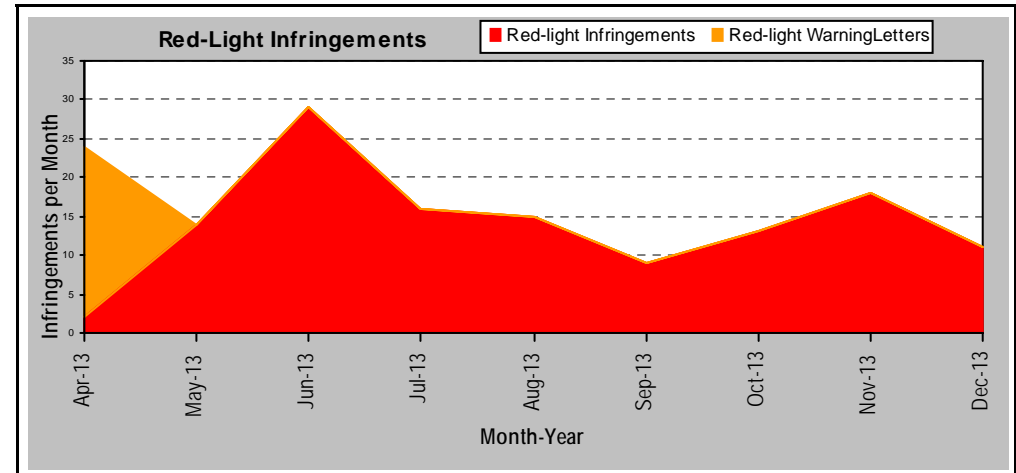
	5 years before installation ¹	278 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	21	1	69%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	27	3	27%
<i>Adjacent Crashes</i>	21	2	37%
<i>Right Through Crashes</i>	1	0	100%
<i>Rear End Crashes</i>	0	0	-

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Crows Nest - Pacific Highway at Hume Street

- 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 casualties and 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. Maintenance of the camera at this intersection was undertaken from March 2013 to September 2013. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

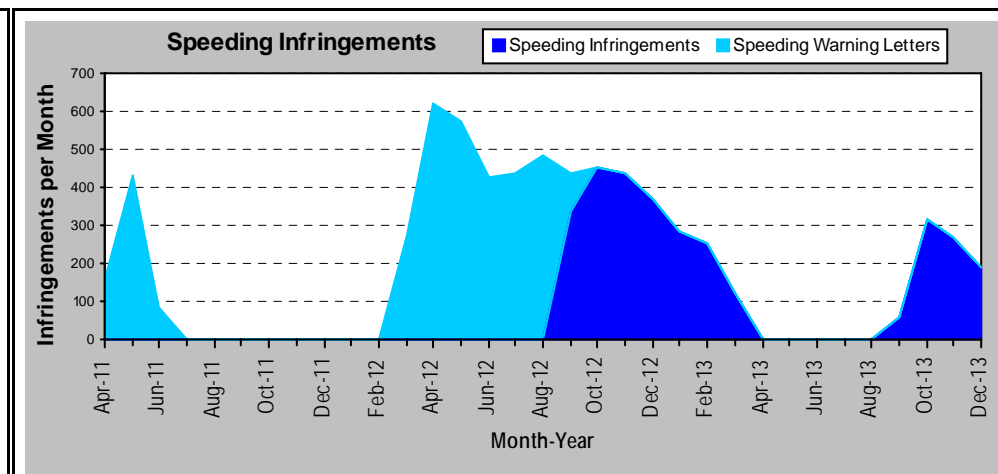
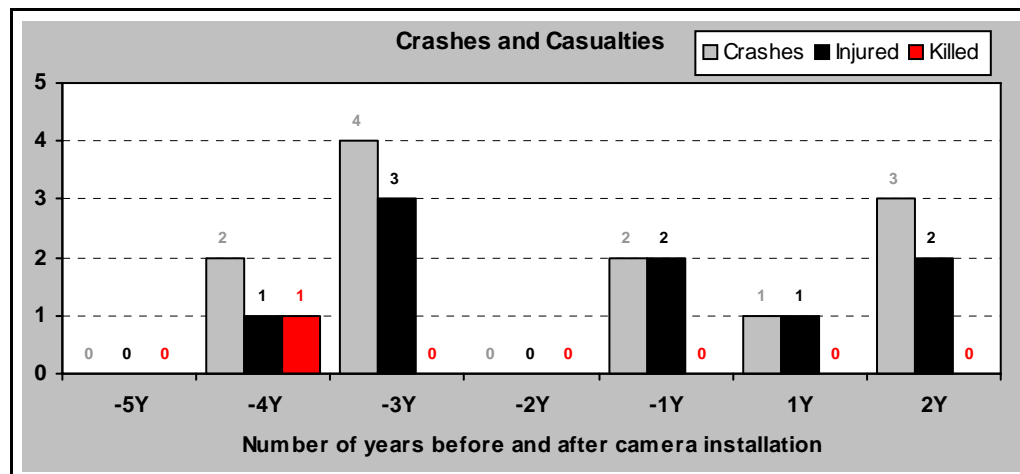
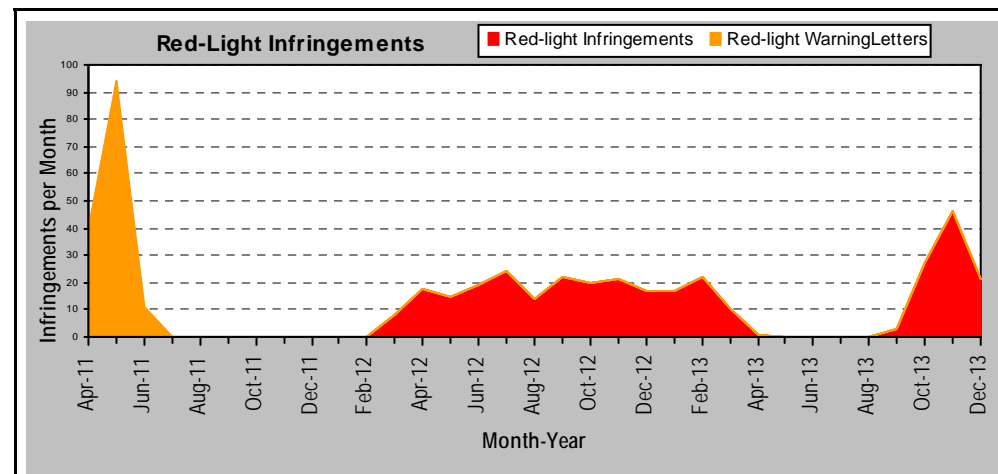
	5 years before installation ¹	2 years and 259 days after installation ²	Percentage reduction ³
Fatalities	1	0	100%
Injuries	6	4	+23%
<i>Pedestrian Casualties</i>	3	1	38%
Crashes	8	5	+15%
<i>Adjacent Crashes</i>	2	2	+85%
<i>Right Through Crashes</i>	0	1	-
<i>Rear End Crashes</i>	2	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Croydon Park - Georges River Road at Croydon Avenue

- There is one camera at this intersection.
- The camera at the intersection of Georges River Road and Croydon Avenue commenced issuing warning letters in August 2013.
- A longer period of time is required to assess 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

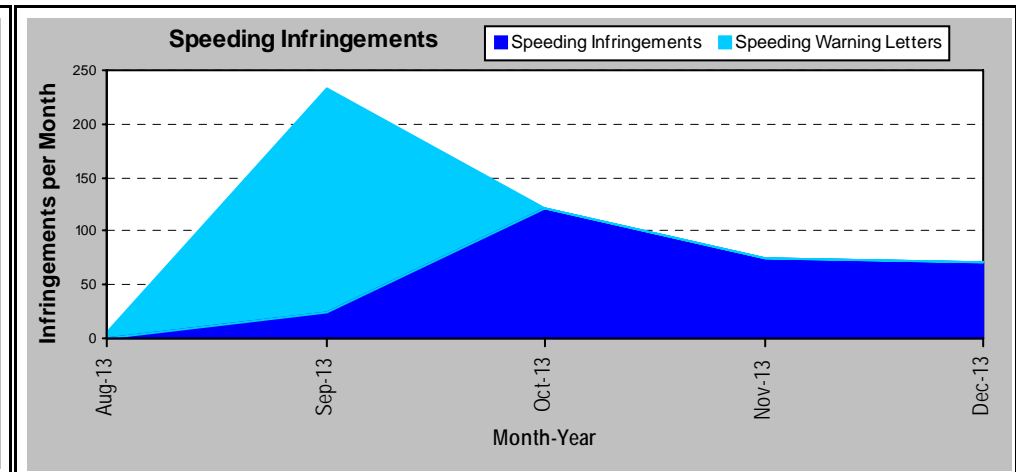
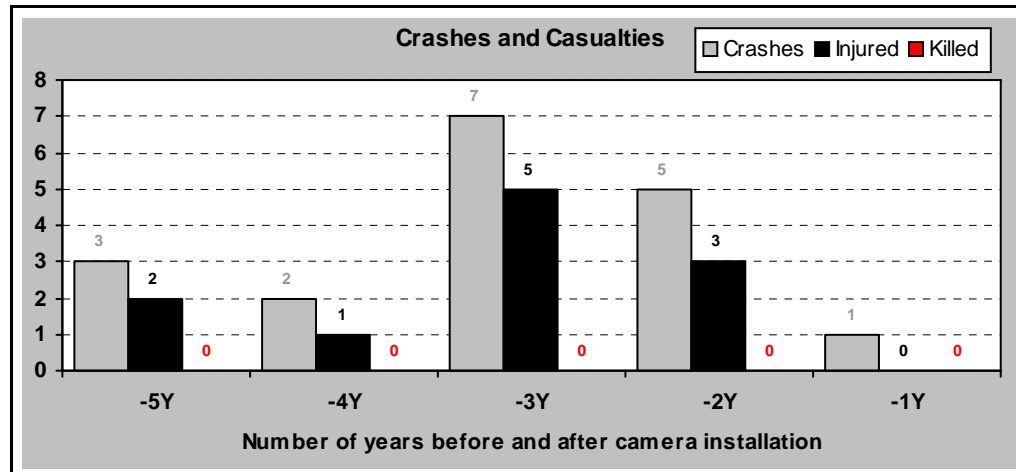
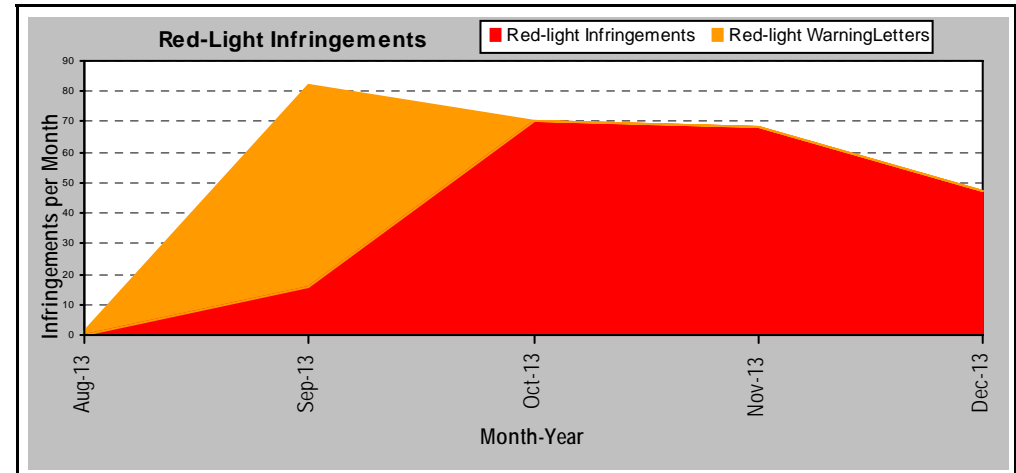
	5 years before installation ¹	127 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	11	0	100%
<i>Pedestrian Casualties</i>	3	0	100%
Crashes	18	0	100%
<i>Adjacent Crashes</i>	7	0	100%
<i>Right Through Crashes</i>	6	0	100%
<i>Rear End Crashes</i>	0	0	-

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Darlinghurst - Craigend Street at McLachlan Avenue

- There is one camera at this intersection.
- The camera at the intersection of Craigend Street and McLachlan Avenue commenced issuing warning letters in August 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. This location was impacted by major civil works between June and November 2011. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

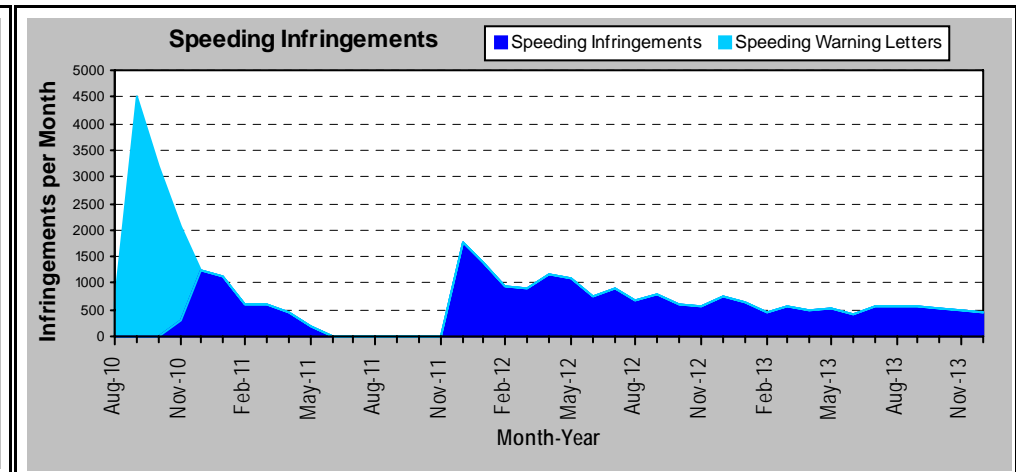
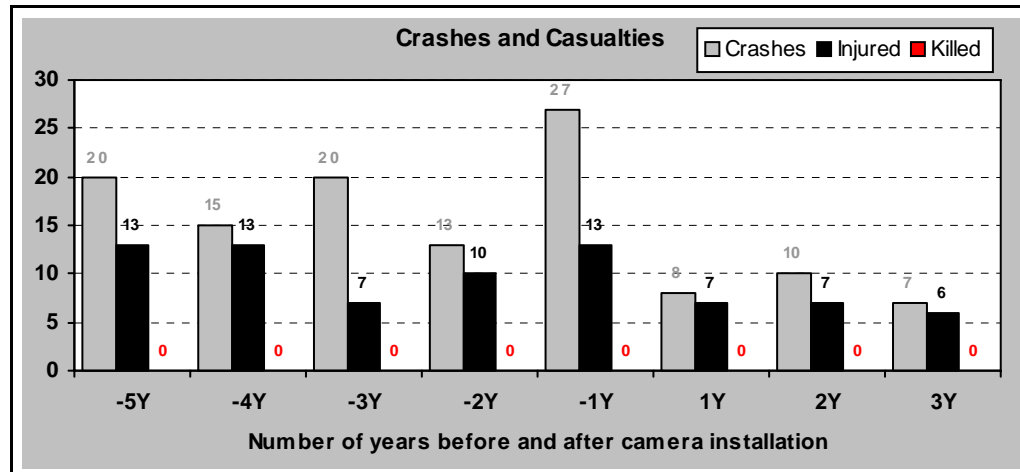
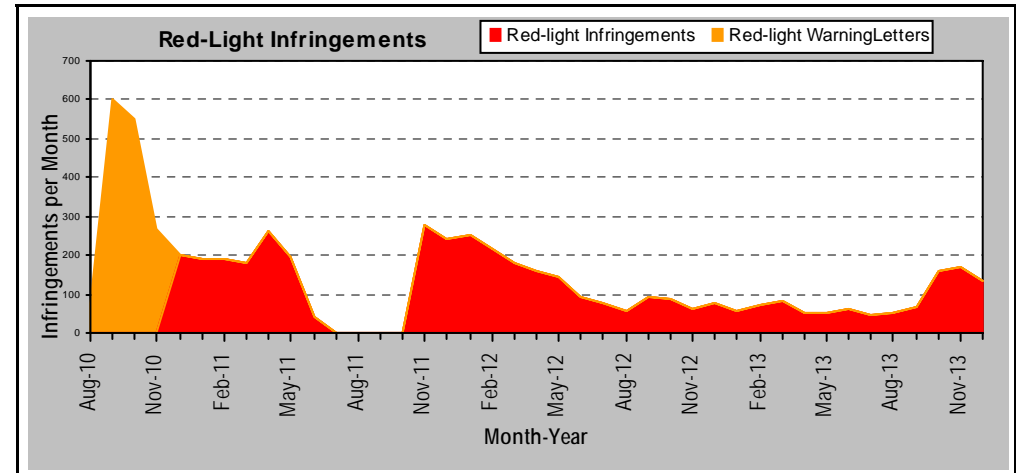
	5 years before installation ¹	3 years and 128 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	56	23	39%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	95	29	54%
<i>Adjacent Crashes</i>	74	16	68%
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	7	2	57%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Dee Why - Pittwater Road at Harbord Road

- 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 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

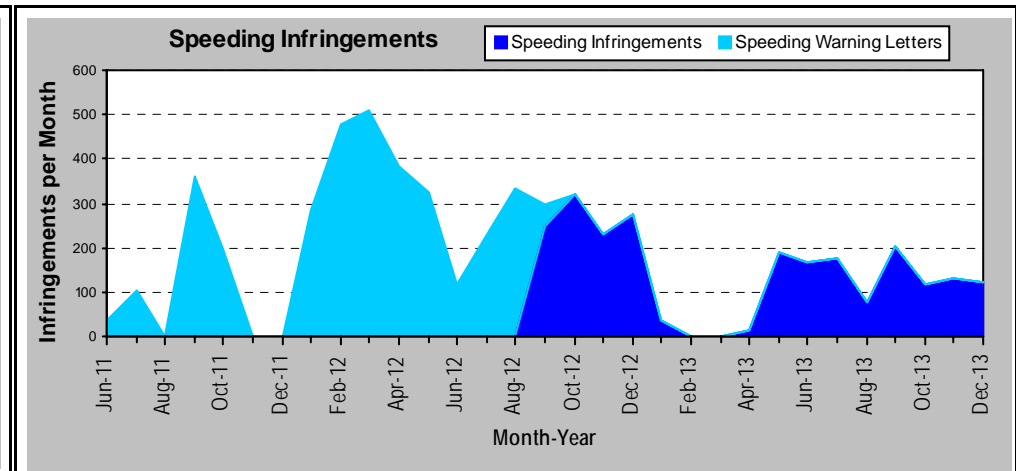
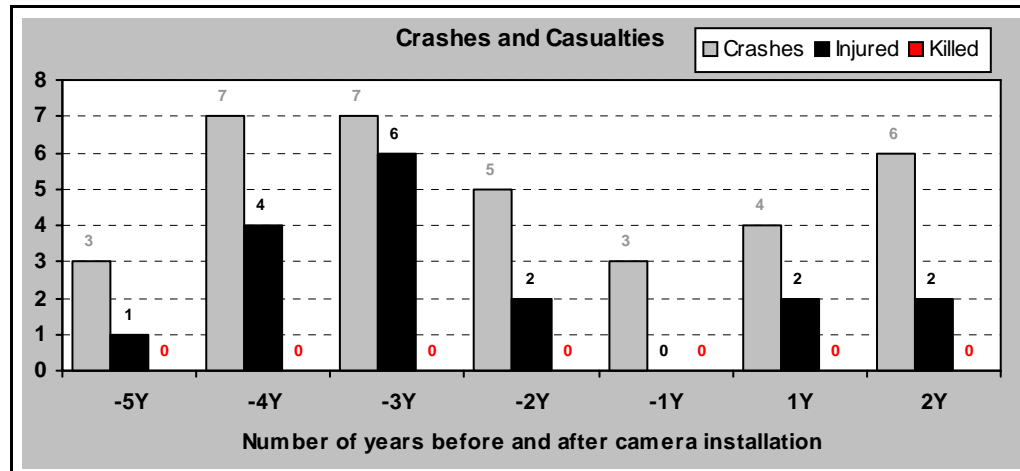
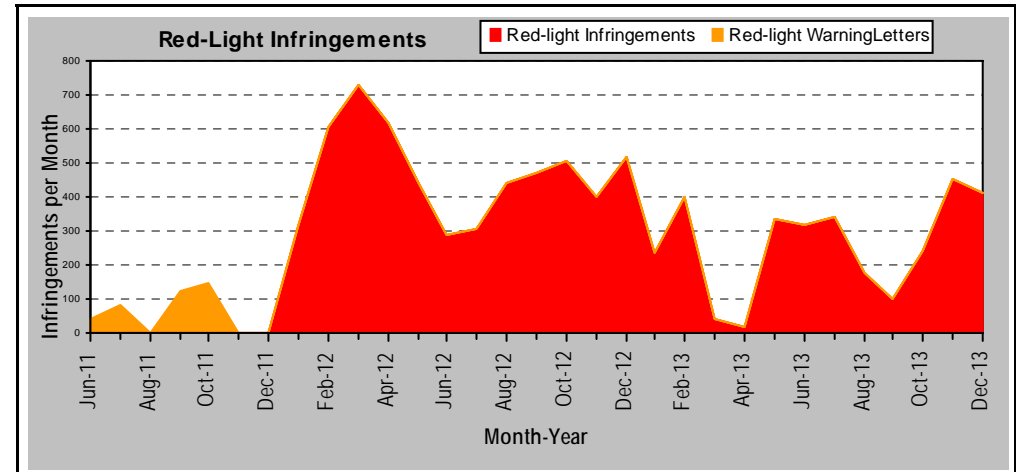
	5 years before installation ¹	2 years and 189 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	13	4	39%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	25	12	5%
<i>Adjacent Crashes</i>	2	1	1%
<i>Right Through Crashes</i>	0	3	-
<i>Rear End Crashes</i>	15	6	21%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Eastwood - Blaxland Road at May Street

- 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 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. Maintenance of the camera at this intersection was undertaken from March 2013 to September 2013. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

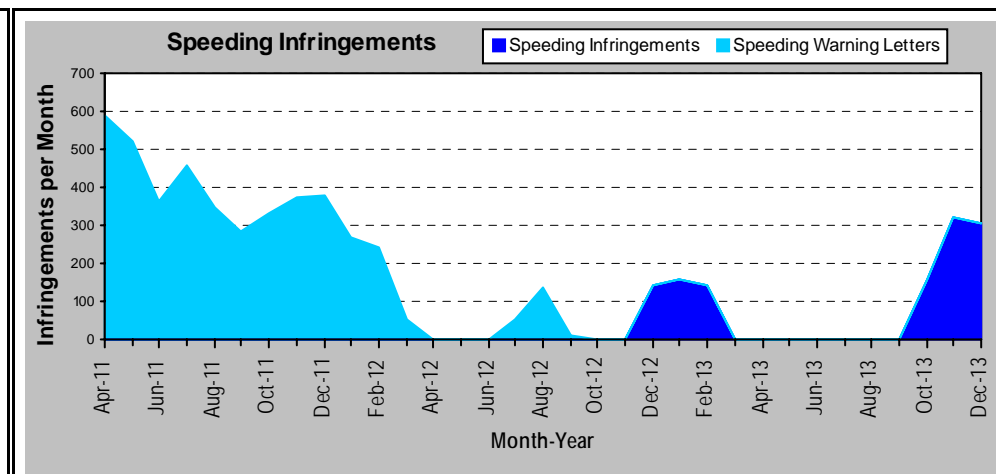
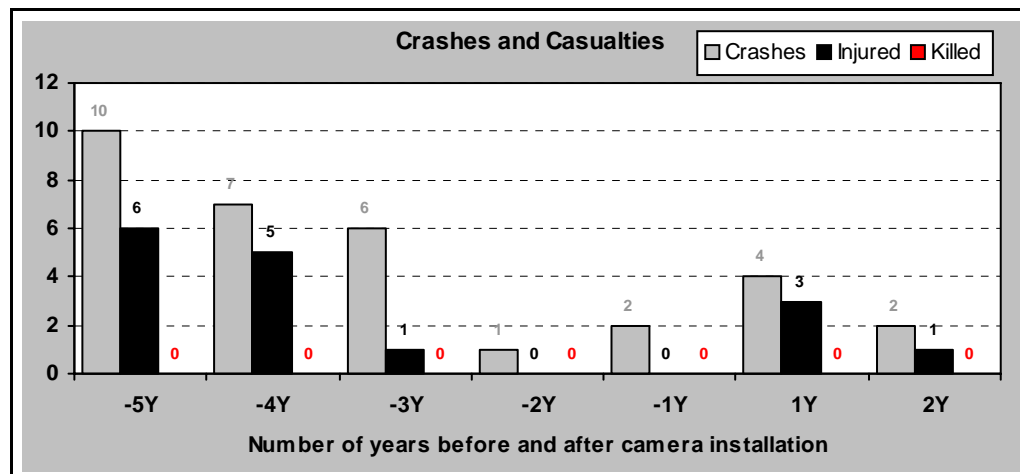
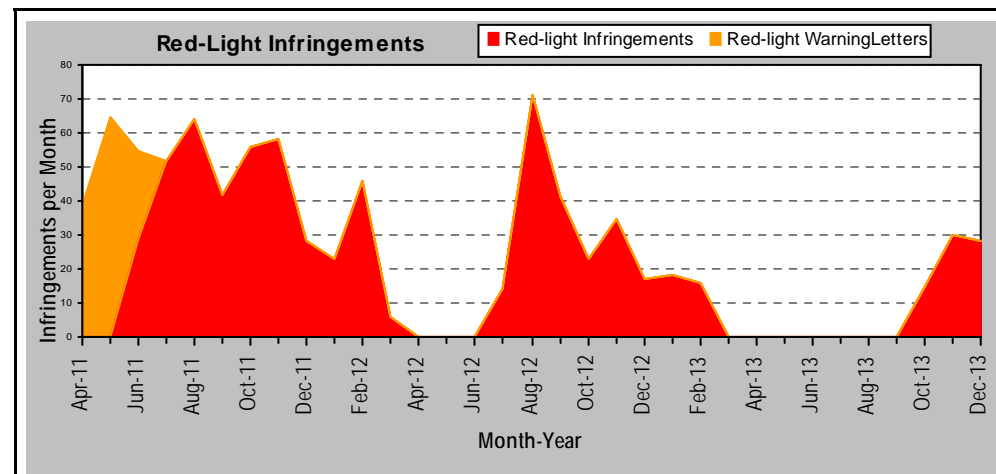
	5 years before installation ¹	2 years and 269 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	12	4	39%
<i>Pedestrian Casualties</i>	2	0	100%
Crashes	26	6	58%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	11	2	67%
<i>Rear End Crashes</i>	8	2	54%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Fairfield - Hamilton Road at The Boulevard

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Hamilton Road and The Boulevard commenced issuing warning letters in October 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

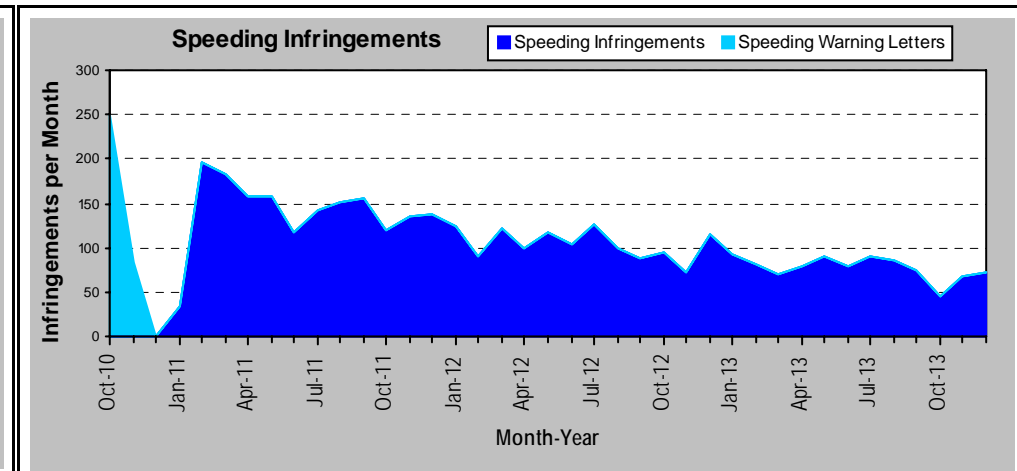
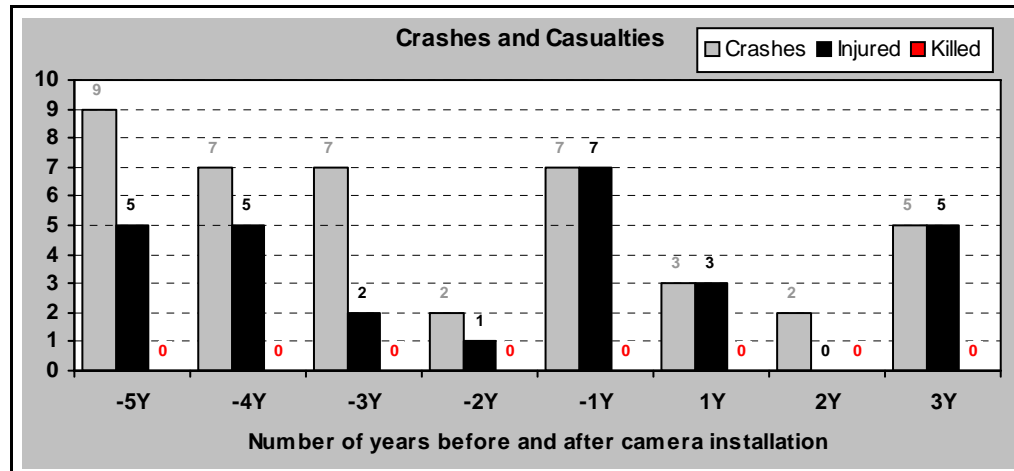
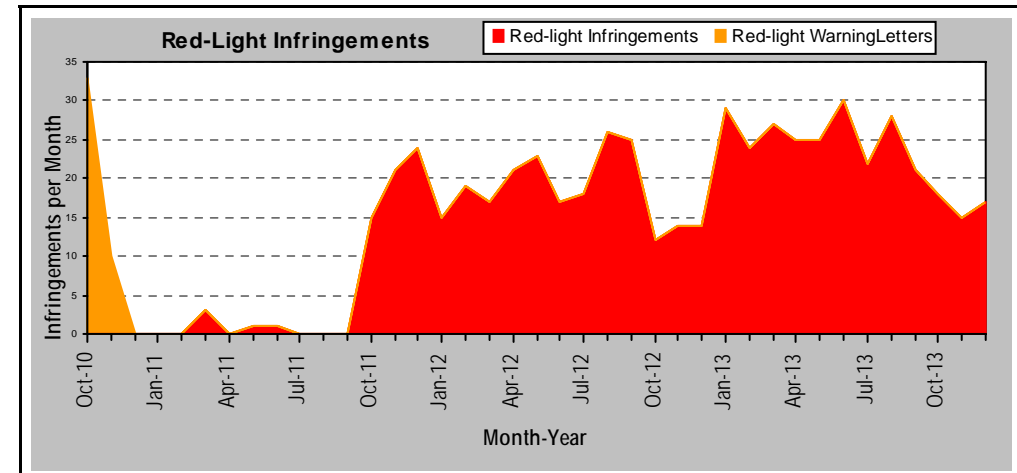
	5 years before installation ¹	3 years and 83 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	20	8	38%
<i>Pedestrian Casualties</i>	1	1	+55%
Crashes	32	11	47%
<i>Adjacent Crashes</i>	5	0	100%
<i>Right Through Crashes</i>	21	6	56%
<i>Rear End Crashes</i>	1	3	+365%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Fairfield - The Horsley Drive at Polding Street

- There is one camera at this intersection.
- The camera at the intersection of The Horsley Drive and Polding Street commenced issuing warning letters in September 2013.
- A longer period of time is required to assess 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 ¹	97 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	31	4	+143%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	42	4	+79%
<i>Adjacent Crashes</i>	6	0	100%
<i>Right Through Crashes</i>	22	4	+242%
<i>Rear End Crashes</i>	5	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection

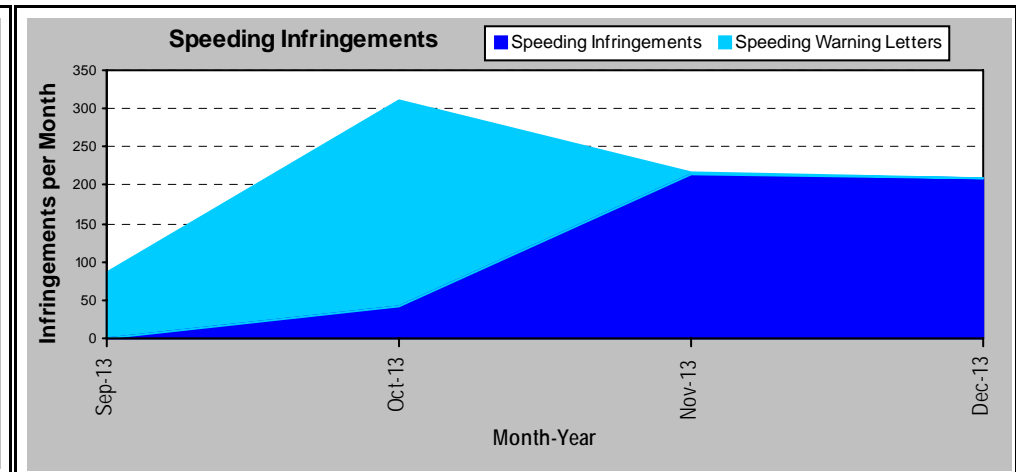
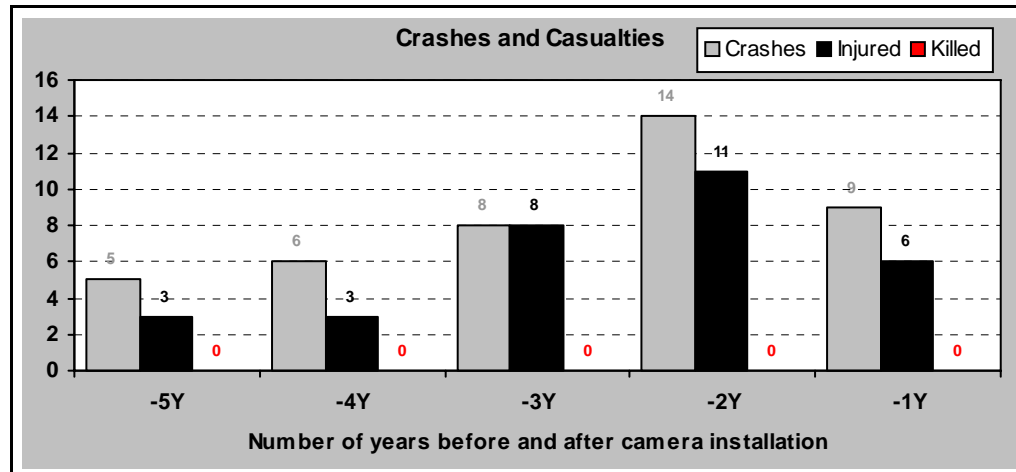
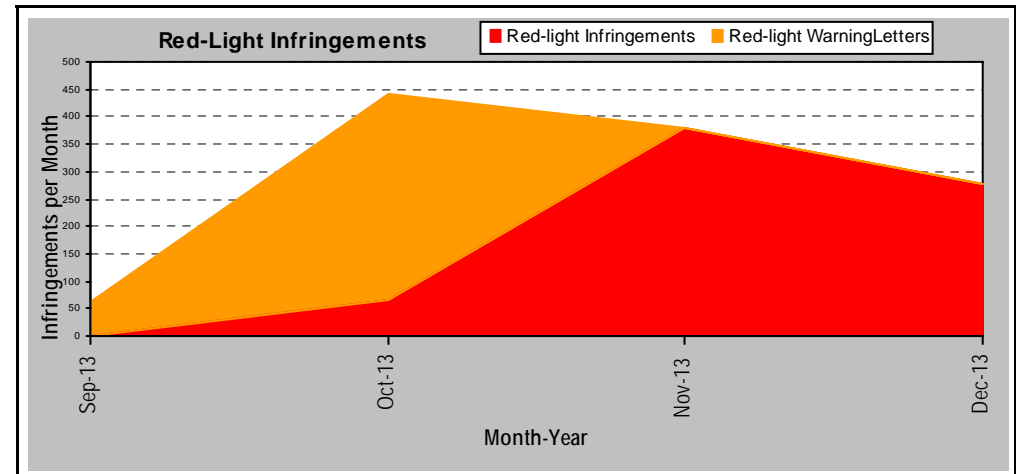


Figure - Princes Highway at O'Briens Road

- 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 casualties and 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

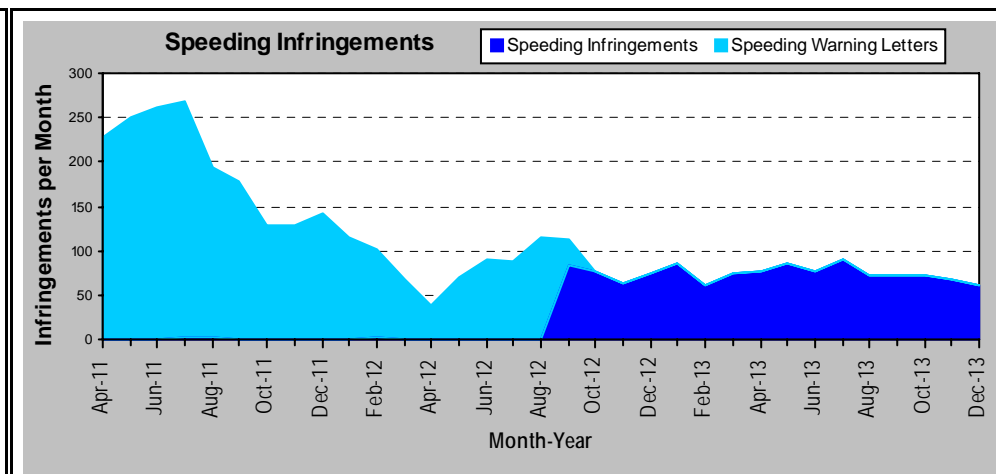
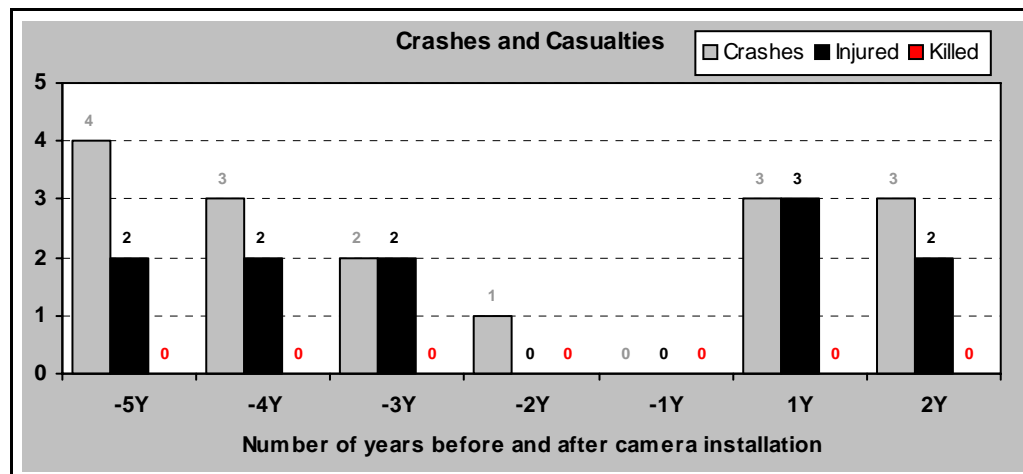
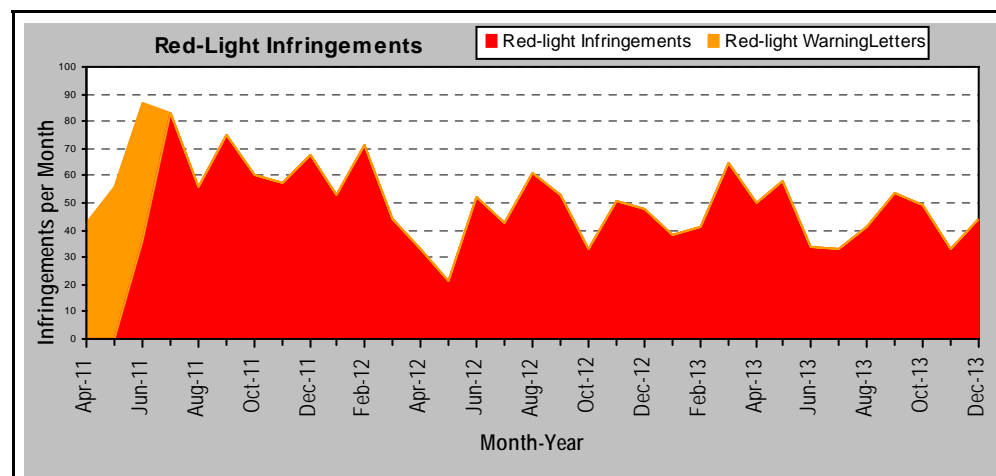
	5 years before installation ¹	2 years and 259 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	6	5	+54%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	10	6	+11%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	4	5	+131%
<i>Rear End Crashes</i>	2	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Five Dock - Fairlight Street at Ramsay Road

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Fairlight Street and Ramsay Road 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

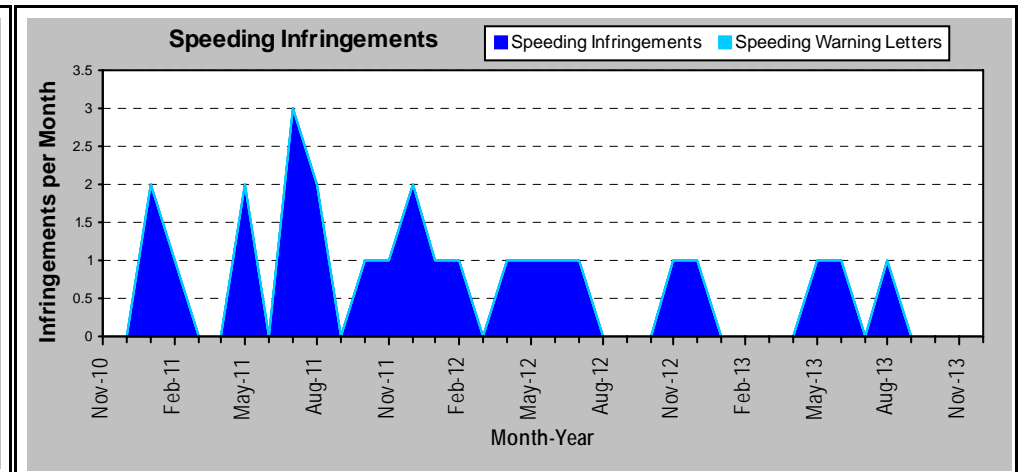
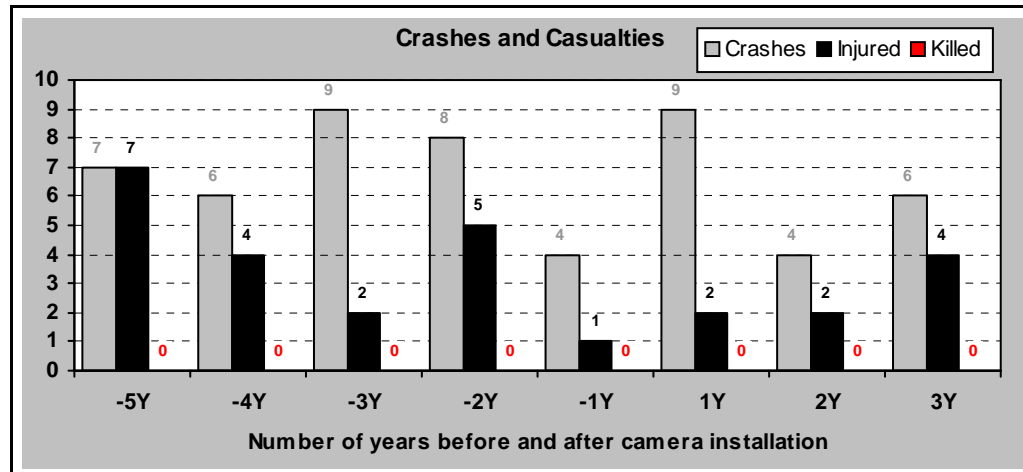
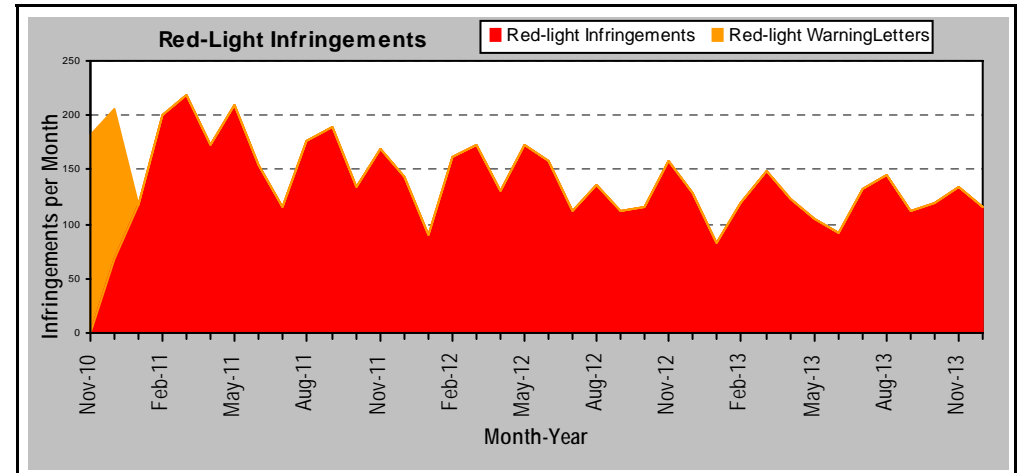
	5 years before installation ¹	3 years and 52 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	19	9	25%
<i>Pedestrian Casualties</i>	2	0	100%
Crashes	34	20	6%
<i>Adjacent Crashes</i>	16	6	40%
<i>Right Through Crashes</i>	2	1	20%
<i>Rear End Crashes</i>	1	1	+59%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Five Dock - Parramatta Road at Arlington Street

- 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 Arlington Street commenced issuing warning letters in April 2013.
- 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

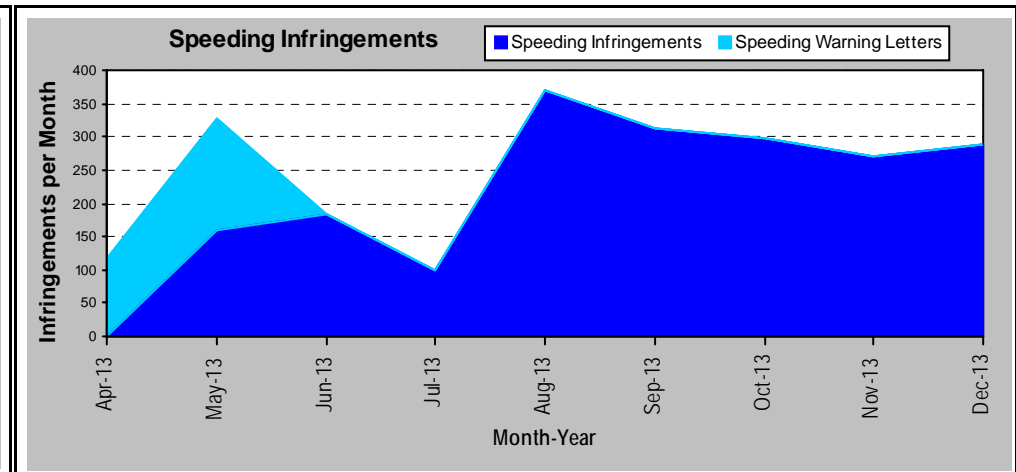
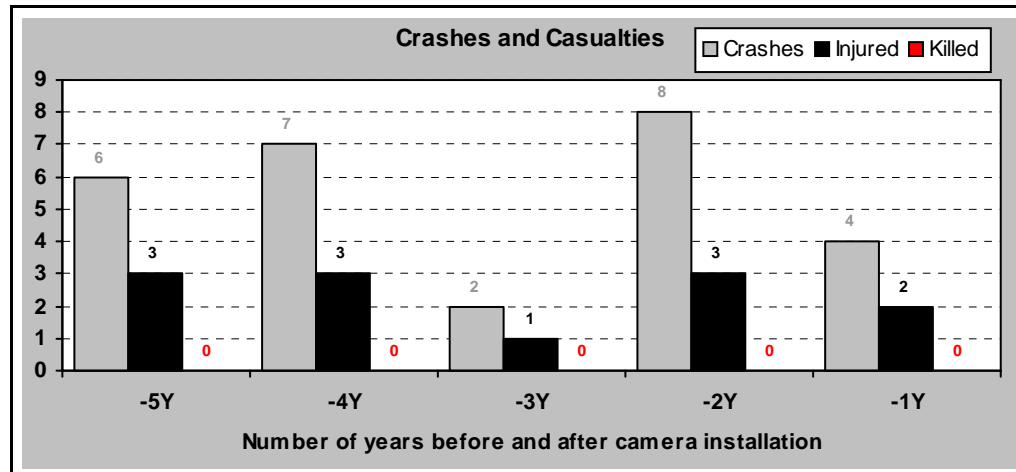
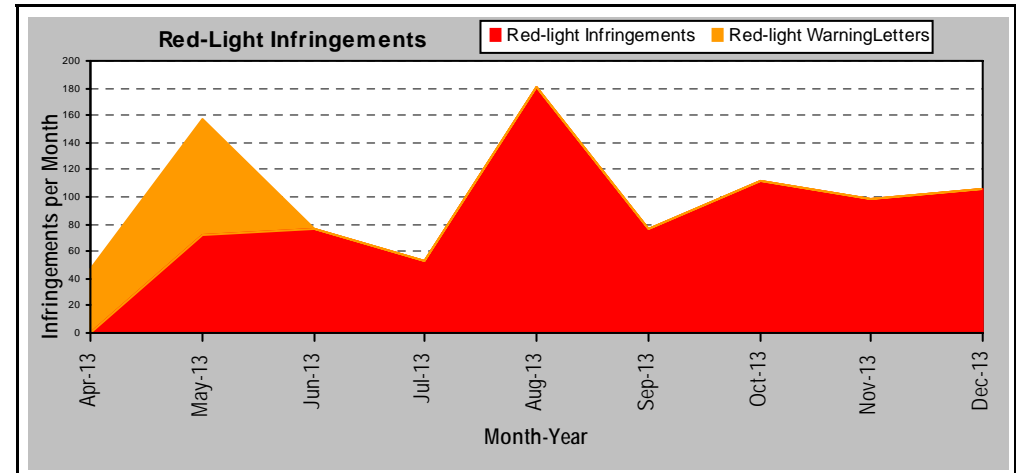
	5 years before installation ¹	264 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	12	1	42%
<i>Pedestrian Casualties</i>	2	0	100%
Crashes	27	3	23%
<i>Adjacent Crashes</i>	11	1	37%
<i>Right Through Crashes</i>	4	0	100%
<i>Rear End Crashes</i>	7	1	1%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Granville - Parramatta Road at Good Street

- 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 Good Street commenced issuing warning letters in February 2013.
- 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

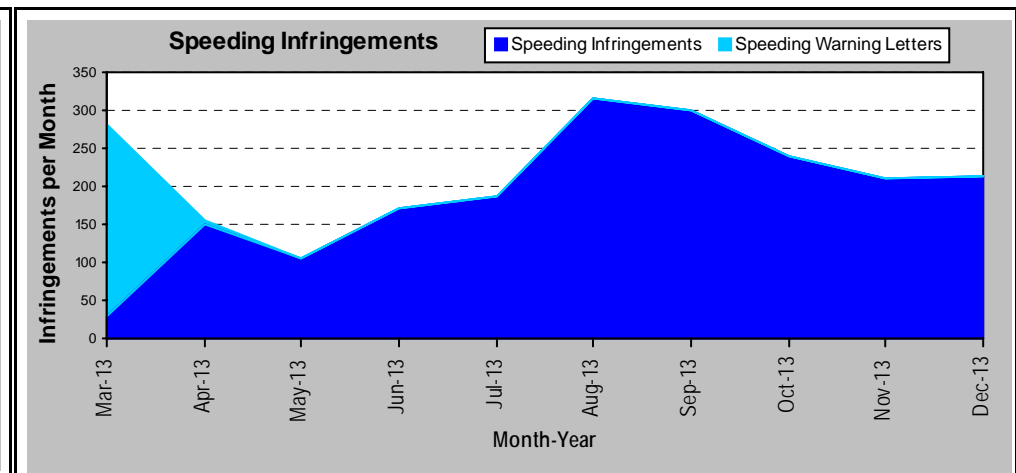
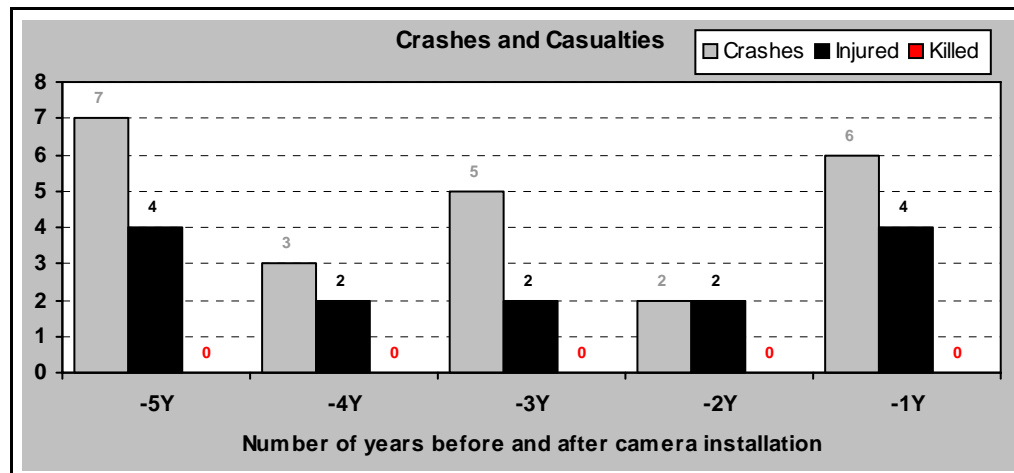
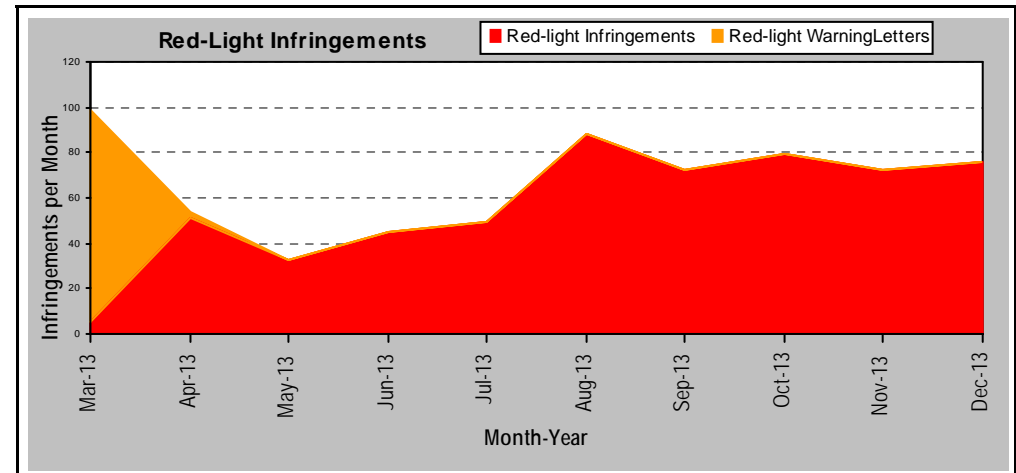
	5 years before installation ¹	309 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	14	2	16%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	23	4	+3%
<i>Adjacent Crashes</i>	8	2	+48%
<i>Right Through Crashes</i>	7	2	+69%
<i>Rear End Crashes</i>	5	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Granville - Woodville Road at M4 On Ramp

- There is one camera at this intersection.
- The camera at the intersection of Woodville Road 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

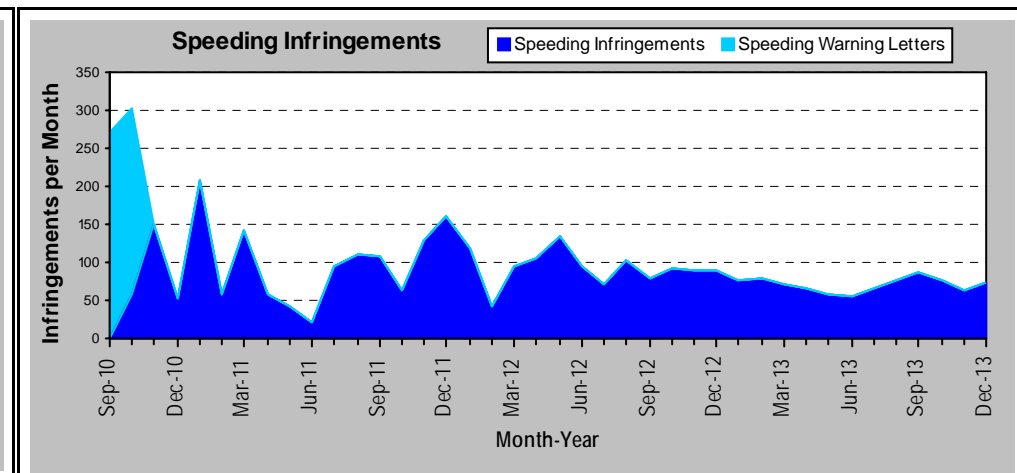
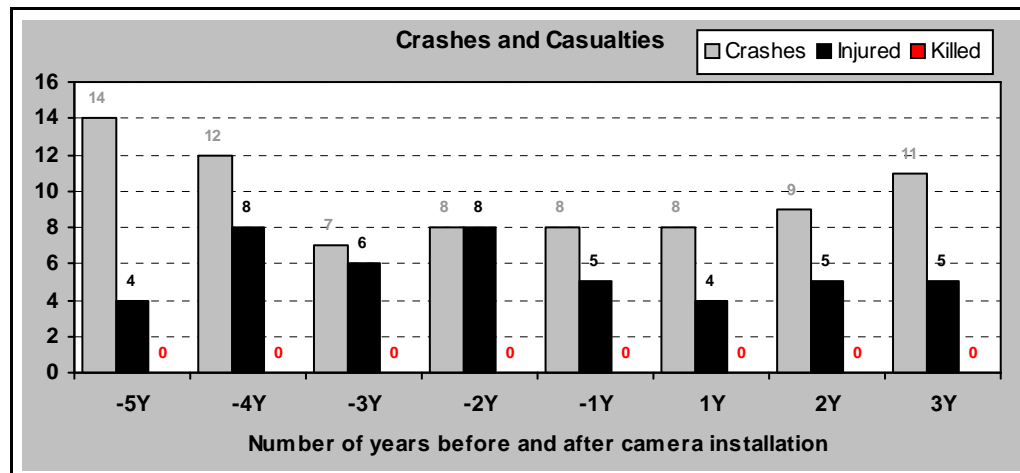
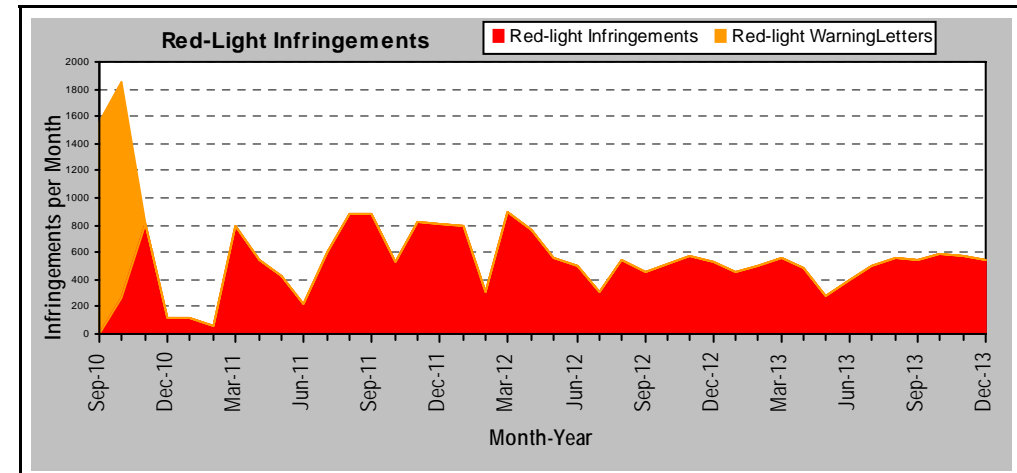
	5 years before installation ¹	3 years and 115 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	31	14	32%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	49	30	8%
<i>Adjacent Crashes</i>	11	3	59%
<i>Right Through Crashes</i>	12	6	25%
<i>Rear End Crashes</i>	9	7	+17%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Guildford - Woodville Road at Guildford Road

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Woodville Road and Guildford Road 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

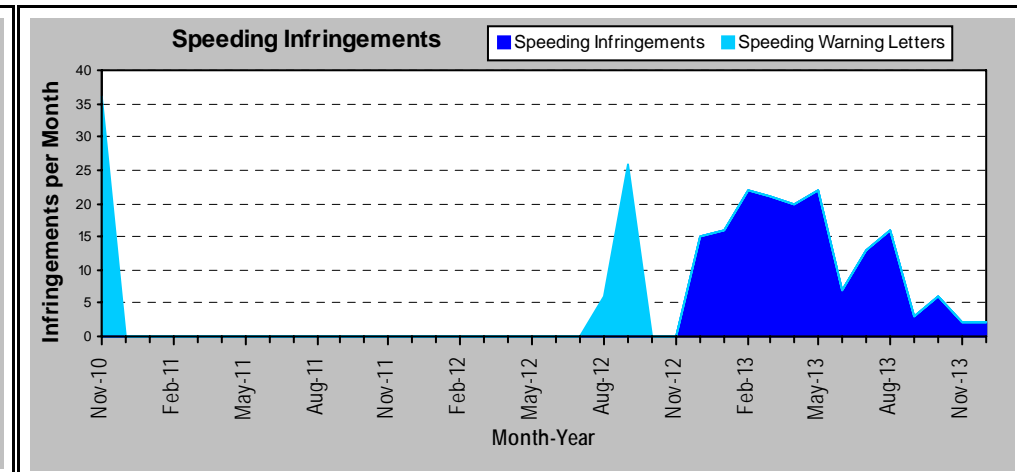
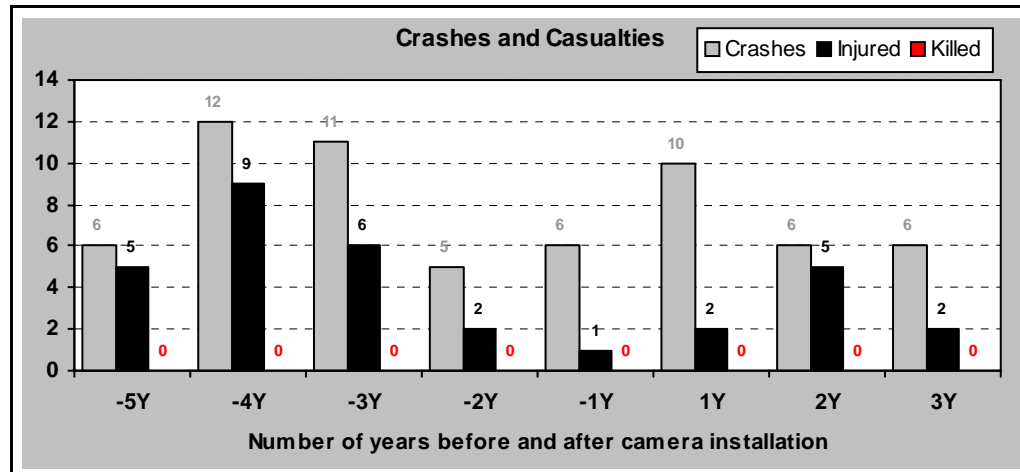
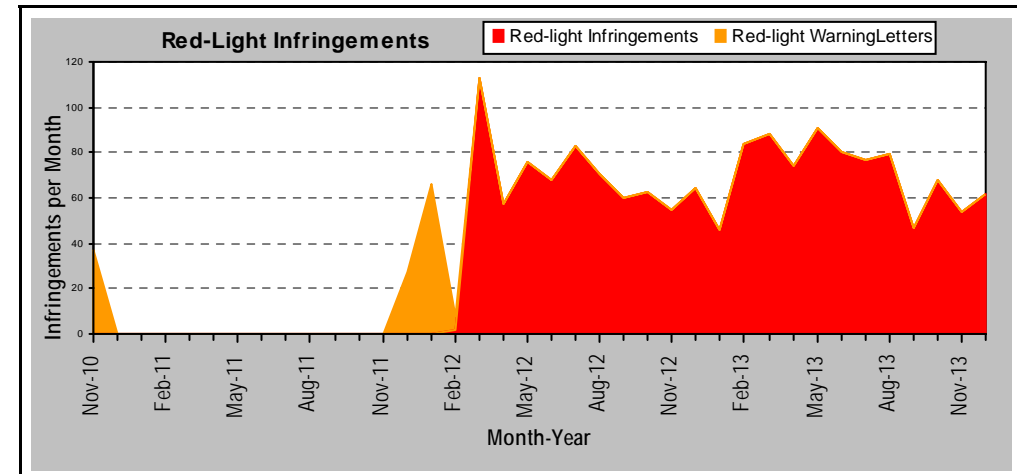
	5 years before installation ¹	3 years and 52 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	23	9	38%
<i>Pedestrian Casualties</i>	2	1	20%
Crashes	40	22	12%
<i>Adjacent Crashes</i>	9	6	+6%
<i>Right Through Crashes</i>	5	7	+123%
<i>Rear End Crashes</i>	19	6	50%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Haberfield - Dobroyd Parade at Mortley Avenue

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Dobroyd Parade and Mortley Avenue commenced issuing warning letters in June 2011.
- While early results indicate a slight increase in casualties and 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

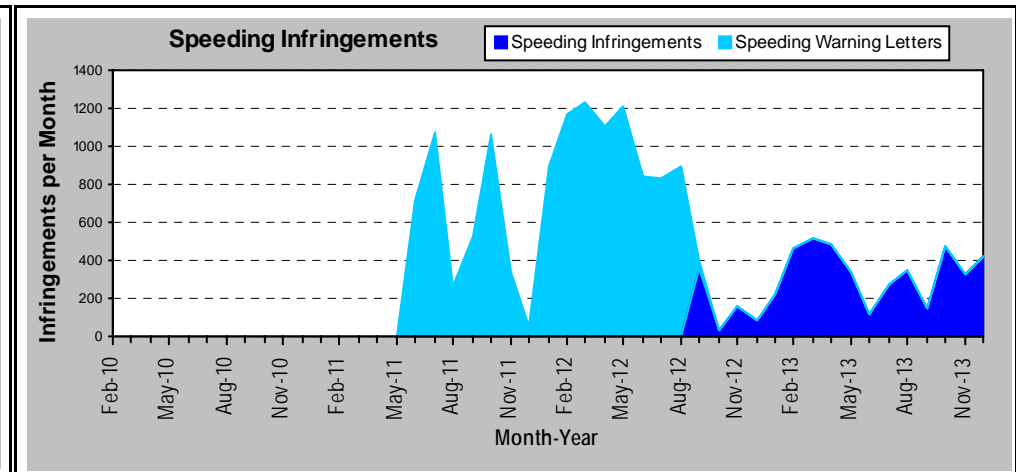
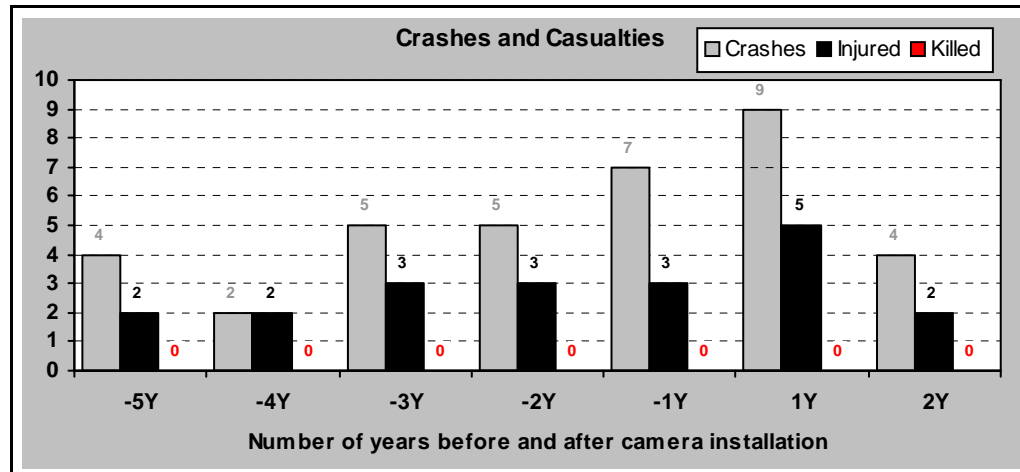
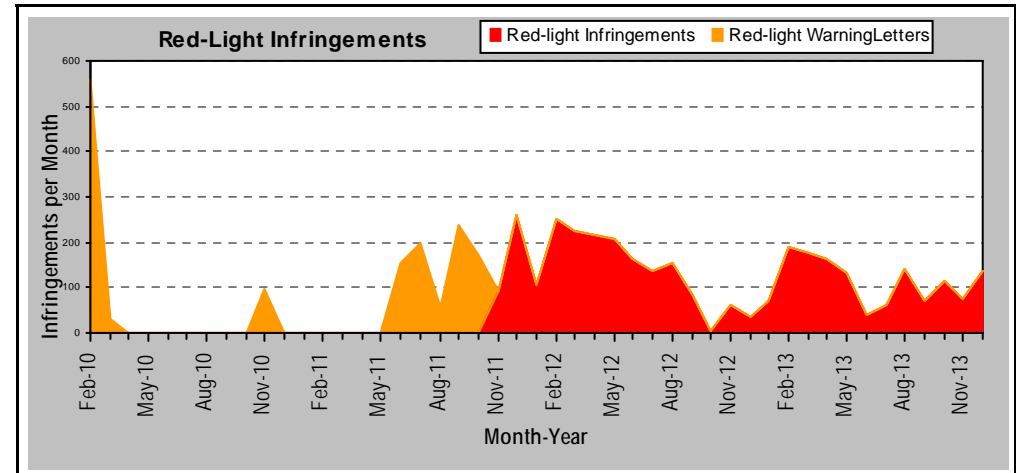
	5 years before installation ¹	2 years and 201 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	13	11	+66%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	23	16	+36%
<i>Adjacent Crashes</i>	0	2	-
<i>Right Through Crashes</i>	5	3	+18%
<i>Rear End Crashes</i>	16	10	+23%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Haberfield - Parramatta Road at Sloane Street

- 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 early results indicate a slight increase in casualties and 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

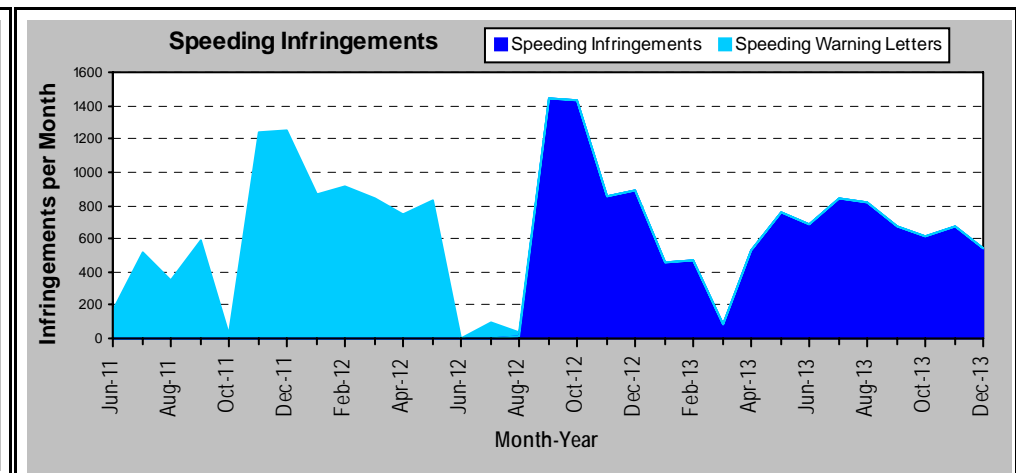
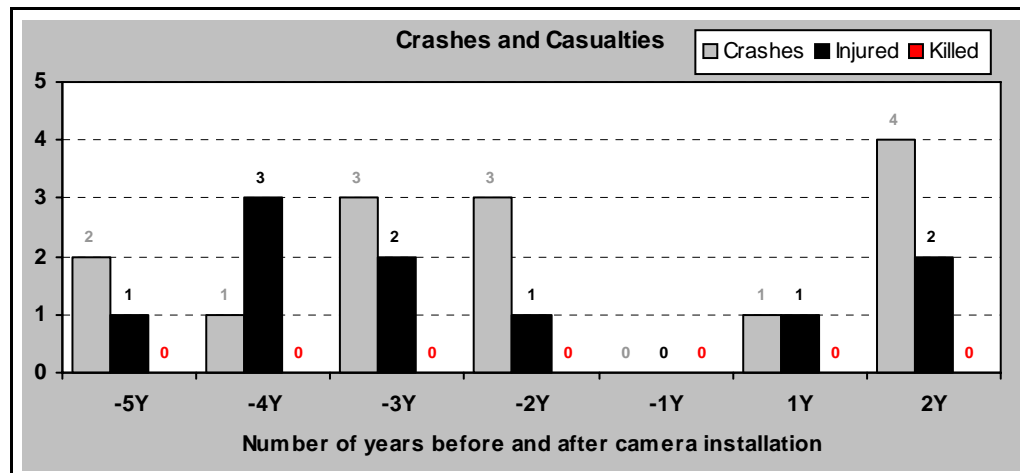
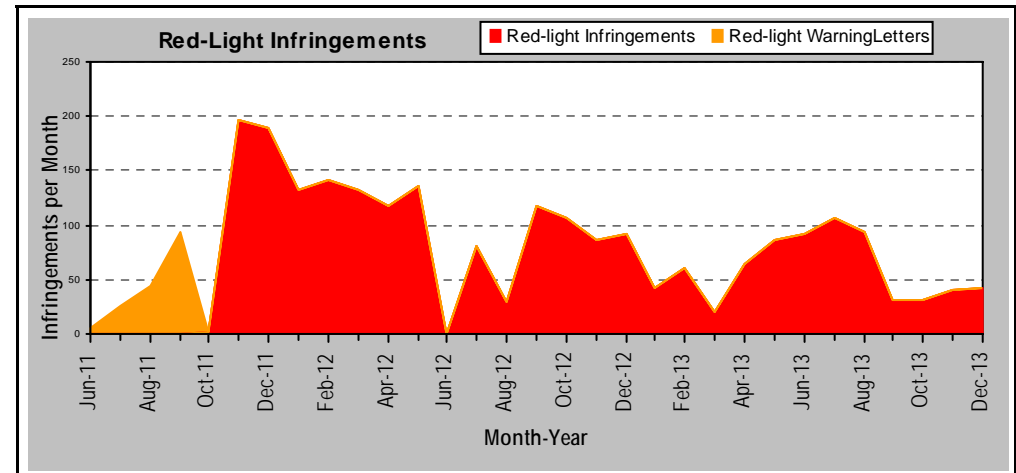
	5 years before installation ¹	2 years and 189 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	7	4	+14%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	9	8	+77%
<i>Adjacent Crashes</i>	0	1	-
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	5	6	+138%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Haberfield - Ramsay Street at Wattle Street

- There is one camera at this intersection.
- The camera at the intersection of Ramsay Street and Wattle Street commenced issuing warning letters in February 2013.
- 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 since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

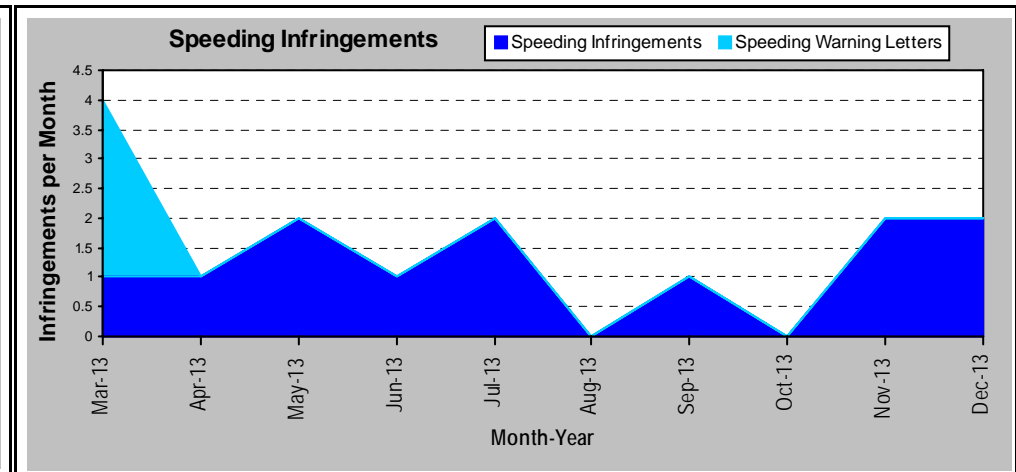
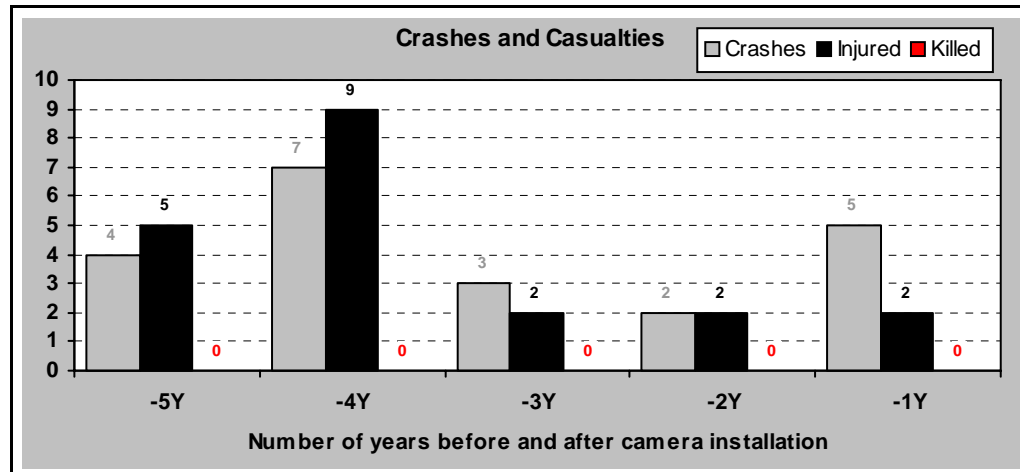
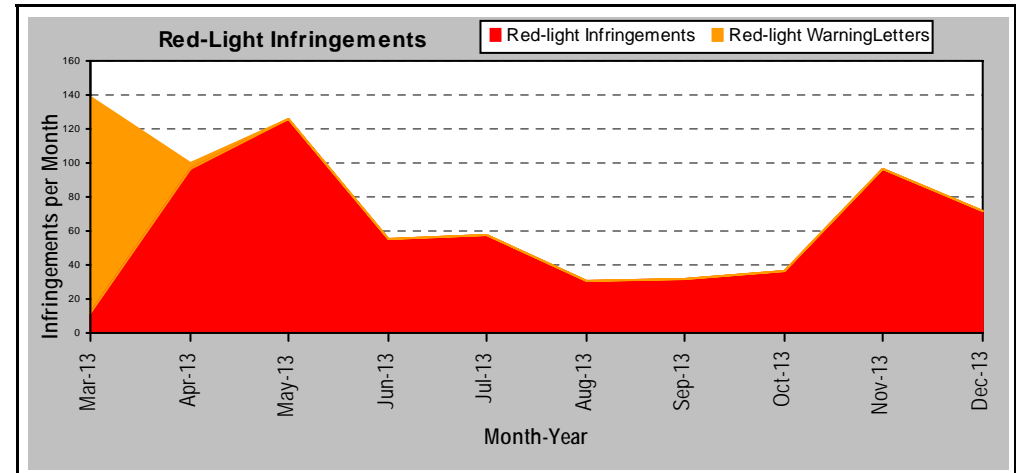
	5 years before installation ¹	309 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	20	0	100%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	21	1	72%
<i>Adjacent Crashes</i>	15	0	100%
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	3	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Hamilton - Tudor Street at Beaumont Street

- 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

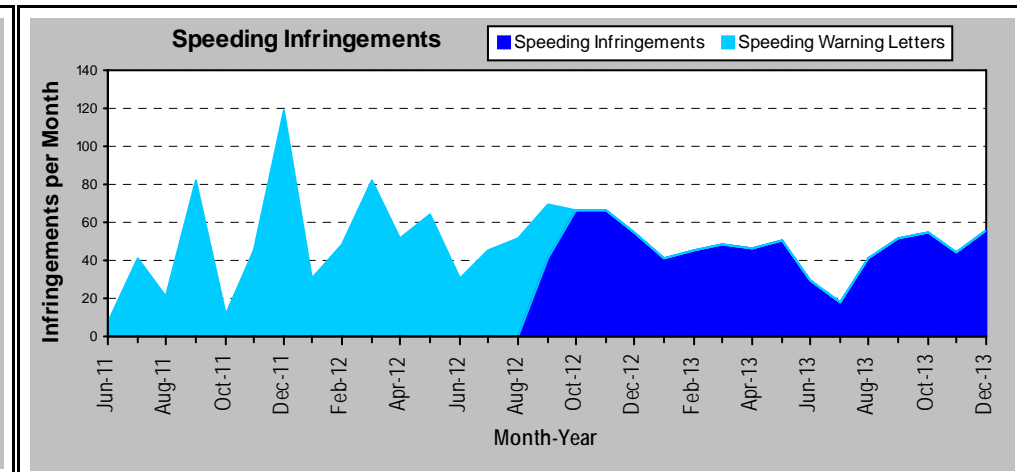
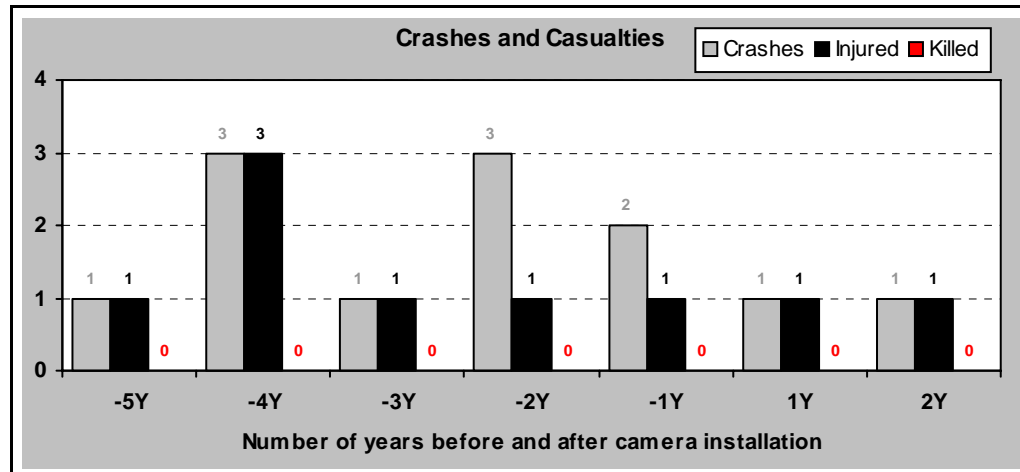
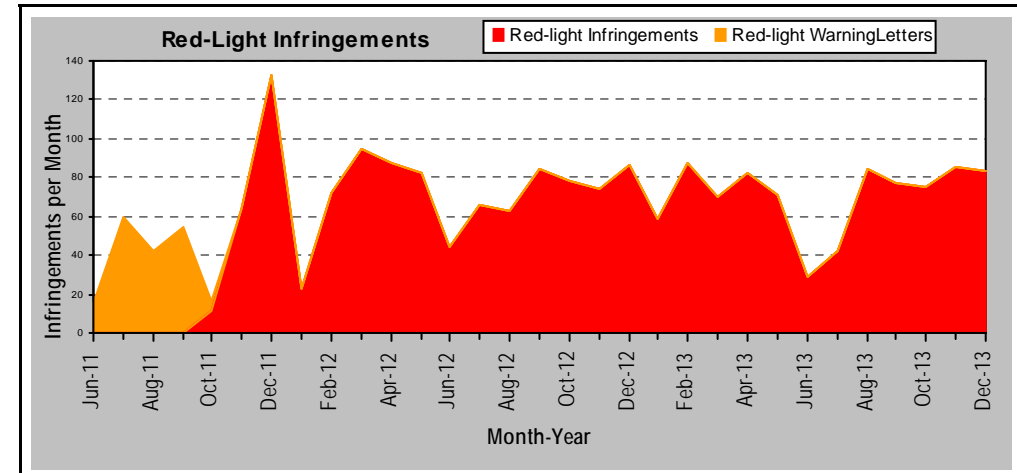
	5 years before installation ¹	2 years and 189 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	7	2	43%
<i>Pedestrian Casualties</i>	1	2	+297%
Crashes	10	3	40%
<i>Adjacent Crashes</i>	1	0	100%
<i>Right Through Crashes</i>	2	0	100%
<i>Rear End Crashes</i>	3	1	34%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Hamilton East - Pacific Highway at Parry Street

- 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 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

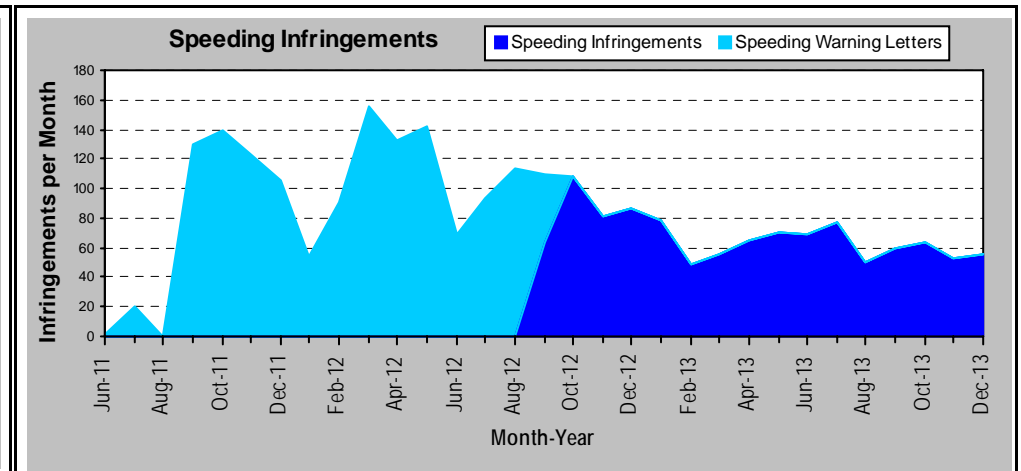
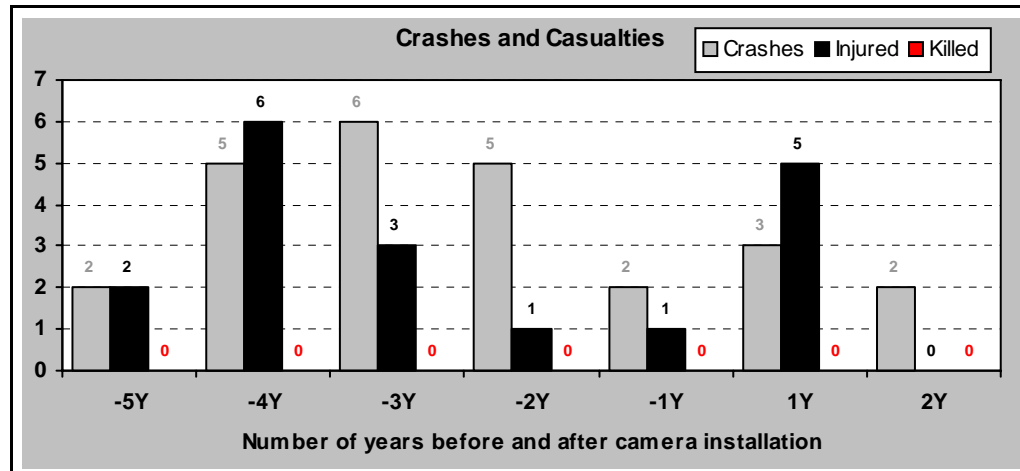
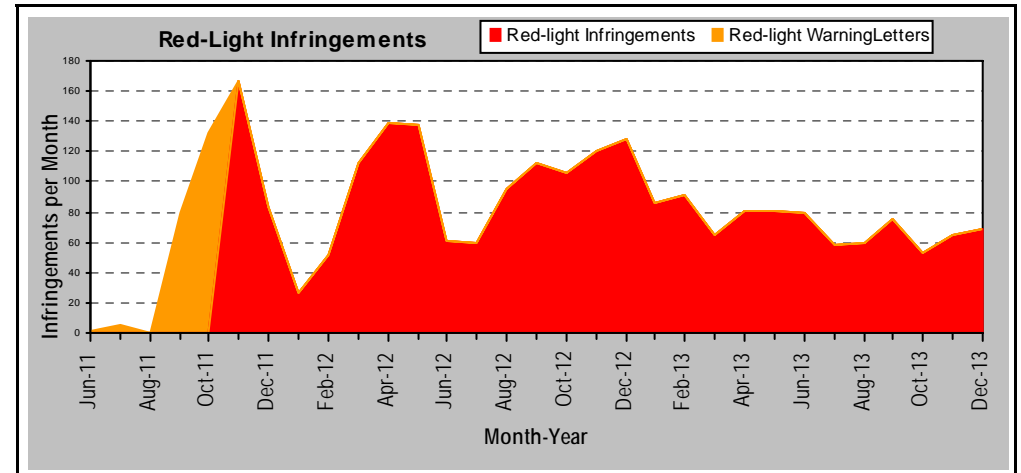
	5 years before installation ¹	2 years and 187 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	13	6	8%
<i>Pedestrian Casualties</i>	0	1	-
Crashes	20	6	40%
<i>Adjacent Crashes</i>	6	3	0%
<i>Right Through Crashes</i>	2	1	0%
<i>Rear End Crashes</i>	5	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Haymarket - George Street at Pitt Street / Quay Street

- There are two cameras at this intersection.
- The camera at the intersection of George Street and Pitt Street commenced issuing warning letters in June 2013.
- The camera at the intersection of George Street and Quay Street commenced issuing warning letters in June 2013.
- While early results indicate a slight increase in casualties and 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 since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

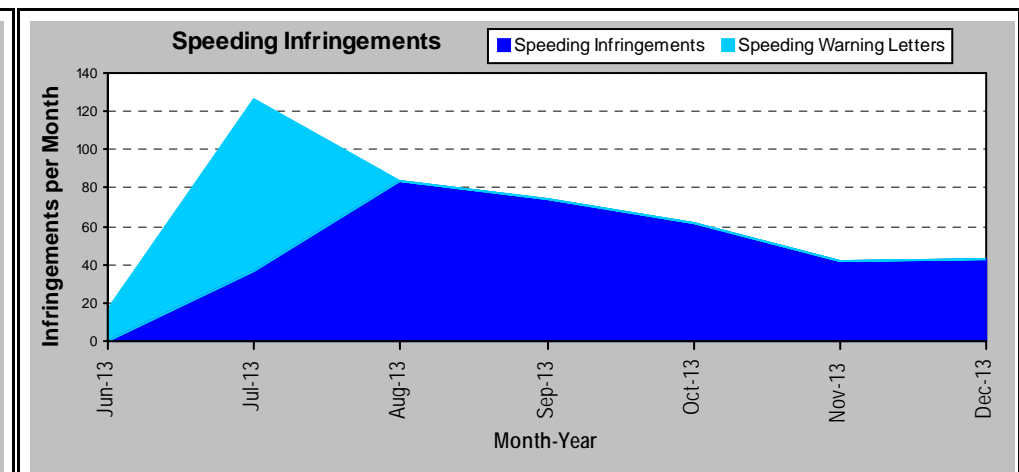
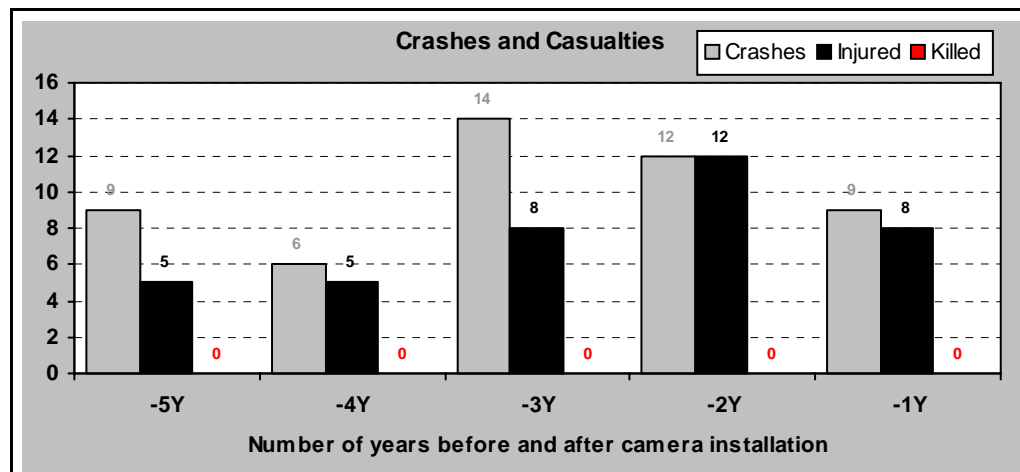
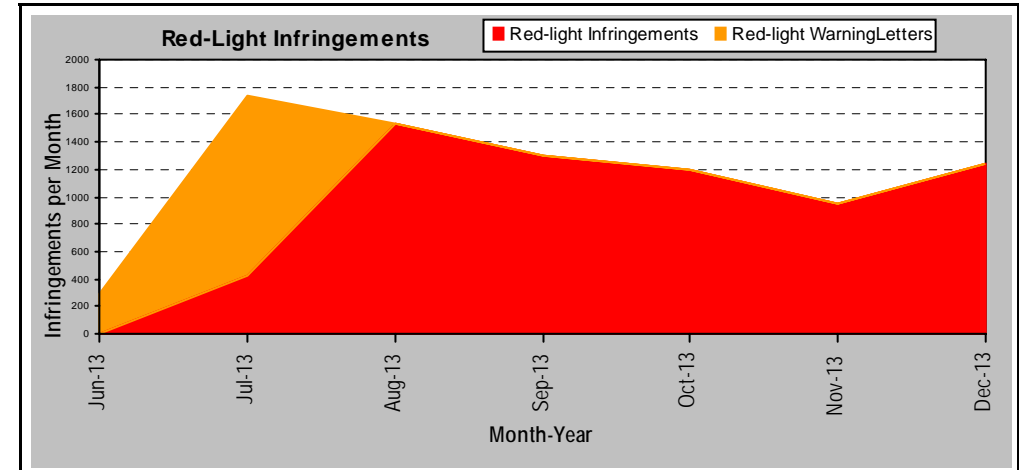
	5 years before installation ¹	193 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	38	6	+49%
<i>Pedestrian Casualties</i>	15	1	37%
Crashes	50	8	+51%
<i>Adjacent Crashes</i>	9	1	+5%
<i>Right Through Crashes</i>	3	2	+531%
<i>Rear End Crashes</i>	6	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Hunters Hill - Ryde Road at Pittwater Road

- 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 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

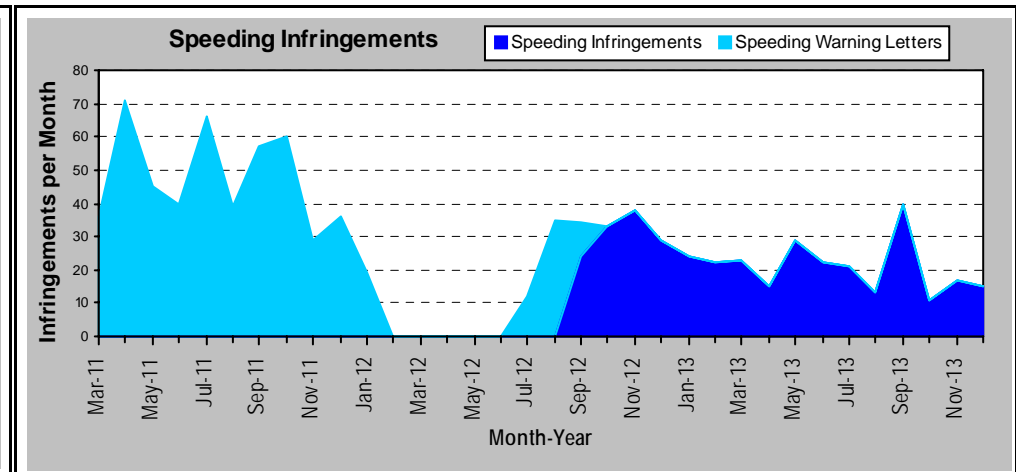
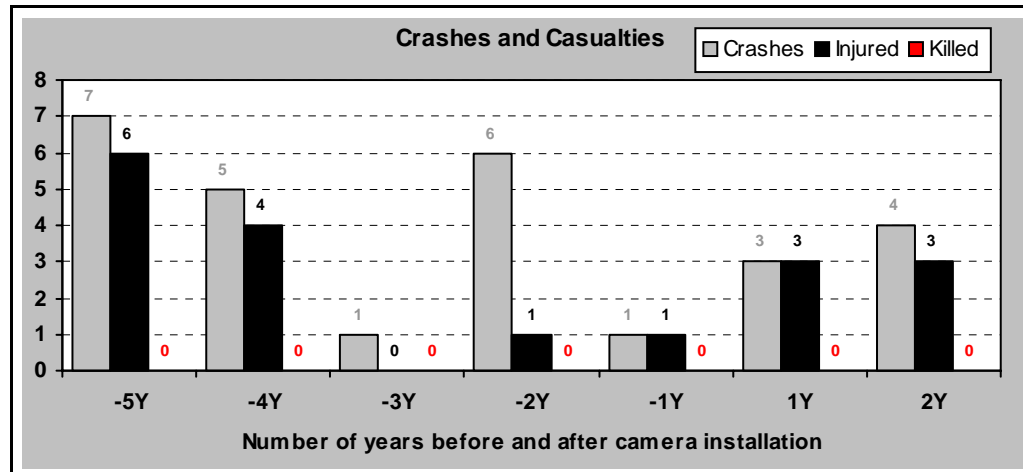
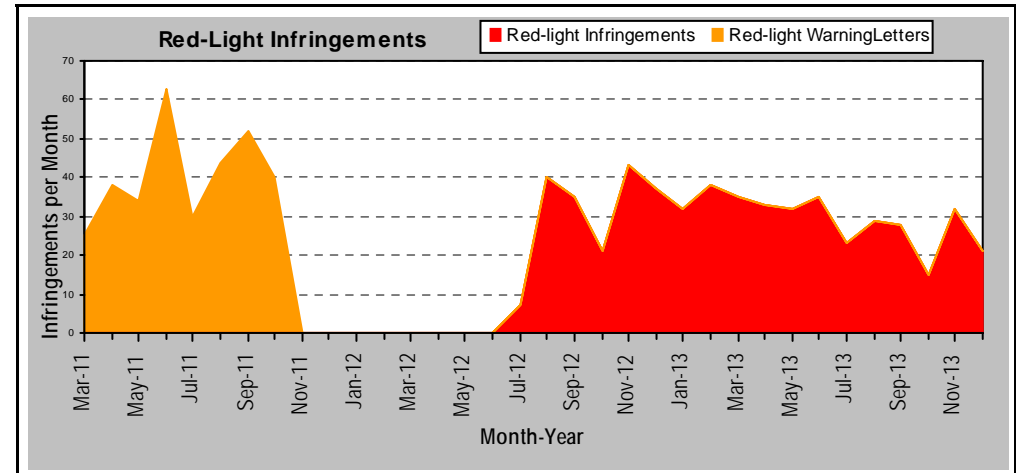
	5 years before installation ¹	2 years and 290 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	12	8	+19%
<i>Pedestrian Casualties</i>	0	1	-
Crashes	20	10	10%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	14	7	10%
<i>Rear End Crashes</i>	4	1	55%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Kensington - Anzac Parade at Todman Avenue

- 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 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

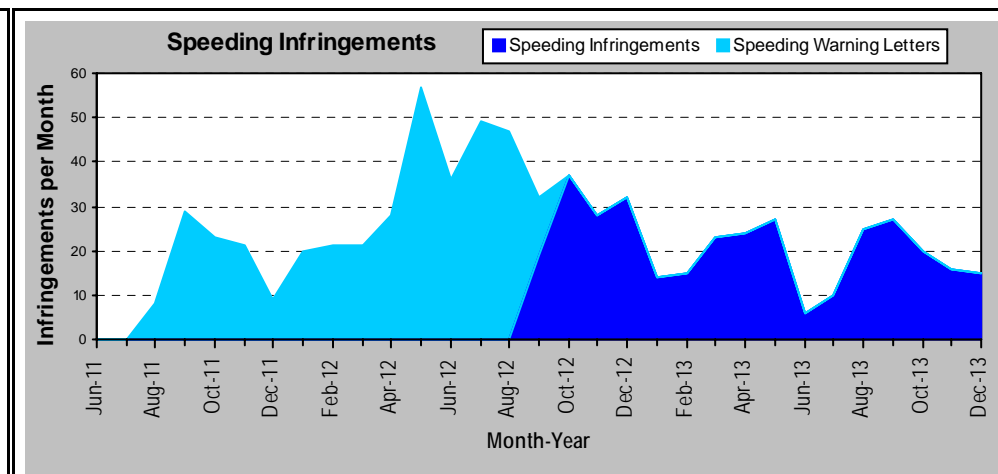
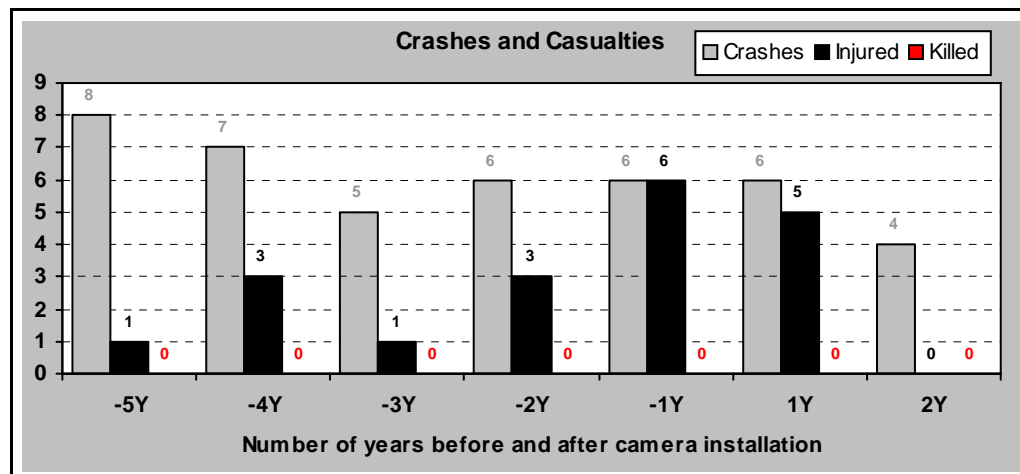
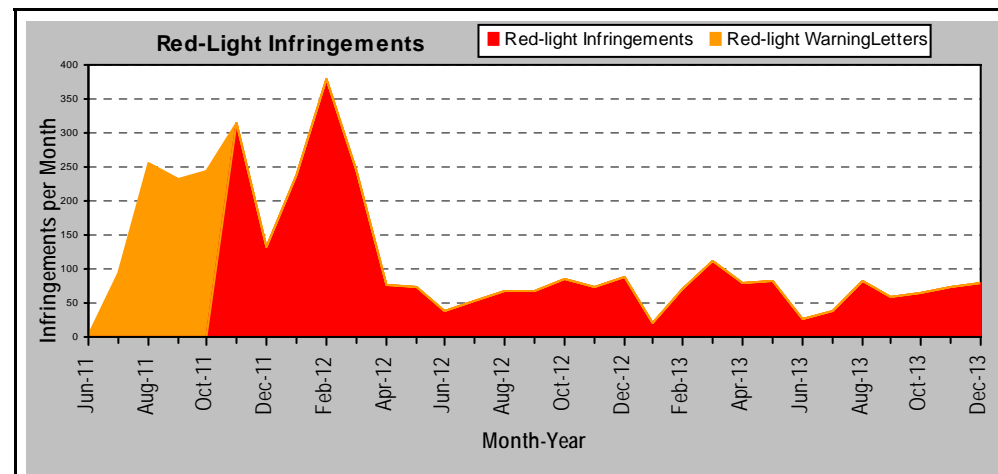
	5 years before installation ¹	2 years and 187 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	14	6	15%
<i>Pedestrian Casualties</i>	4	1	50%
Crashes	32	14	13%
<i>Adjacent Crashes</i>	10	4	20%
<i>Right Through Crashes</i>	7	7	+99%
<i>Rear End Crashes</i>	6	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Kingsgrove - Bexley Road at William Street

- 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 casualties and 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

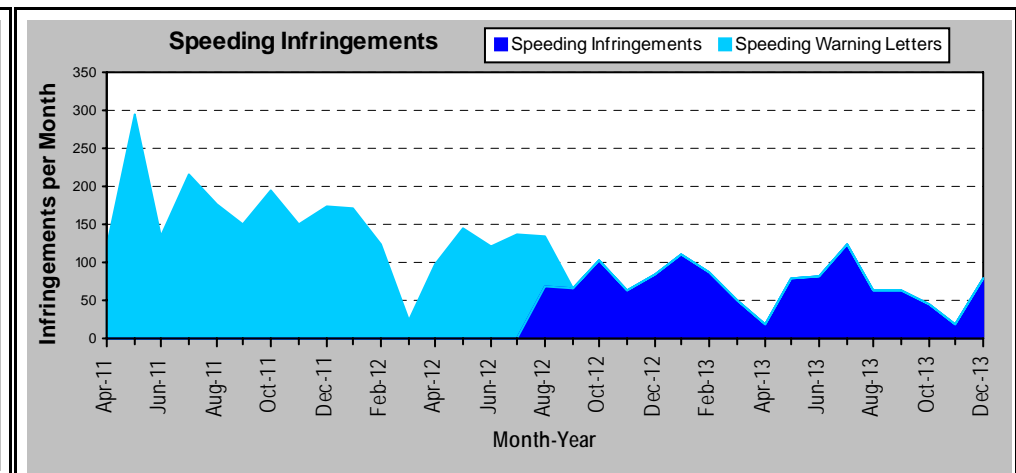
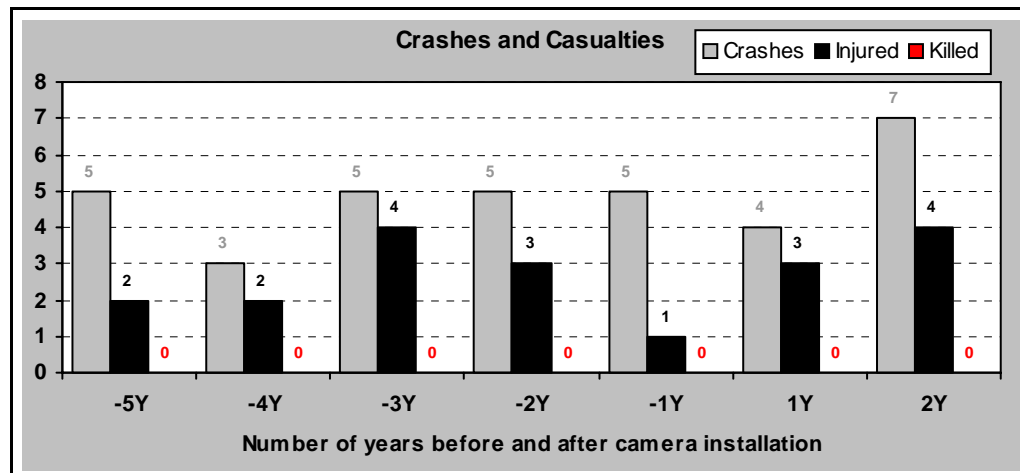
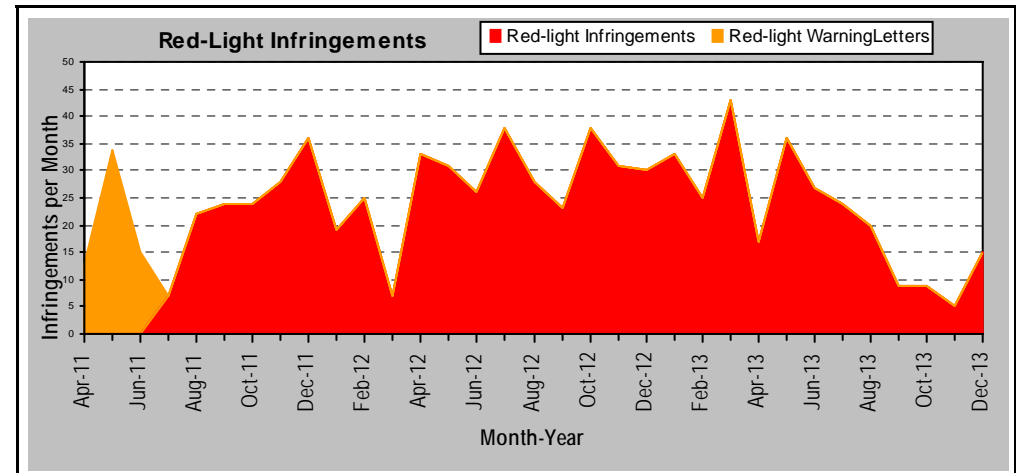
	5 years before installation ¹	2 years and 266 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	12	8	+22%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	23	14	+12%
<i>Adjacent Crashes</i>	1	2	+267%
<i>Right Through Crashes</i>	14	10	+31%
<i>Rear End Crashes</i>	5	2	27%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Kingsgrove - Kingsgrove Road at Forsyth Street

- There is one camera at this intersection.
- The camera at the intersection of Kingsgrove Road and Forsyth Street commenced issuing warning letters in November 2013.
- A longer period of time is required to assess 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

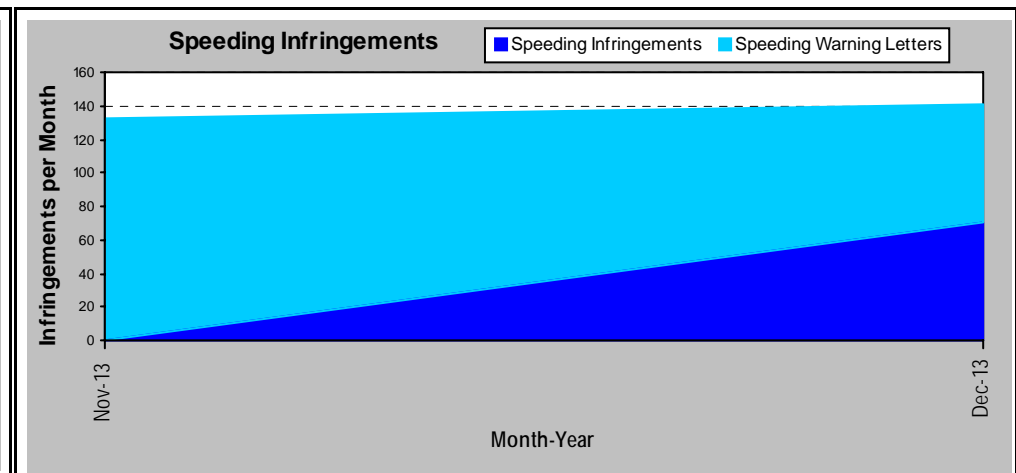
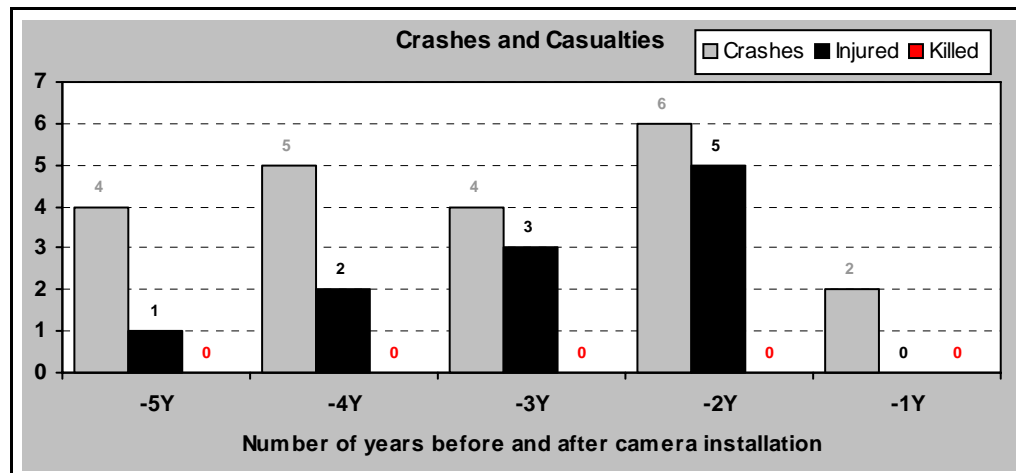
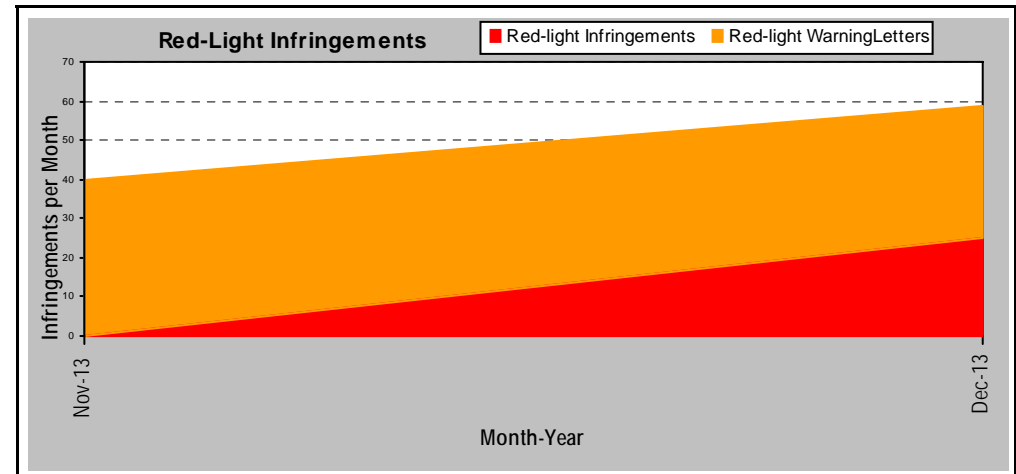
	5 years before installation ¹	47 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	11	0	100%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	21	0	100%
<i>Adjacent Crashes</i>	11	0	100%
<i>Right Through Crashes</i>	4	0	100%
<i>Rear End Crashes</i>	2	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Kirrawee - Acacia Road at President Avenue

- 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

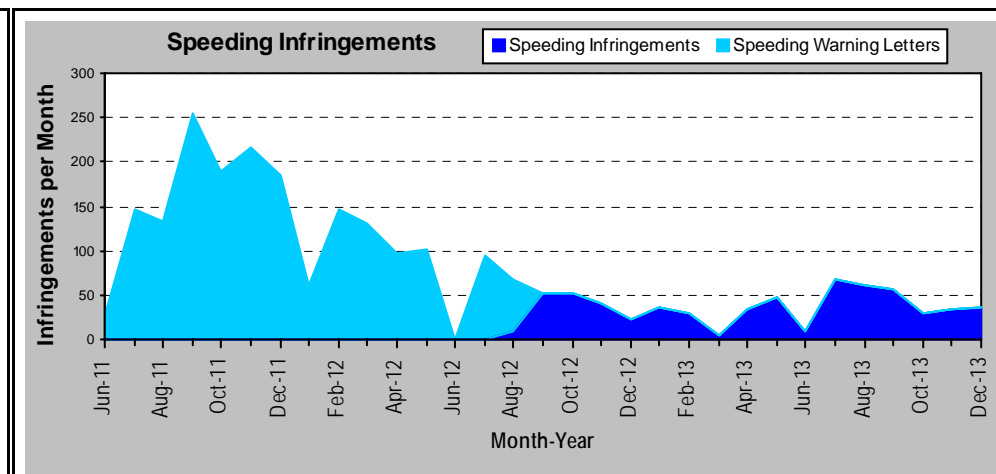
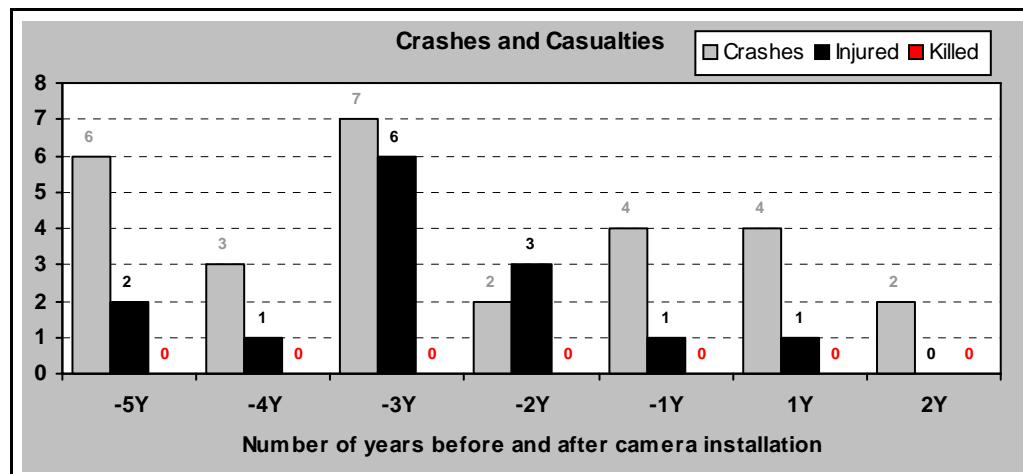
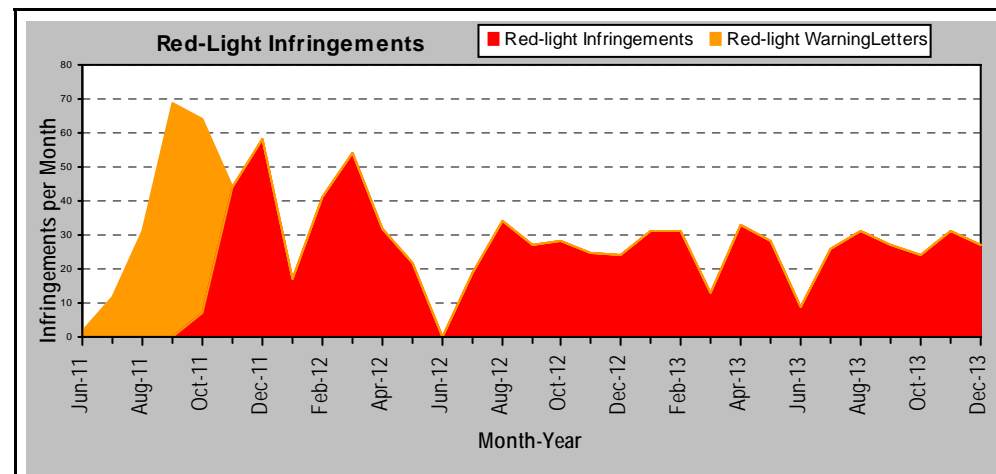
	5 years before installation ¹	2 years and 189 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	13	2	69%
<i>Pedestrian Casualties</i>	2	0	100%
Crashes	22	7	37%
<i>Adjacent Crashes</i>	4	2	1%
<i>Right Through Crashes</i>	7	4	+14%
<i>Rear End Crashes</i>	7	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Kogarah Bay - Park Road at Princes Highway

- 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 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

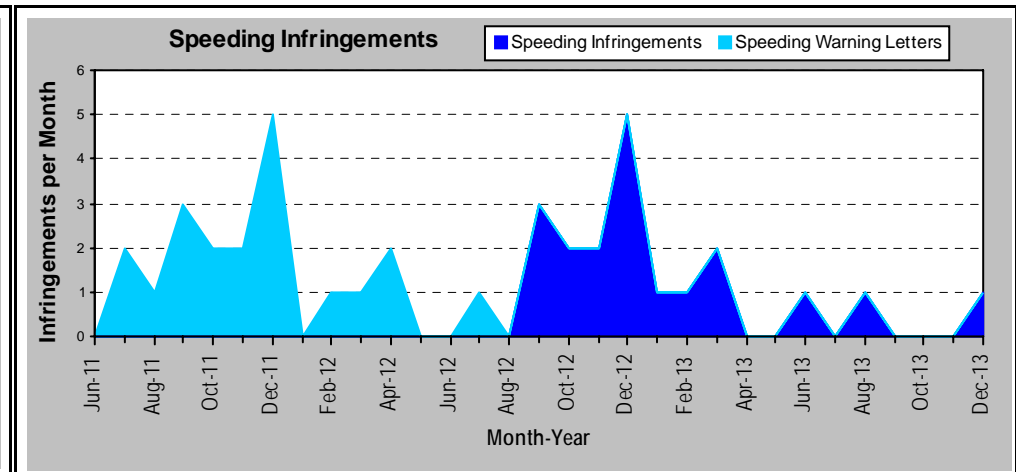
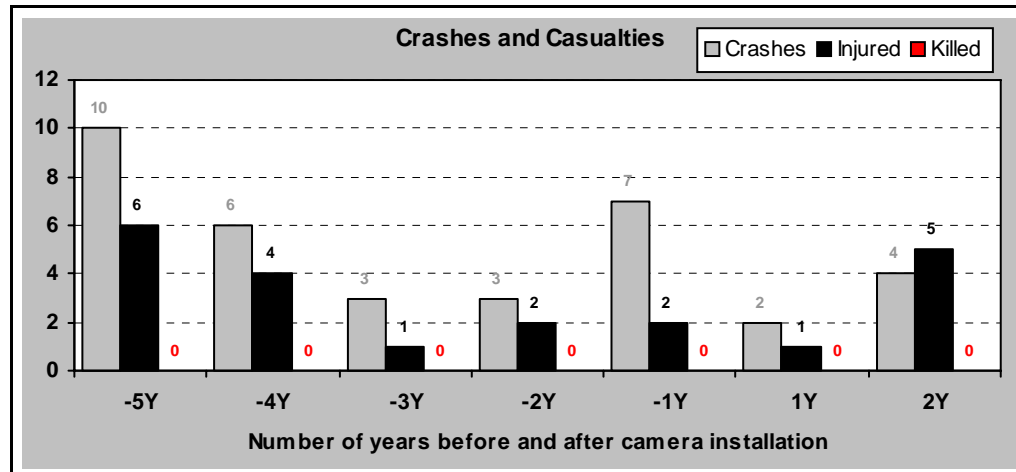
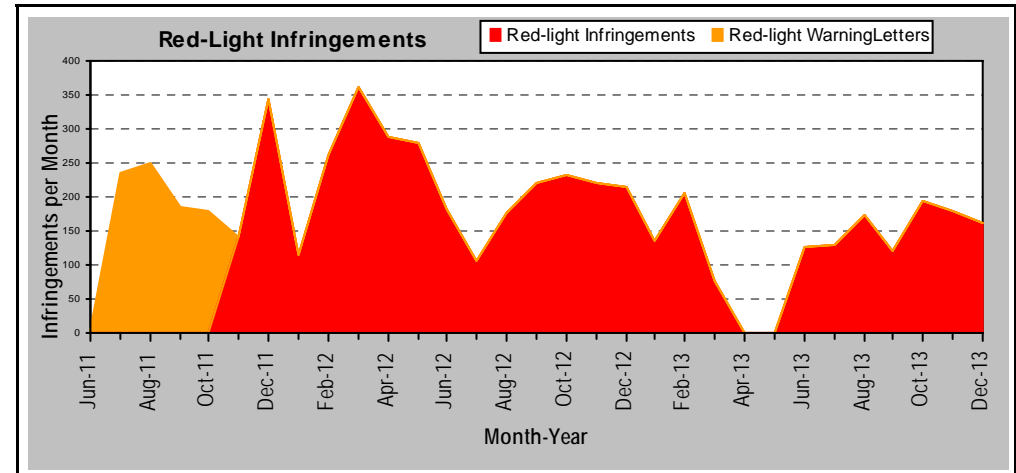
	5 years before installation ¹	2 years and 201 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	15	6	22%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	29	8	46%
<i>Adjacent Crashes</i>	6	3	2%
<i>Right Through Crashes</i>	12	4	35%
<i>Rear End Crashes</i>	7	1	72%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Lakemba - Punchbowl Road at Wangee Road

- There is one camera at this intersection.
- The camera at the intersection of Punchbowl Road and Wangee Road commenced issuing warning letters in October 2013.
- A longer period of time is required to assess 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

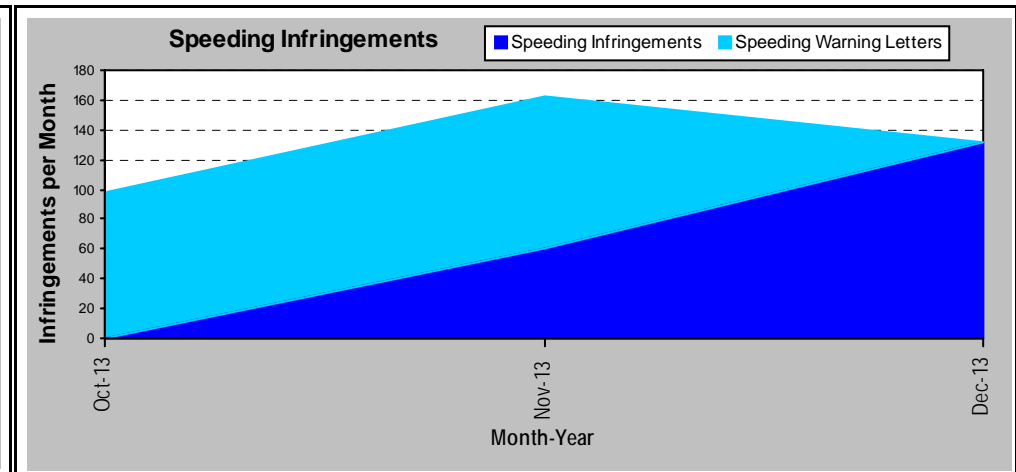
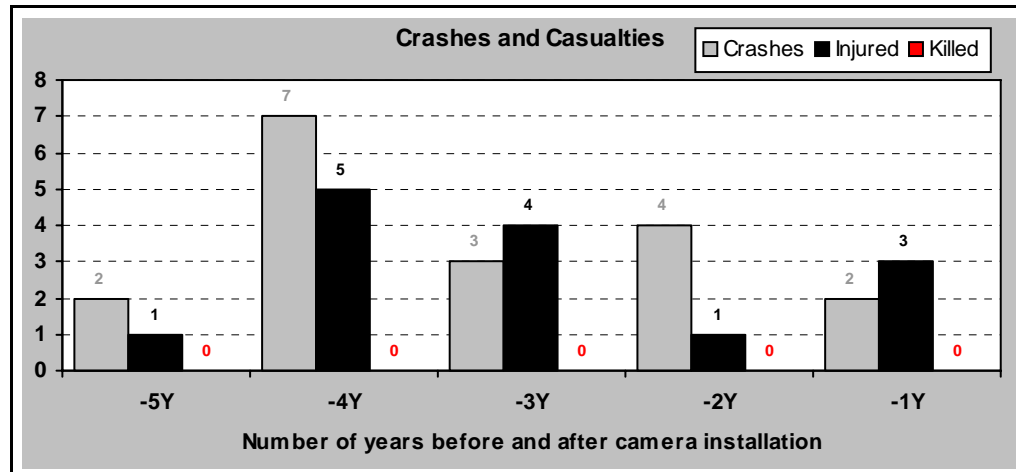
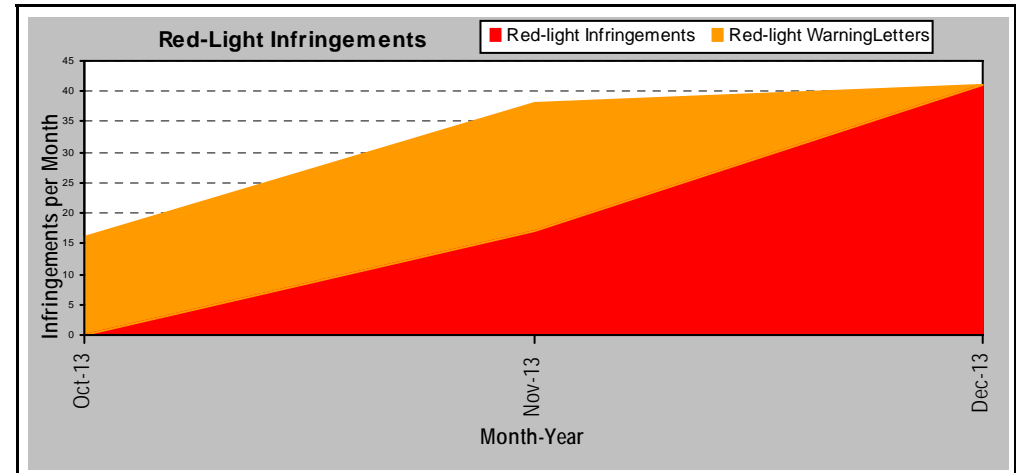
	5 years before installation ¹	75 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	14	0	100%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	18	0	100%
<i>Adjacent Crashes</i>	8	0	100%
<i>Right Through Crashes</i>	6	0	100%
<i>Rear End Crashes</i>	3	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Lambton - Griffiths Road at Turton Road

- 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

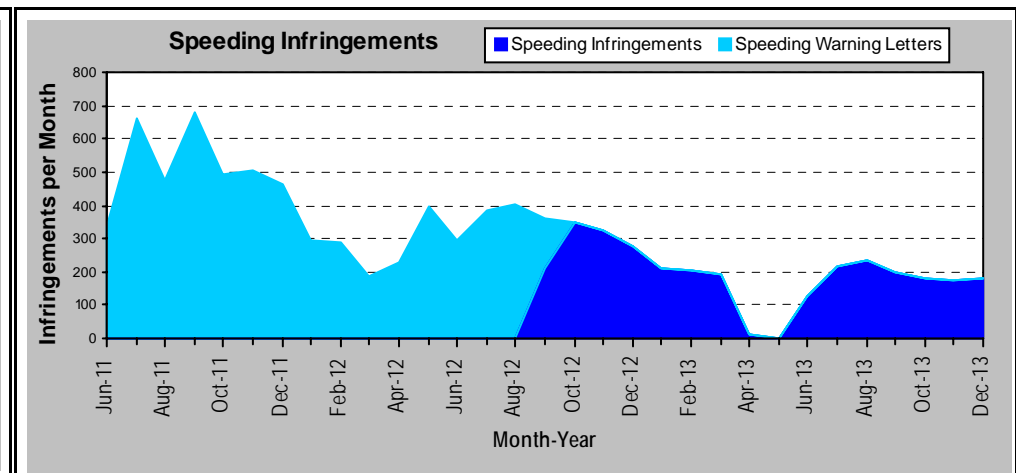
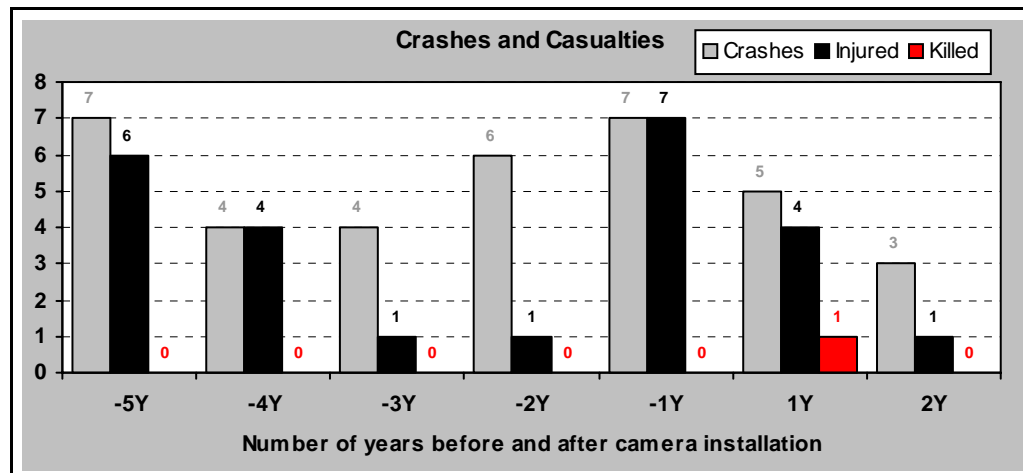
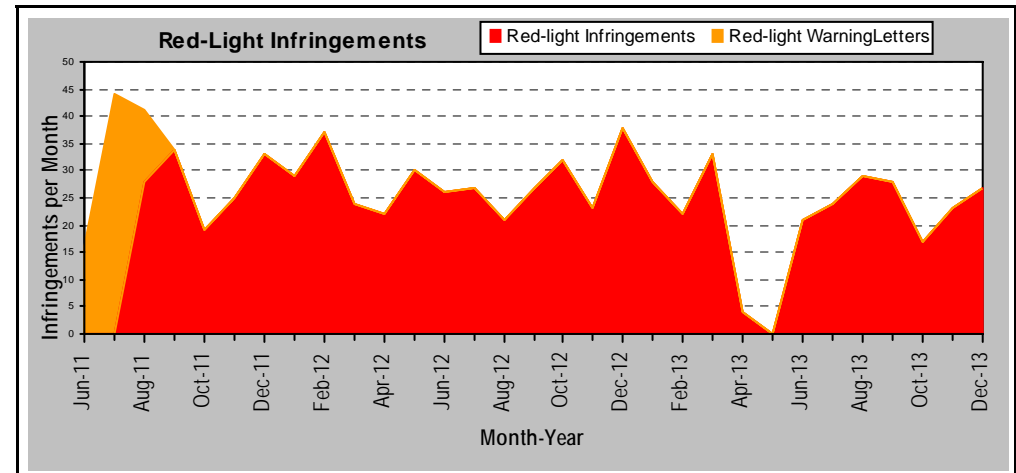
	5 years before installation ¹	2 years and 214 days after installation ²	Percentage reduction ³
Fatalities	0	1	Increase
Injuries	19	10	+2%
<i>Pedestrian Casualties</i>	1	1	+93%
Crashes	28	11	24%
<i>Adjacent Crashes</i>	7	2	45%
<i>Right Through Crashes</i>	4	1	52%
<i>Rear End Crashes</i>	11	5	12%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Lansdowne / Villawood - Henry Lawson Drive / Woodville Road at Hume Highway

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Henry Lawson Drive and Hume Highway commenced issuing warning letters in August 2010.
- The camera at the intersection of Woodville Road and Hume Highway 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

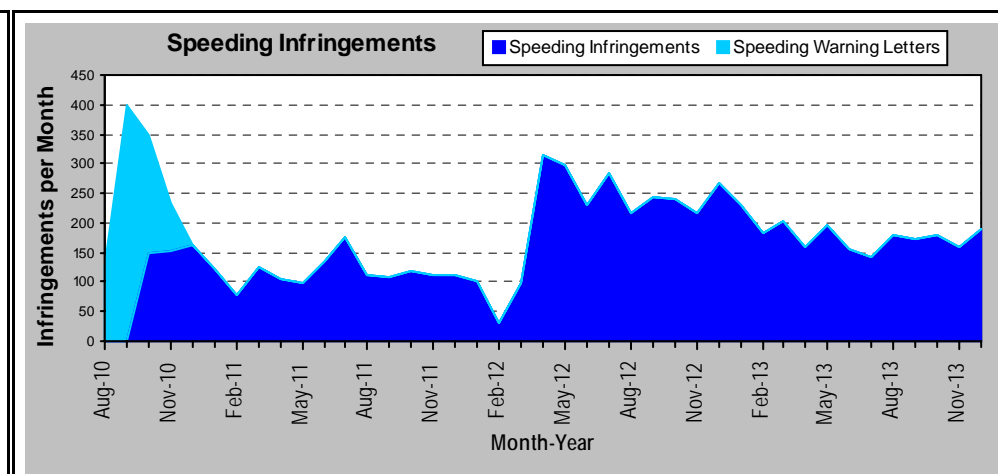
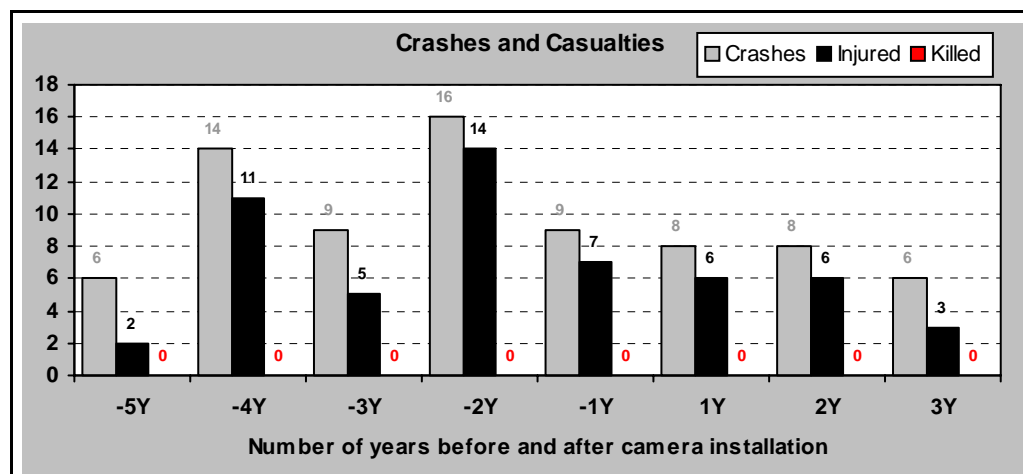
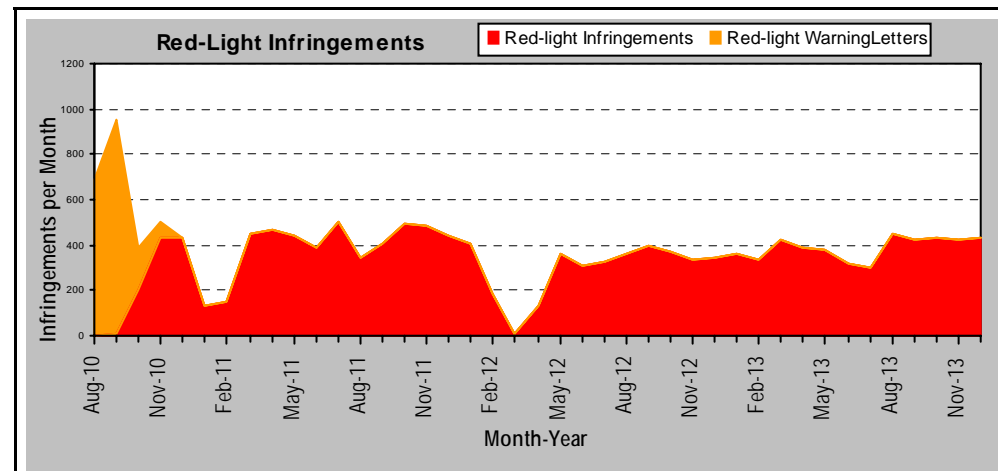
	5 years before installation ¹	3 years and 142 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	39	18	32%
<i>Pedestrian Casualties</i>	2	1	26%
Crashes	54	26	29%
<i>Adjacent Crashes</i>	2	1	26%
<i>Right Through Crashes</i>	13	10	+14%
<i>Rear End Crashes</i>	18	8	34%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Leichhardt - City West Link at James Street

- There is one camera at this intersection.
- The camera at the intersection of City West Link and James Street commenced issuing warning letters in April 2013.
- 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

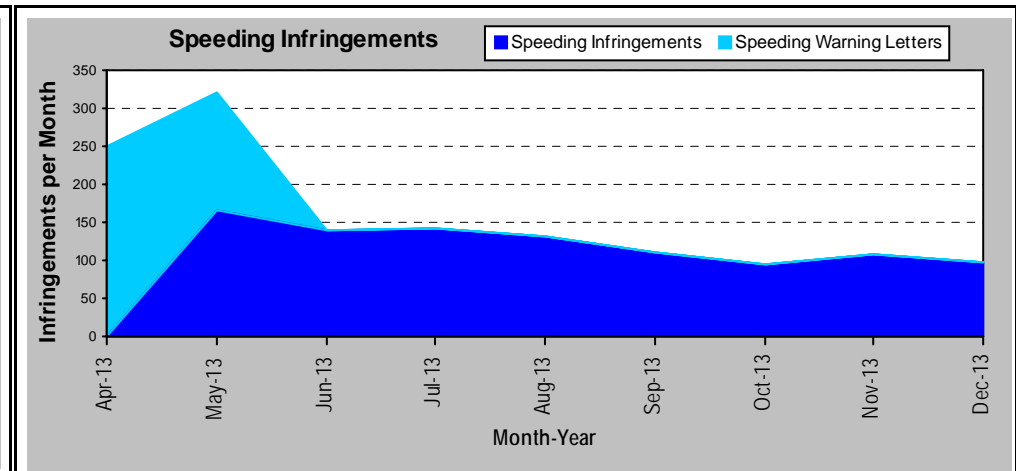
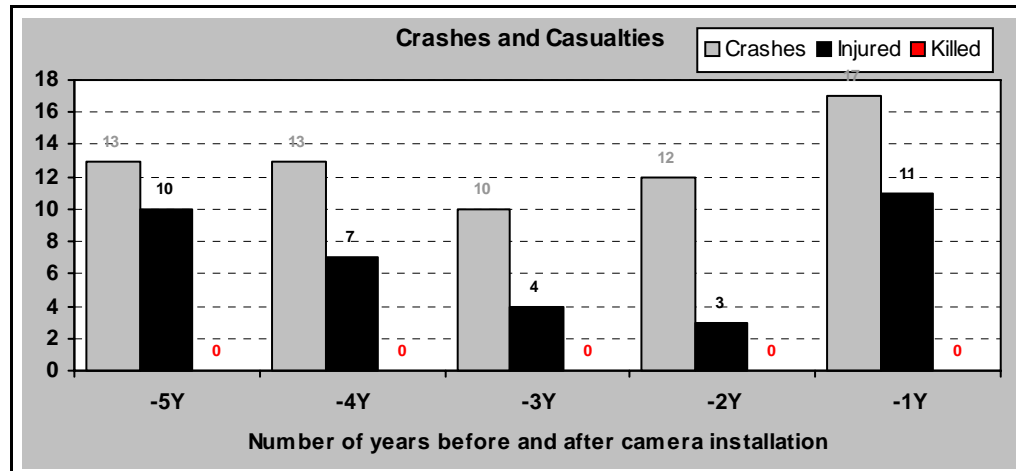
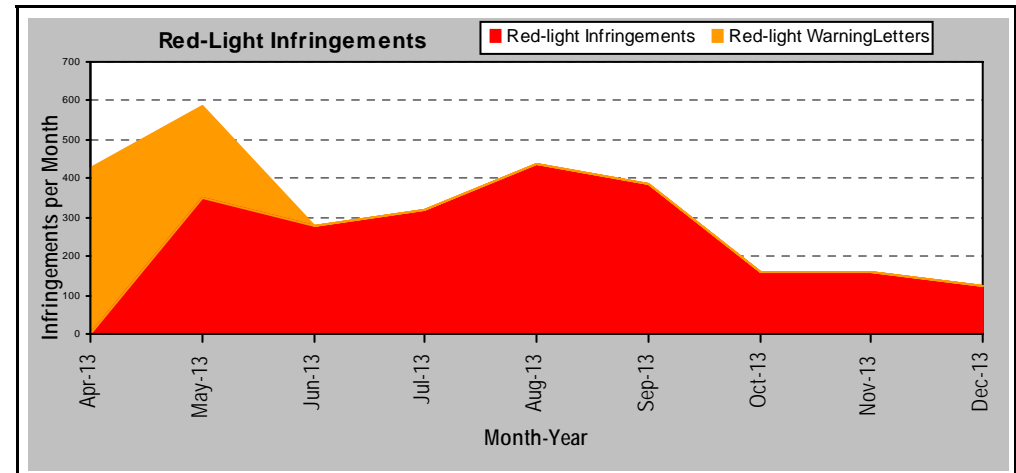
	5 years before installation ¹	264 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	35	4	21%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	65	7	26%
<i>Adjacent Crashes</i>	30	4	8%
<i>Right Through Crashes</i>	2	0	100%
<i>Rear End Crashes</i>	24	1	71%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Lidcombe - Olympic Drive at Vaughan Street

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Olympic Drive and Vaughan Street 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

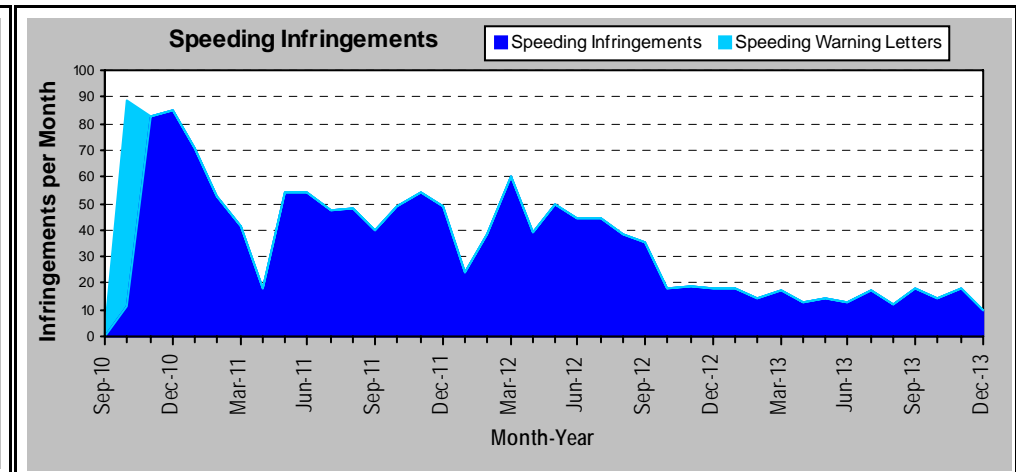
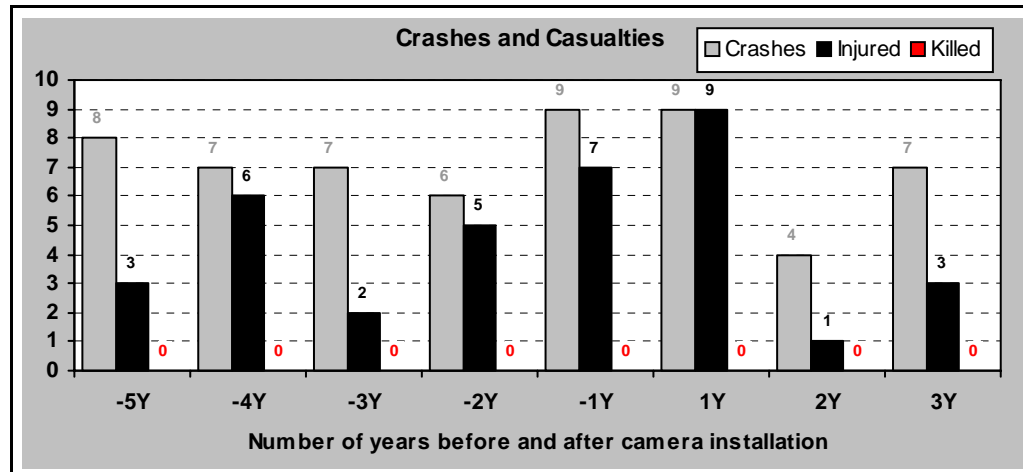
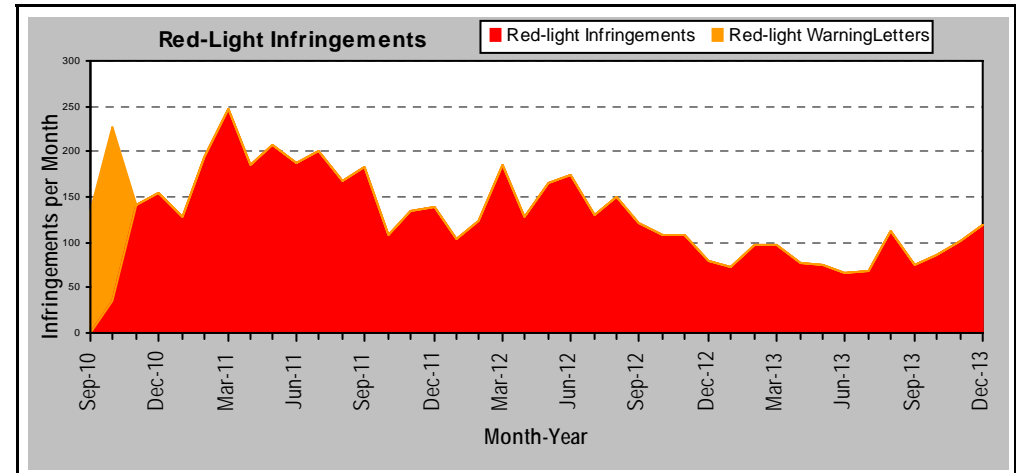
	5 years before installation ¹	3 years and 111 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	23	14	8%
<i>Pedestrian Casualties</i>	2	1	24%
Crashes	37	22	10%
<i>Adjacent Crashes</i>	4	3	+14%
<i>Right Through Crashes</i>	11	4	45%
<i>Rear End Crashes</i>	16	11	+4%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Liverpool - Hume Highway at Elizabeth Drive

- There is one camera at this intersection.
- The camera at the intersection of Hume Highway and Elizabeth Drive 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

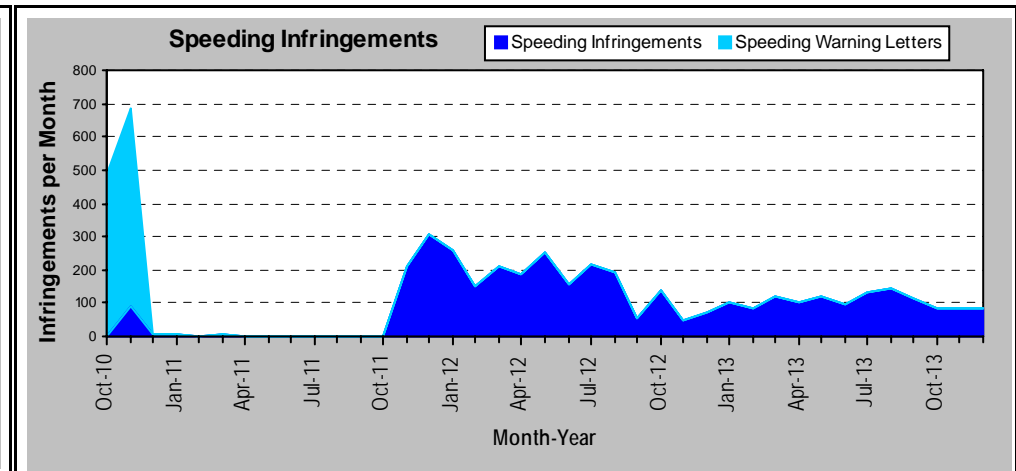
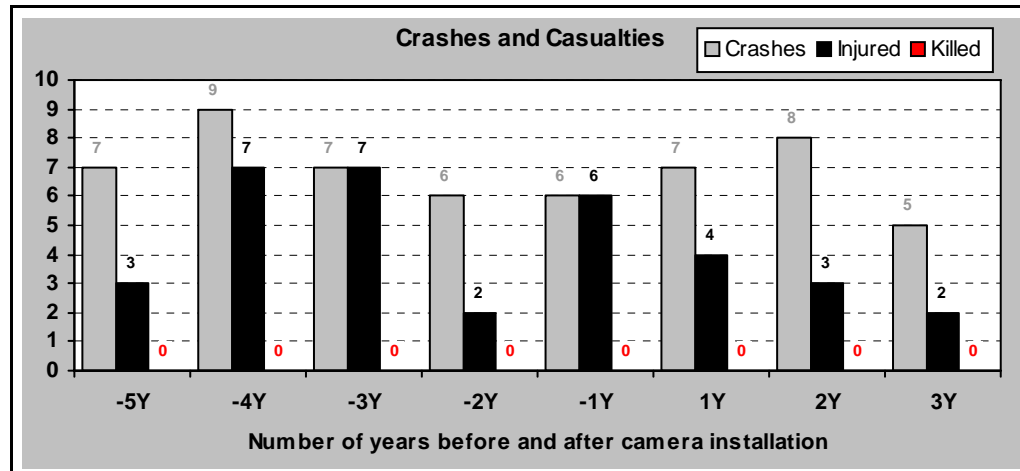
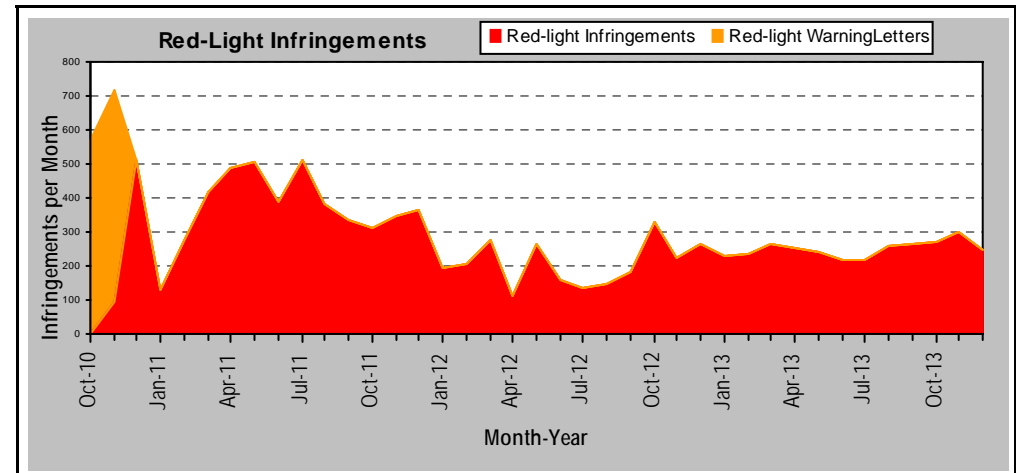
	5 years before installation ¹	3 years and 80 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	25	10	38%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	35	21	7%
<i>Adjacent Crashes</i>	2	3	+133%
<i>Right Through Crashes</i>	5	4	+24%
<i>Rear End Crashes</i>	13	10	+20%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Liverpool - Memorial Avenue at Bathurst Street

- There is one camera at this intersection.
- The camera at the intersection of Memorial Avenue and Bathurst Street commenced issuing warning letters in April 2013.
- 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 since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

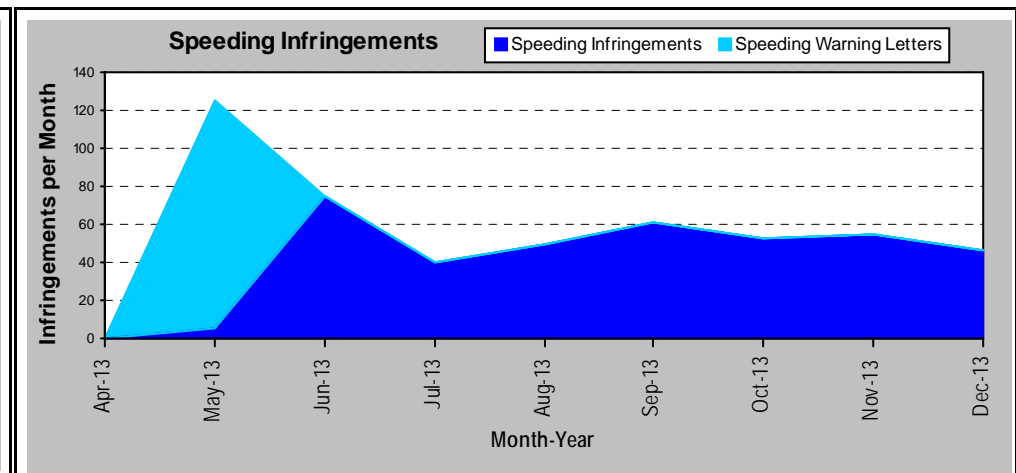
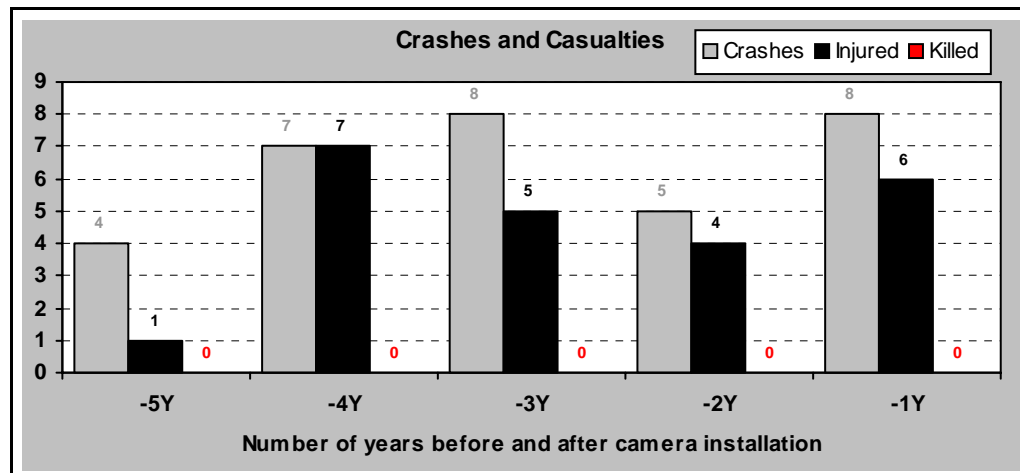
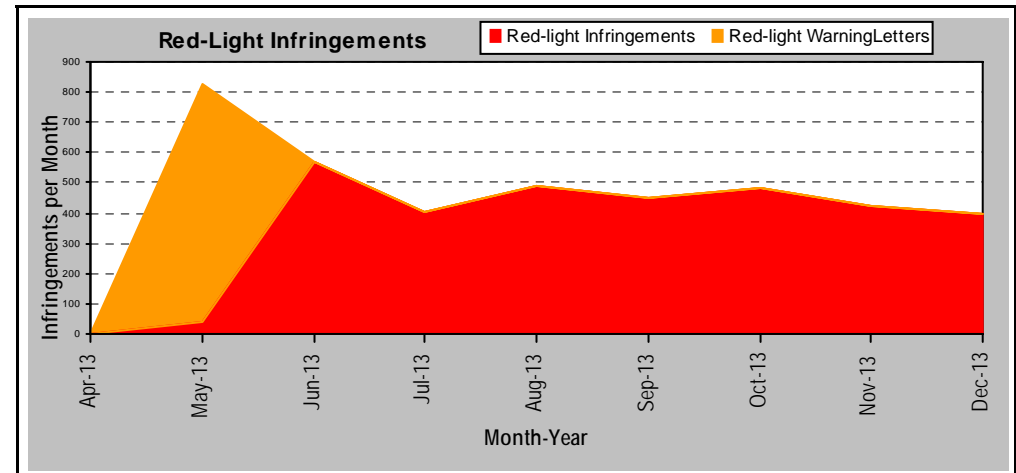
	5 years before installation ¹	246 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	23	2	35%
<i>Pedestrian Casualties</i>	2	0	100%
Crashes	32	1	77%
<i>Adjacent Crashes</i>	15	0	100%
<i>Right Through Crashes</i>	7	1	+6%
<i>Rear End Crashes</i>	1	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Marrickville - Sydenham Road at Victoria Road

- 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 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

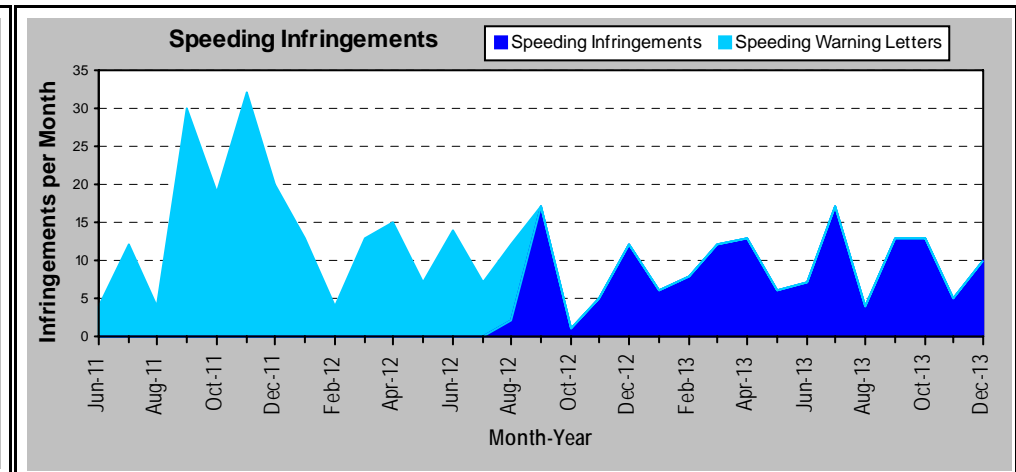
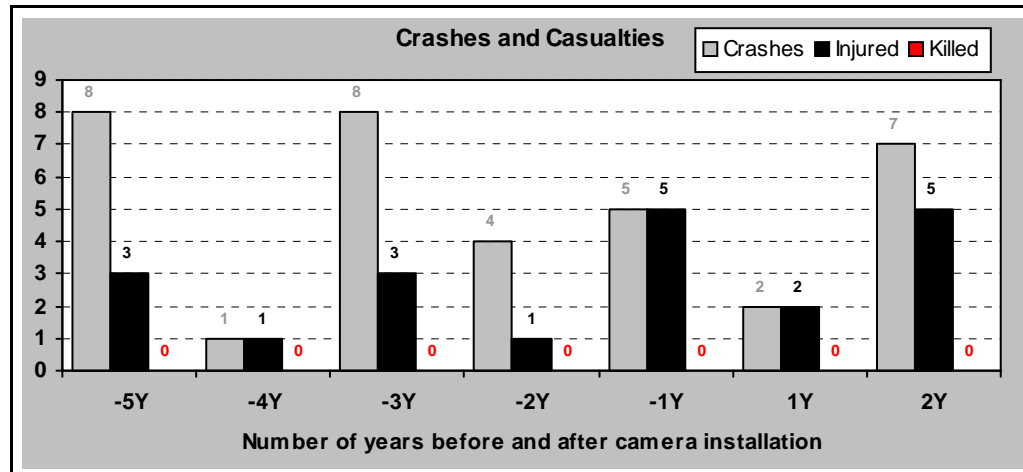
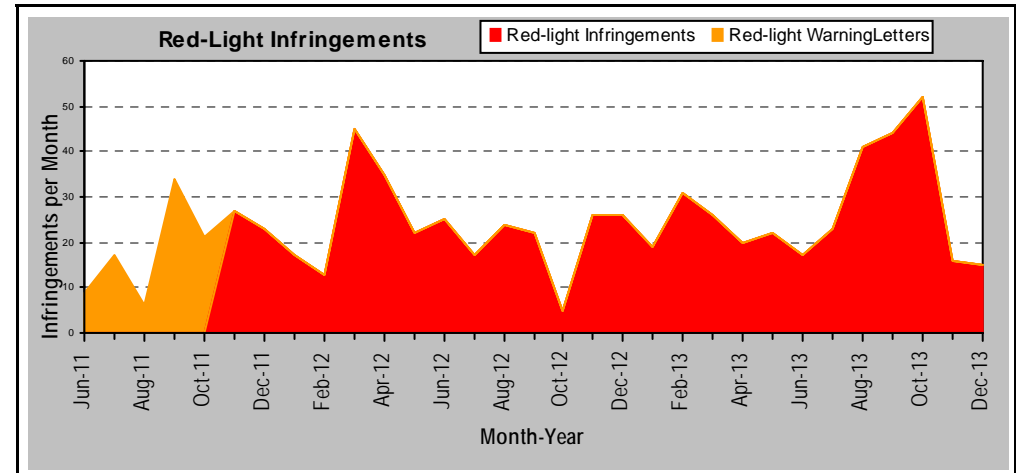
	5 years before installation ¹	2 years and 201 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	13	7	+6%
<i>Pedestrian Casualties</i>	2	0	100%
Crashes	26	10	25%
<i>Adjacent Crashes</i>	5	1	61%
<i>Right Through Crashes</i>	11	3	47%
<i>Rear End Crashes</i>	3	2	+31%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Mascot - O'Riordan Street at Coward Street

- 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 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

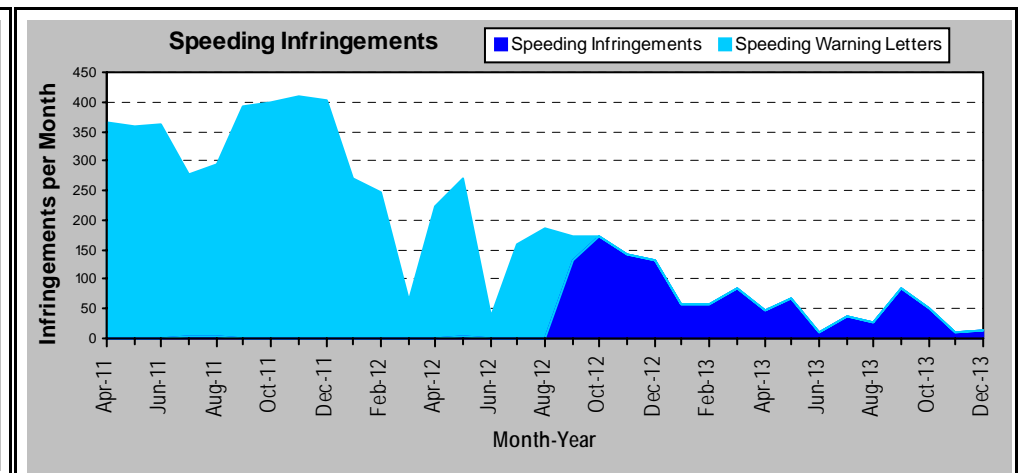
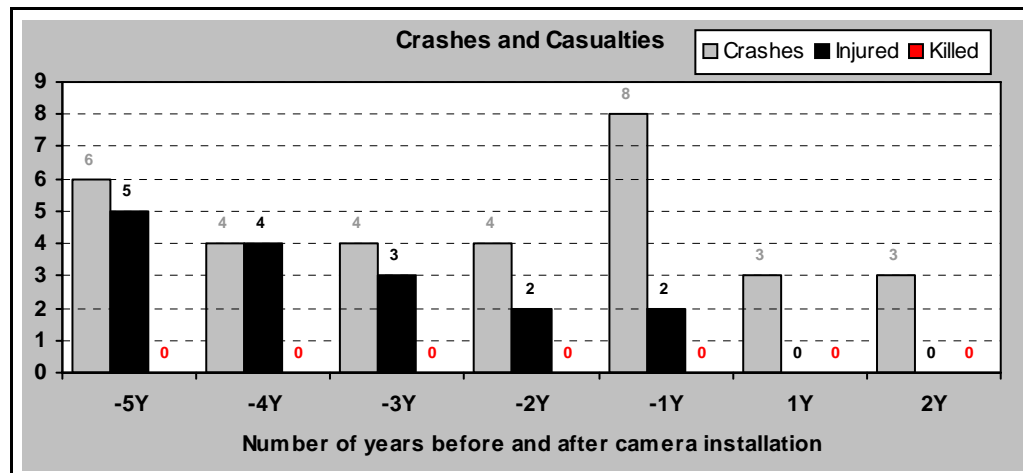
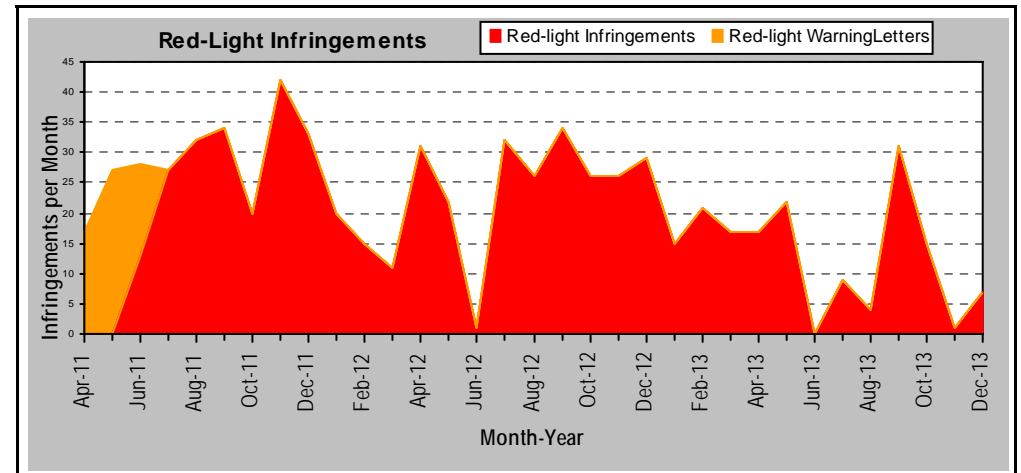
	5 years before installation ¹	2 years and 266 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	16	3	66%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	26	8	44%
<i>Adjacent Crashes</i>	6	2	39%
<i>Right Through Crashes</i>	11	1	83%
<i>Rear End Crashes</i>	4	2	8%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Mascot - O'Riordan Street at Gardeners Road

- 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 Gardeners Road 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

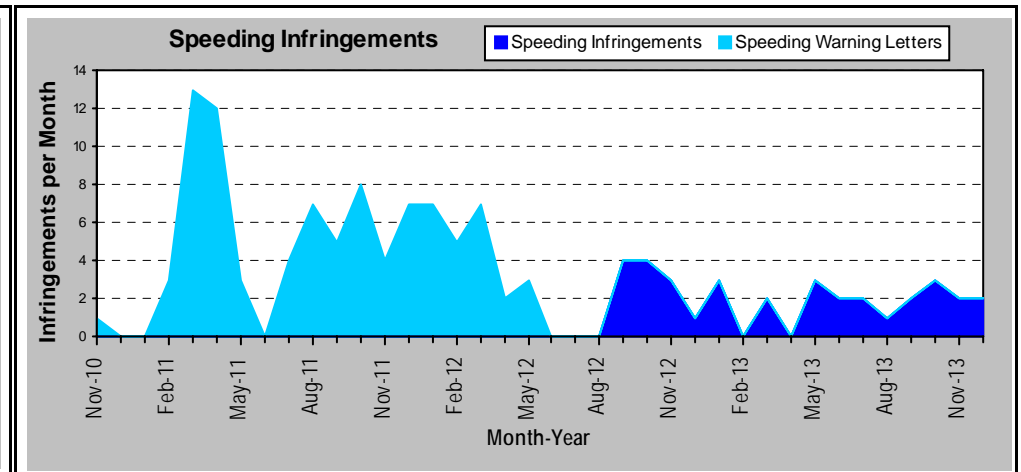
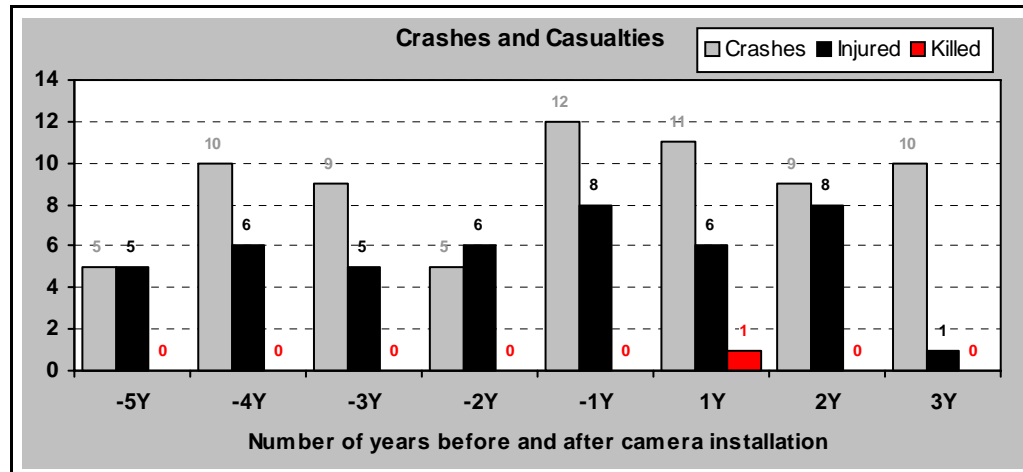
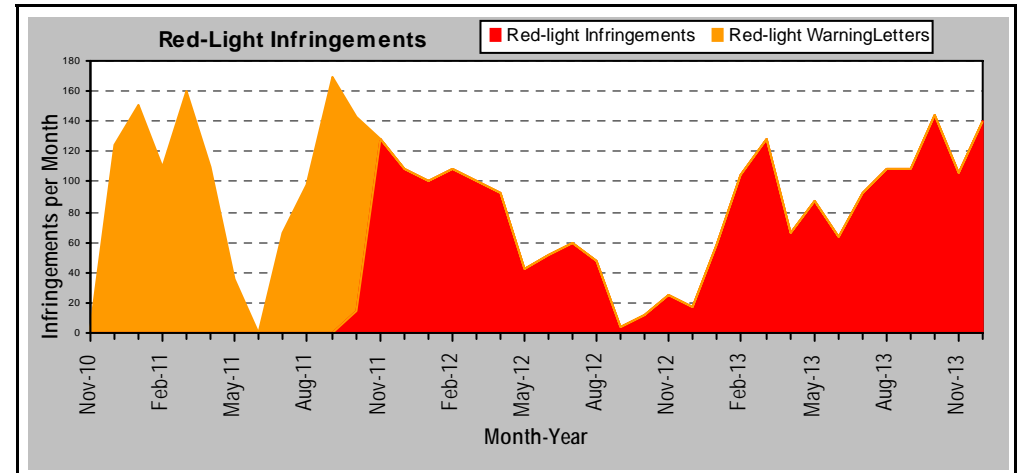
	5 years before installation ¹	3 years and 66 days after installation ²	Percentage reduction ³
Fatalities	0	1	Increase
Injuries	30	16	16%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	41	31	+19%
<i>Adjacent Crashes</i>	5	1	69%
<i>Right Through Crashes</i>	23	19	+30%
<i>Rear End Crashes</i>	4	5	+97%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Mayfield West - Pacific Highway at Maud Street

- 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 Maud Street commenced issuing warning letters in May 2011.
- While early results indicate a slight increase in casualties and 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

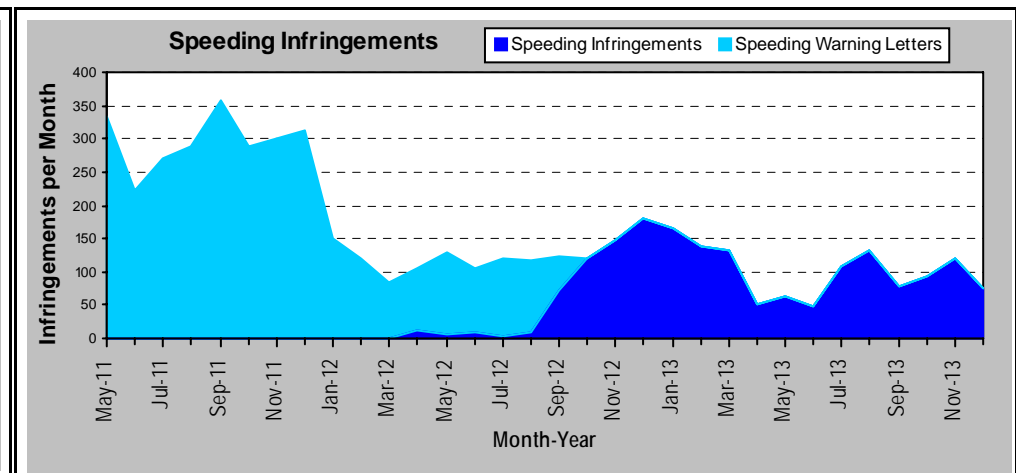
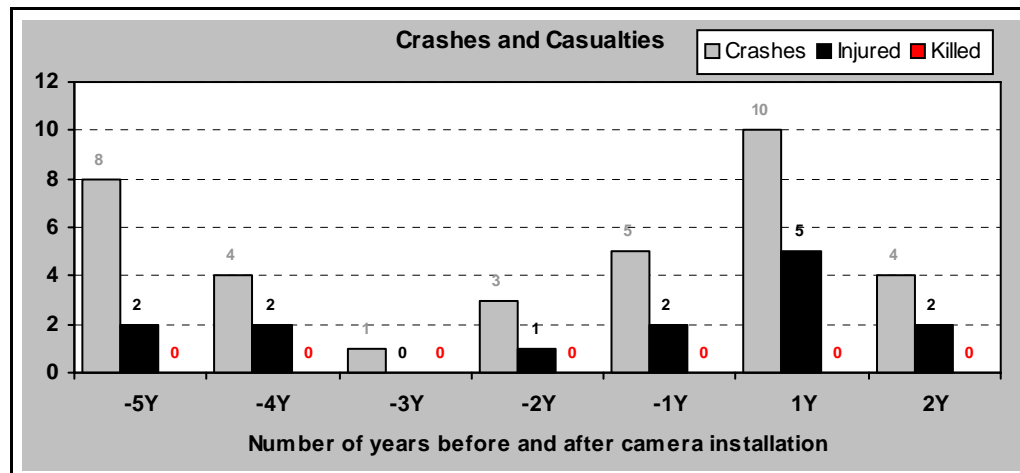
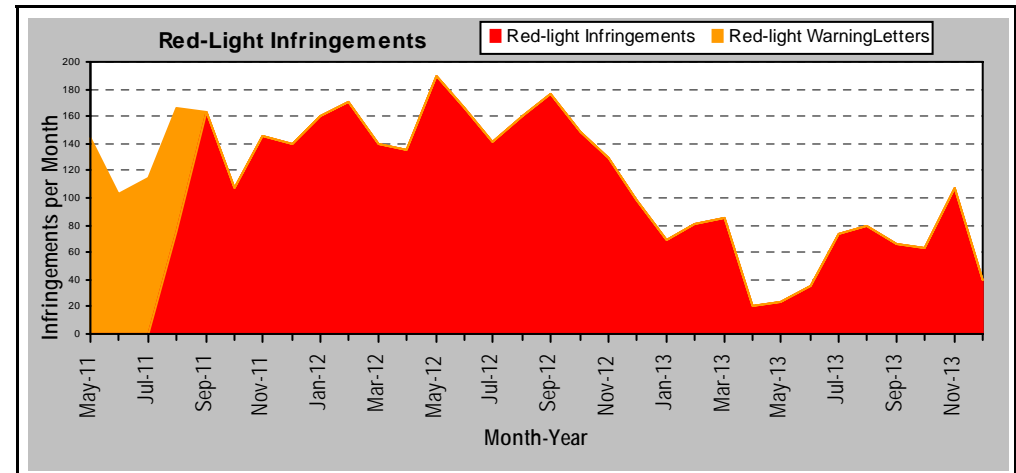
	5 years before installation ¹	2 years and 234 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	7	8	+116%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	21	18	+62%
<i>Adjacent Crashes</i>	4	2	5%
<i>Right Through Crashes</i>	9	10	+110%
<i>Rear End Crashes</i>	3	3	+89%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Mays Hill - Great Western Highway at Coleman Street / Hawkesbury Road

- There are two cameras at this intersection.
- The camera at the intersection of Great Western Highway and Coleman Street commenced issuing warning letters in July 2010.
- The camera at the intersection of Great Western Highway and Hawkesbury Road 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

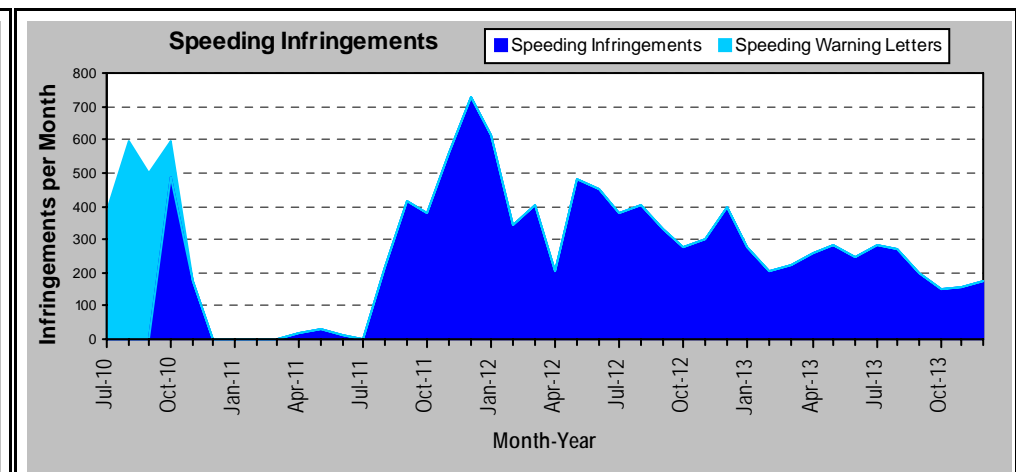
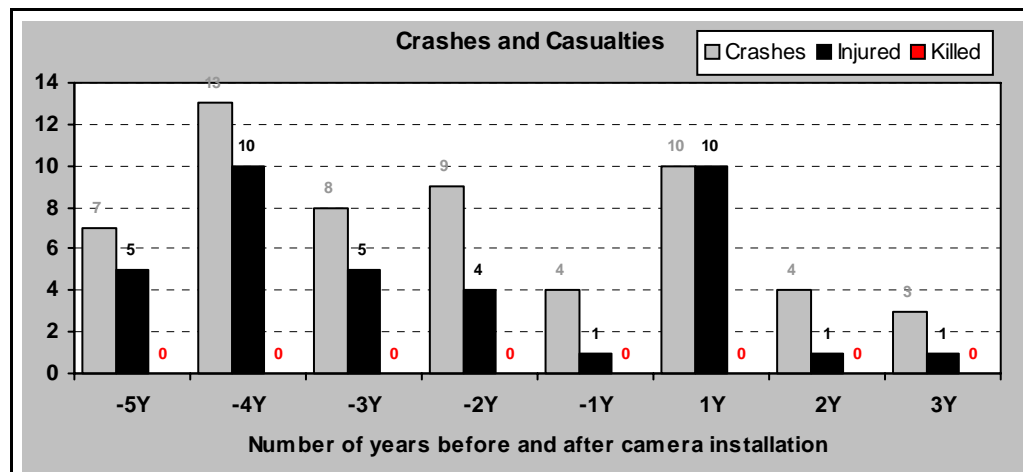
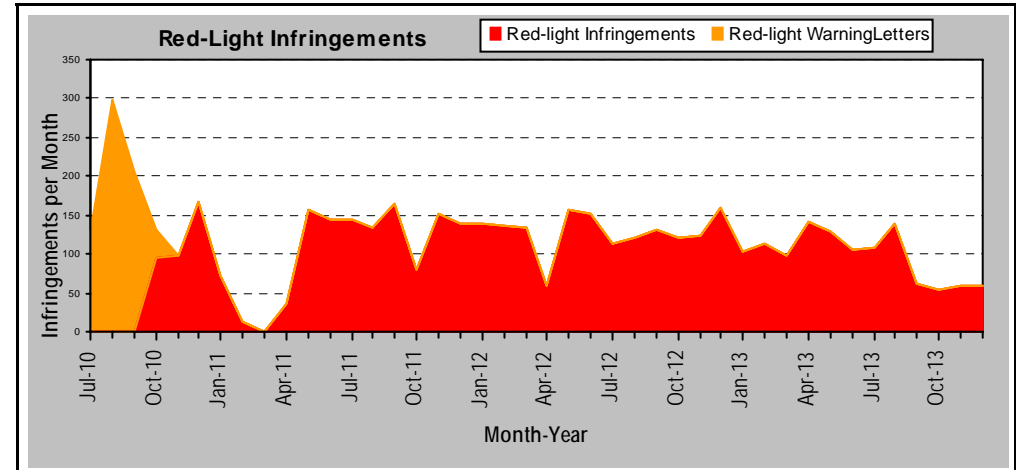
	5 years before installation ¹	3 years and 185 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	25	13	26%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	41	21	27%
<i>Adjacent Crashes</i>	5	1	71%
<i>Right Through Crashes</i>	17	8	33%
<i>Rear End Crashes</i>	15	8	24%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Milperra - Newbridge Road at Henry Lawson Drive

- There is one camera at this intersection.
- The camera at the intersection of Newbridge Road and Henry Lawson Drive commenced issuing warning letters in September 2010.
- While early results indicate a slight increase in casualties and 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. In May 2012, the speed limit was changed from 60 km/h to 70 km/h. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

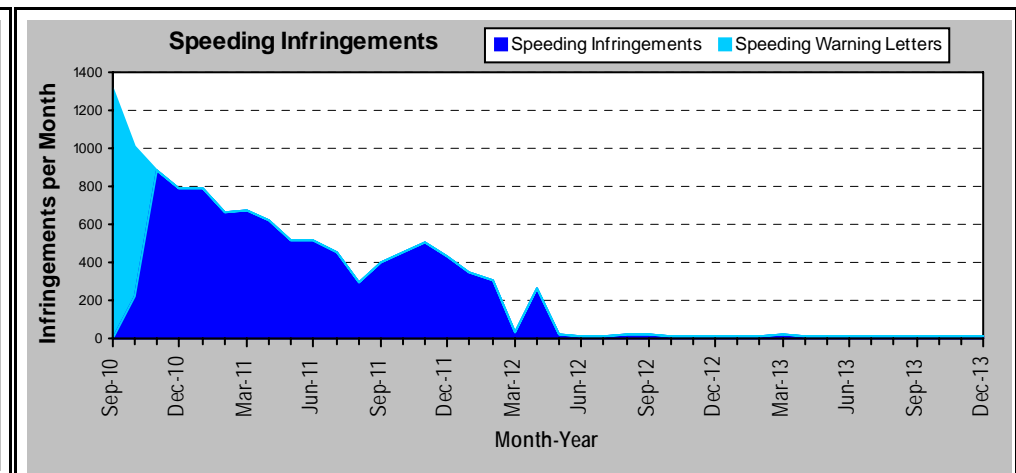
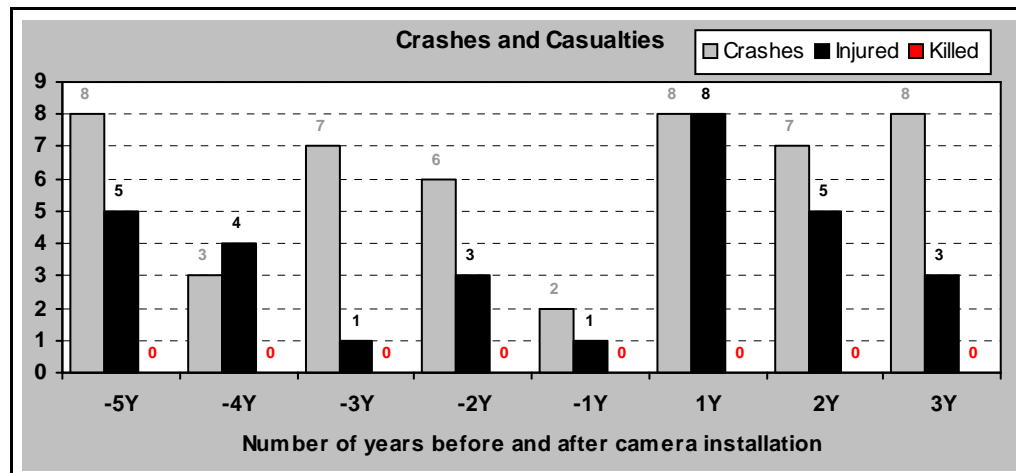
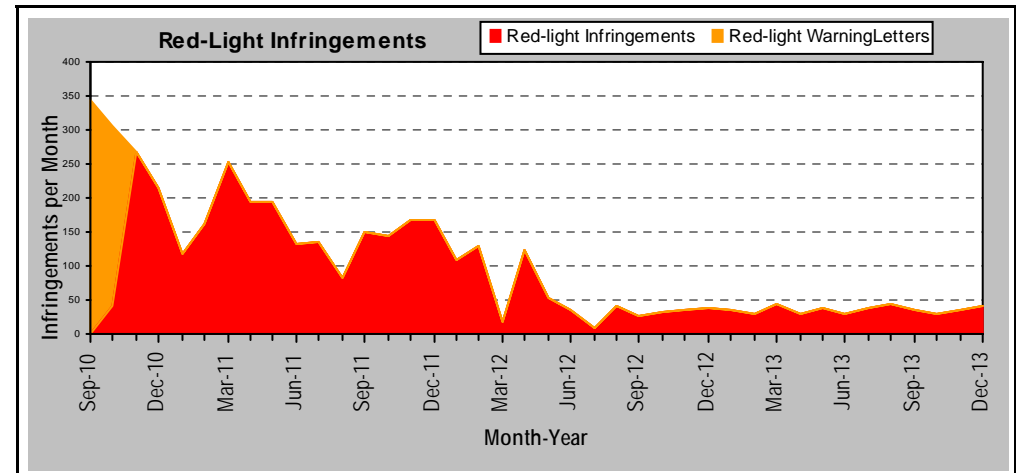
	5 years before installation ¹	3 years and 115 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	14	17	+83%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	26	24	+39%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	6	0	100%
<i>Rear End Crashes</i>	11	16	+120%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Miranda - The Kingsway at Port Hacking Road

- There is one camera at this intersection.
- The camera at the intersection of Kingsway and Port Hacking Road commenced issuing warning letters in July 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

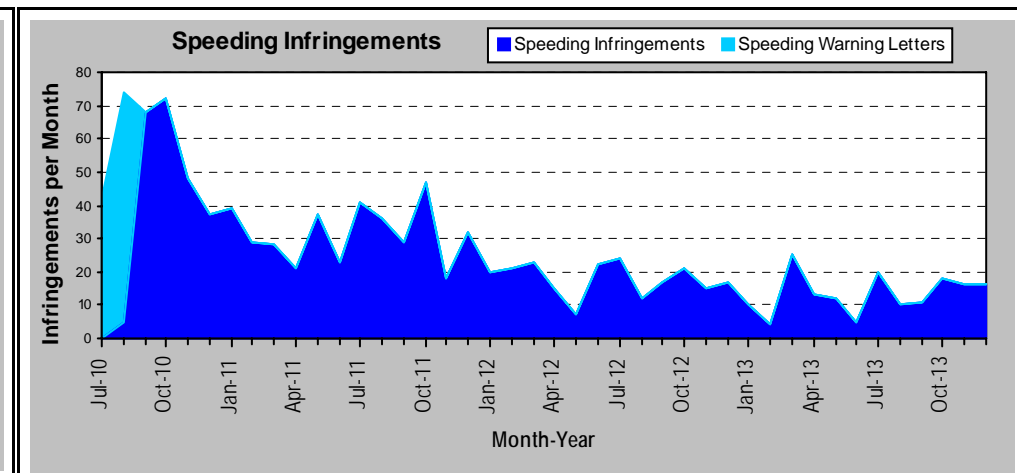
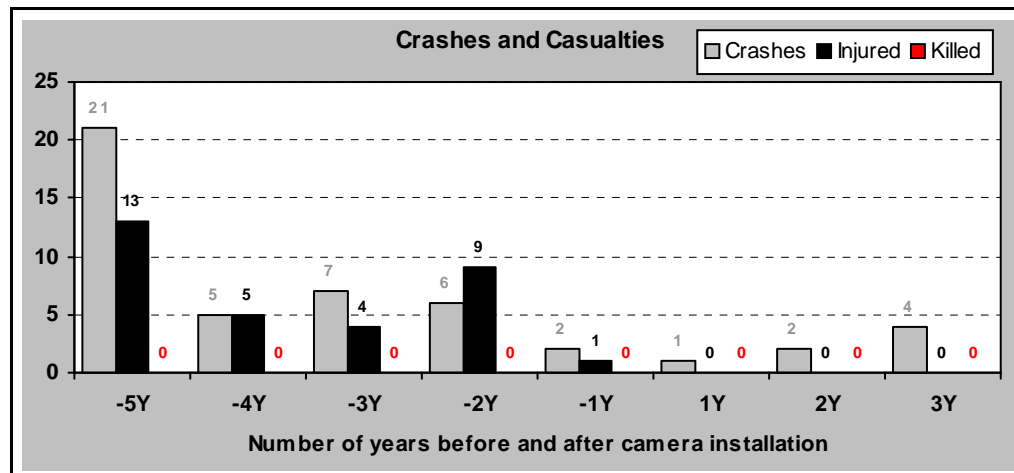
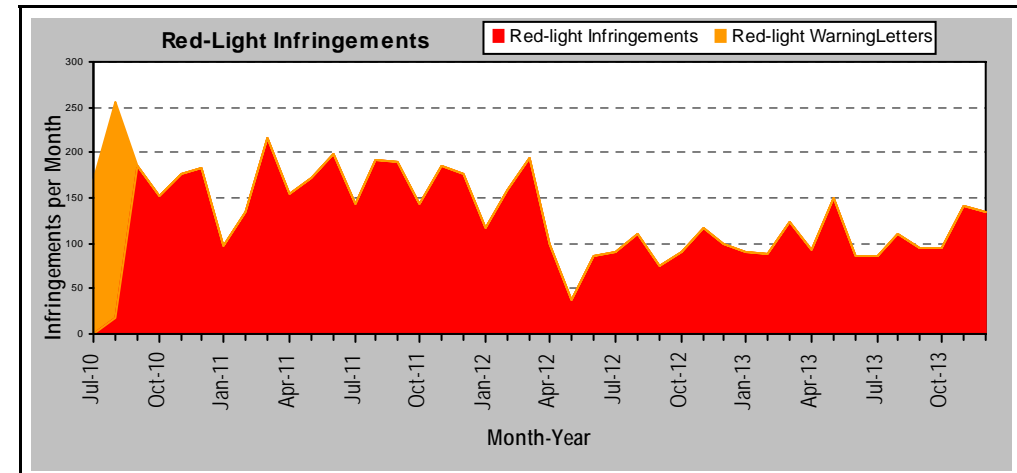
	5 years before installation ¹	3 years and 179 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	32	0	100%
<i>Pedestrian Casualties</i>	3	0	100%
Crashes	41	7	76%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	20	1	93%
<i>Rear End Crashes</i>	11	3	61%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Moore Park - Anzac Parade at Lang Road

- 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

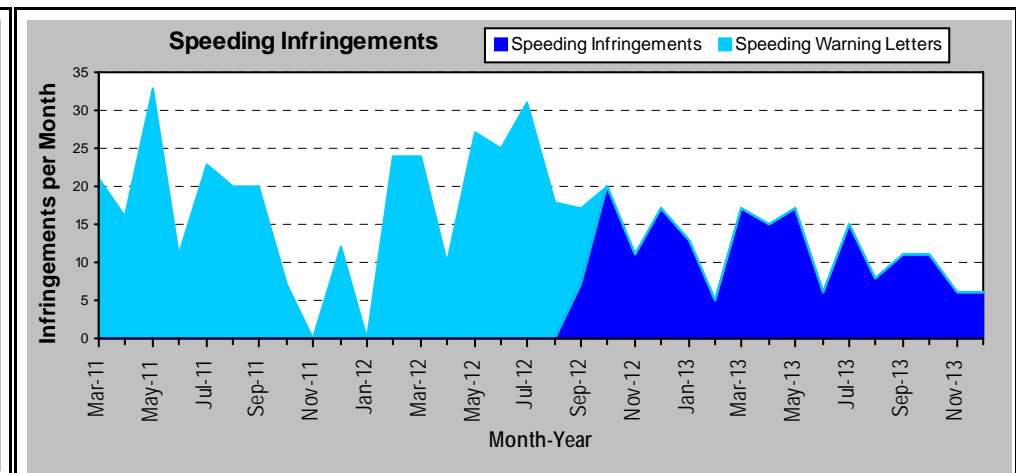
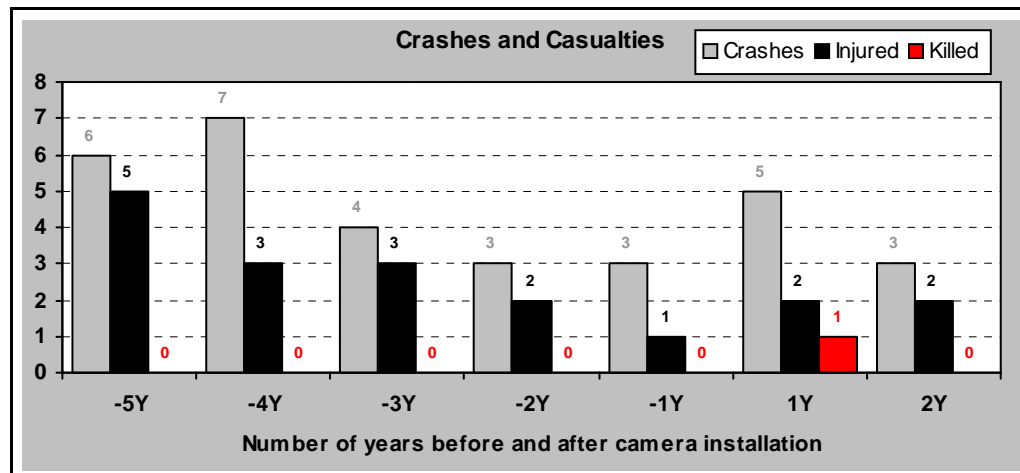
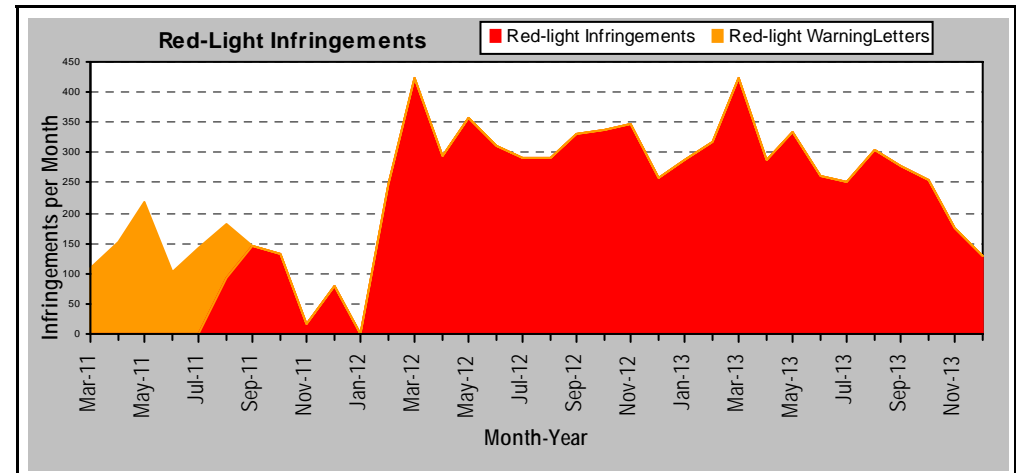
	5 years before installation ¹	2 years and 292 days after installation ²	Percentage reduction ³
Fatalities	0	1	Increase
Injuries	14	4	49%
<i>Pedestrian Casualties</i>	1	1	+79%
Crashes	23	8	38%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	4	0	100%
<i>Rear End Crashes</i>	10	4	29%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Moore Park / Paddington - Anzac Parade / Flinders Street at Moore Park Road

- There are two cameras at this intersection.
- The camera at the intersection of Anzac Parade and Moore Park Road commenced issuing warning letters in August 2010.
- The camera at the intersection of Flinders Street and Moore Park Road commenced issuing warning letters in August 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

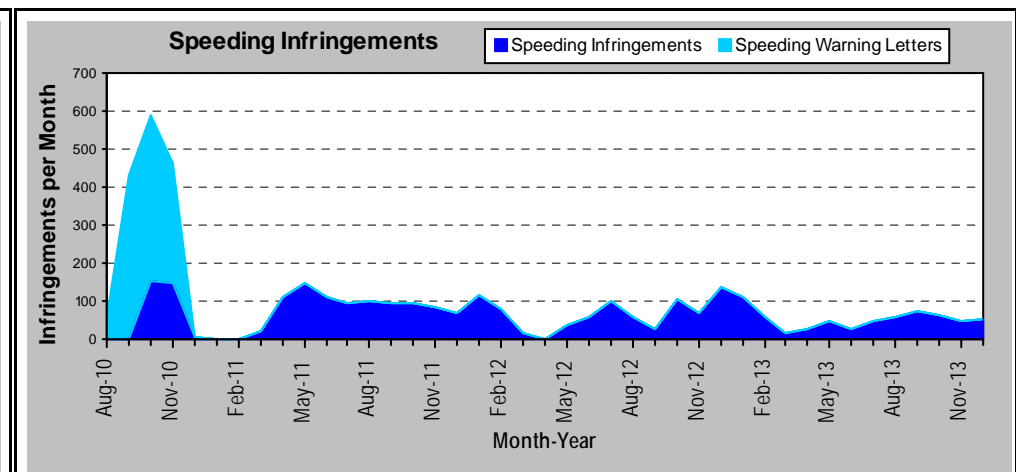
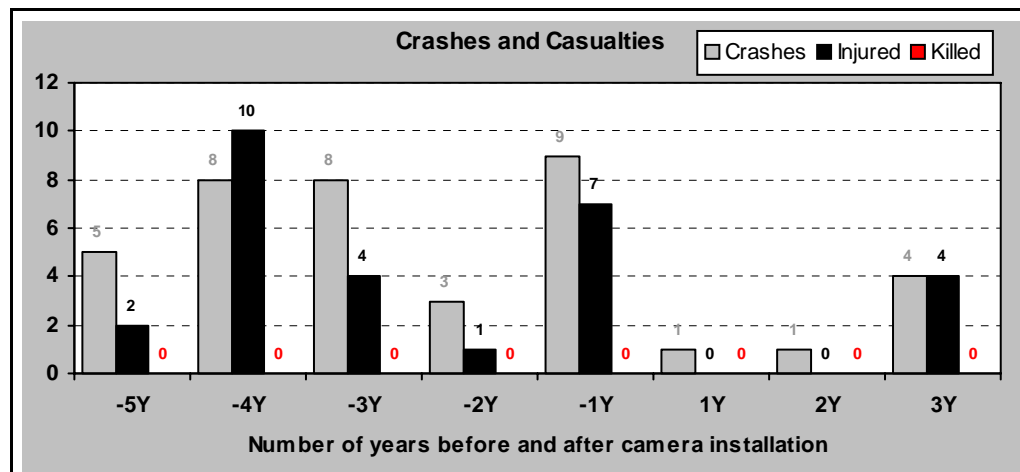
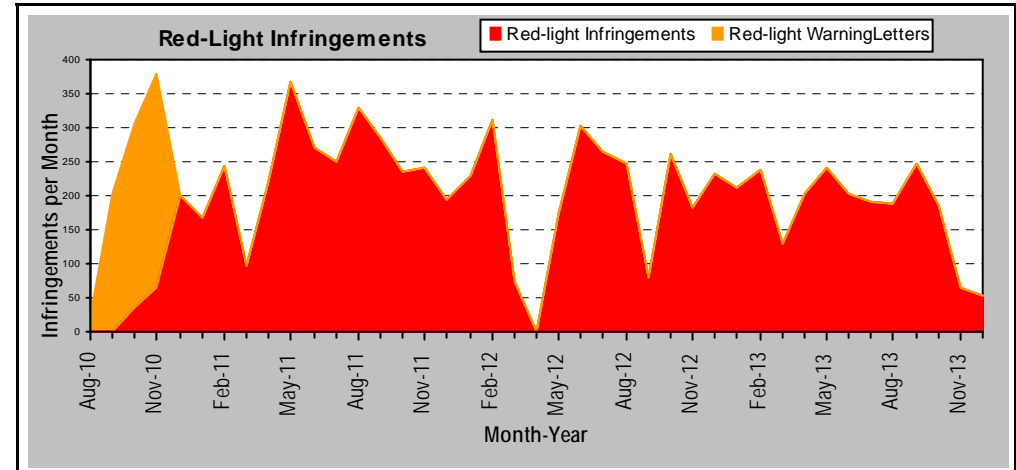
	5 years before installation ¹	3 years and 137 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	24	4	75%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	33	6	73%
<i>Adjacent Crashes</i>	4	1	63%
<i>Right Through Crashes</i>	14	4	58%
<i>Rear End Crashes</i>	4	1	63%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Moorebank - Newbridge Road at Stockton Avenue

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Newbridge Road and Stockton Avenue 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

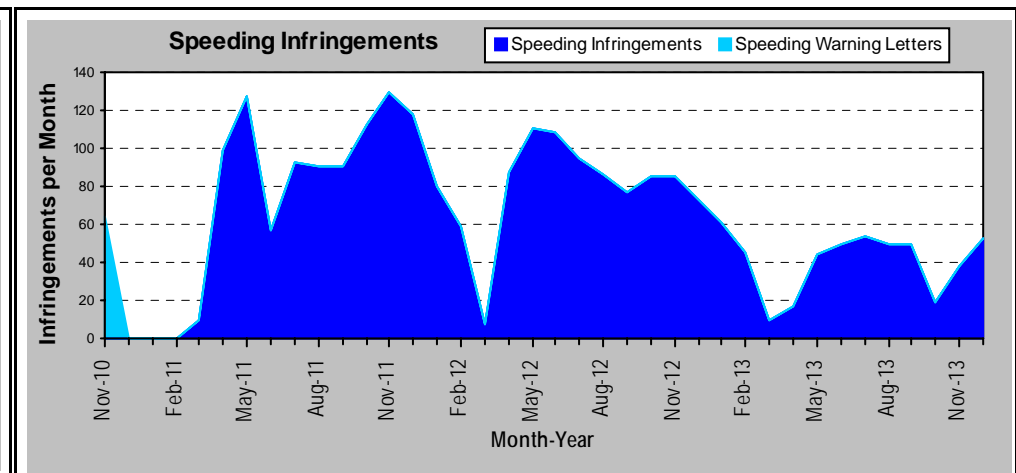
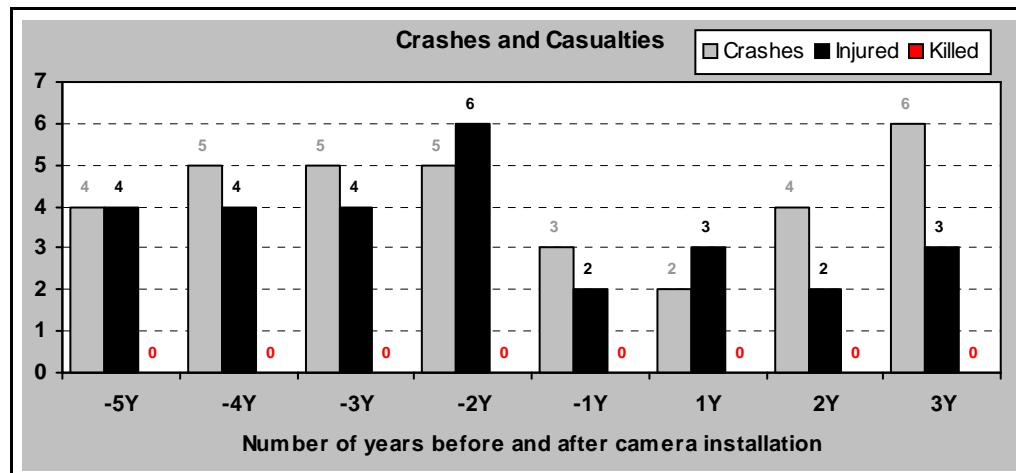
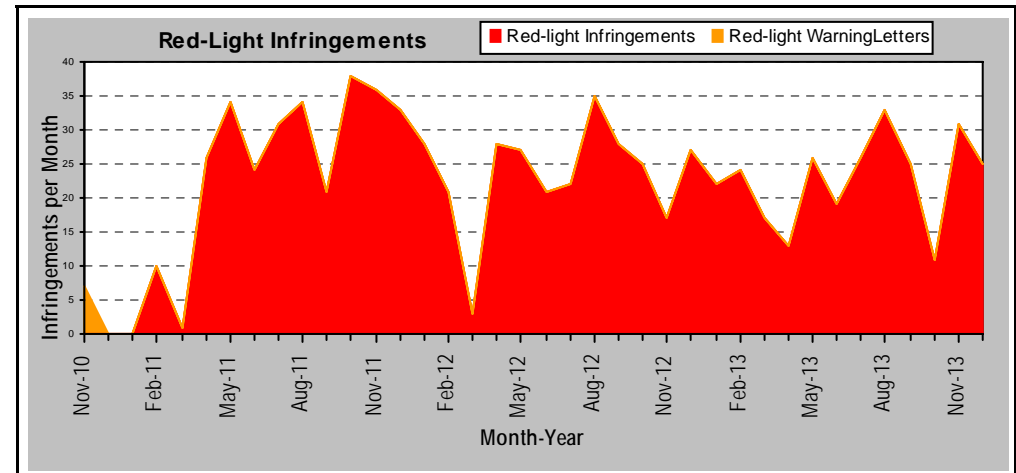
	5 years before installation ¹	3 years and 18 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	20	8	34%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	22	12	11%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	10	4	34%
<i>Rear End Crashes</i>	8	6	+23%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Mosman - Military Road at Cowles Road

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Military Road and Cowles Road 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

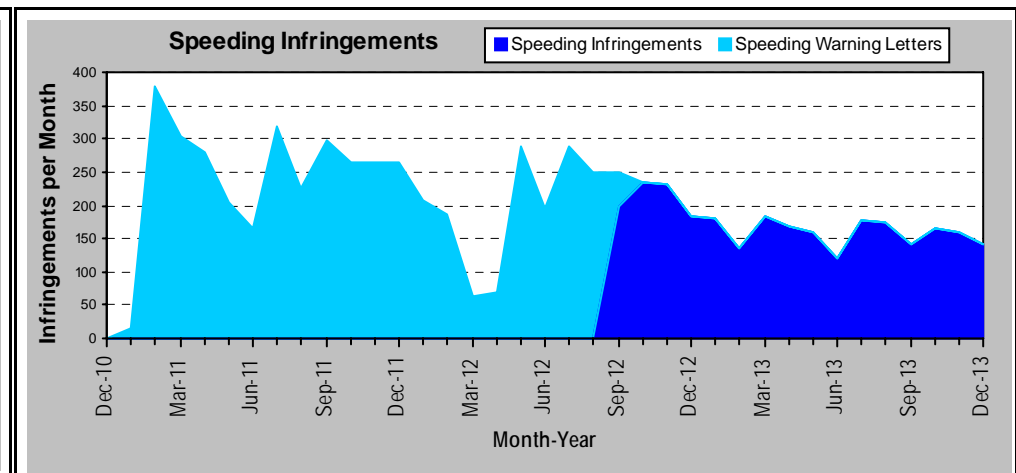
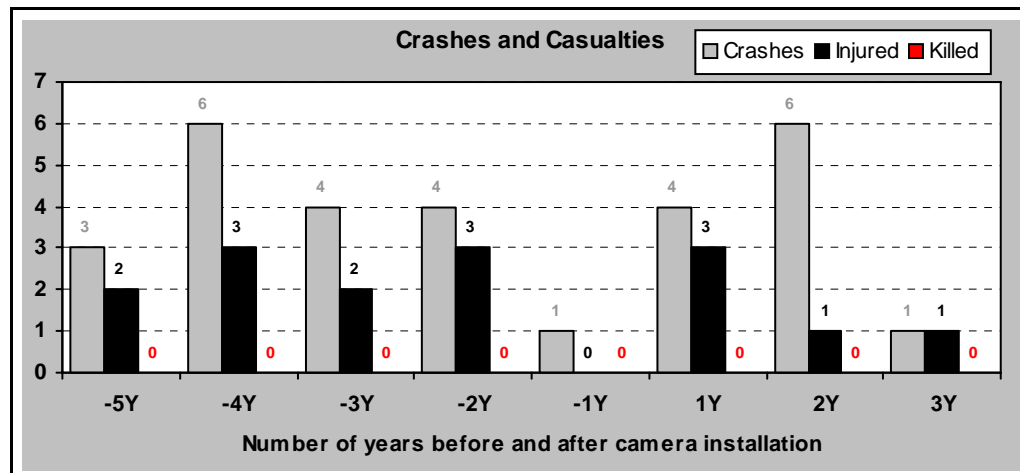
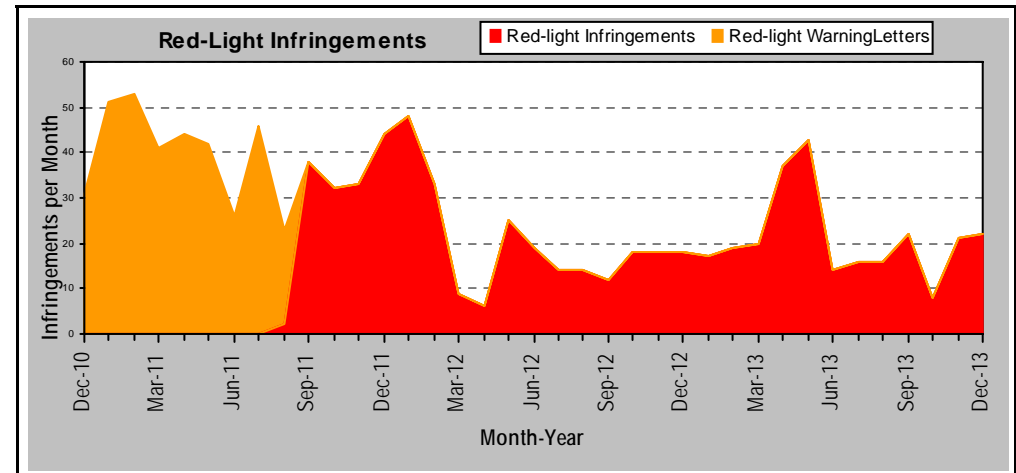
	5 years before installation ¹	3 years and 18 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	10	5	18%
<i>Pedestrian Casualties</i>	1	2	+228%
Crashes	18	11	0%
<i>Adjacent Crashes</i>	5	3	2%
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	7	1	77%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Mount Druitt - Great Western Highway at Carlisle Avenue

- There is one camera at this intersection.
- The camera at the intersection of Great Western Highway and Carlisle Avenue commenced issuing warning letters in November 2013.
- A longer period of time is required to assess 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

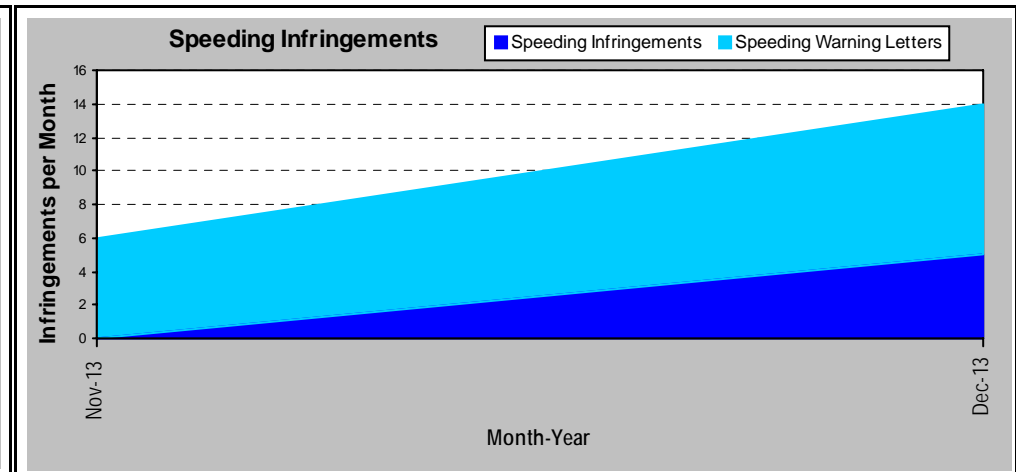
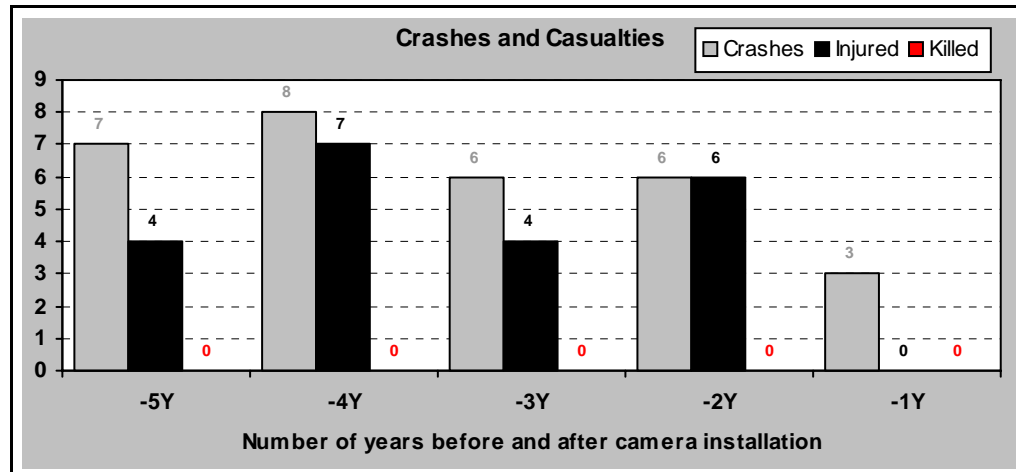
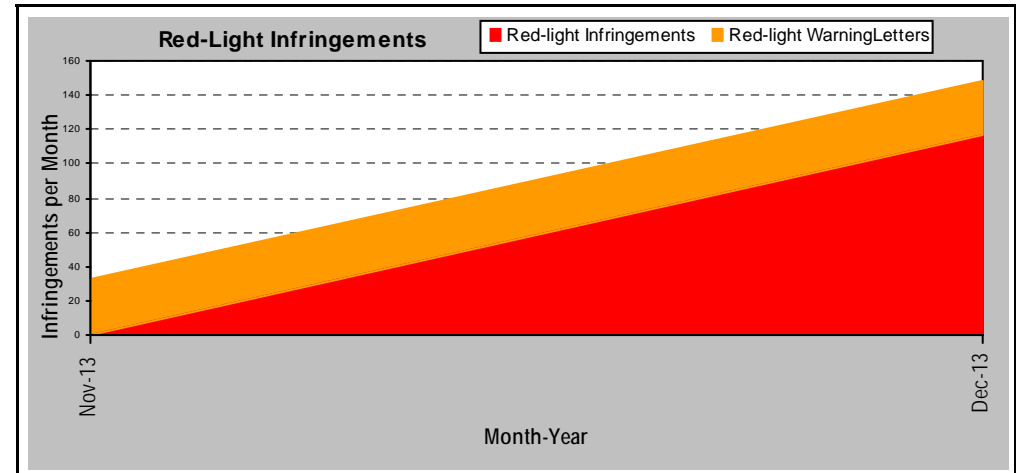
	5 years before installation ¹	47 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	21	1	+85%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	30	3	+289%
<i>Adjacent Crashes</i>	5	0	100%
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	4	1	+871%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Naremburn - Willoughby Road at Chandos Street

- There is one camera at this intersection.
- The camera at the intersection of Willoughby Road and Chandos Street commenced issuing warning letters in February 2013.
- While early results indicate a slight increase in casualties and 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

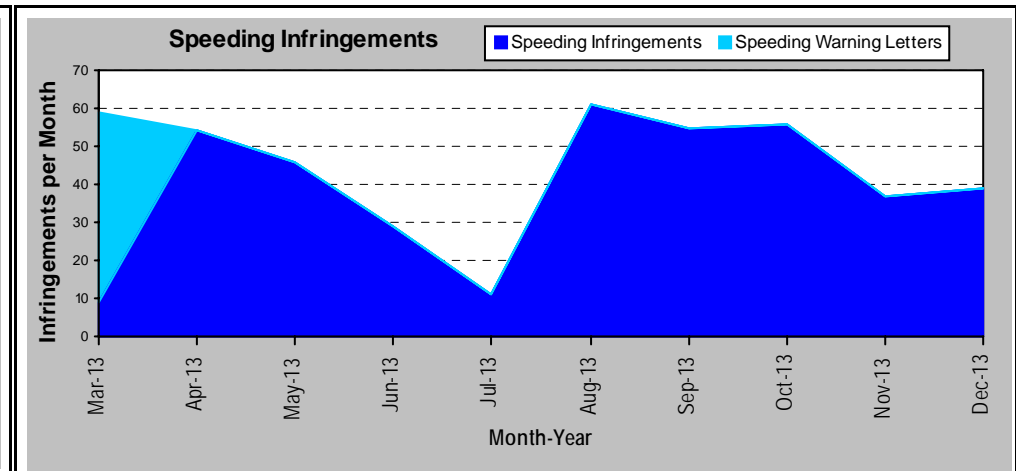
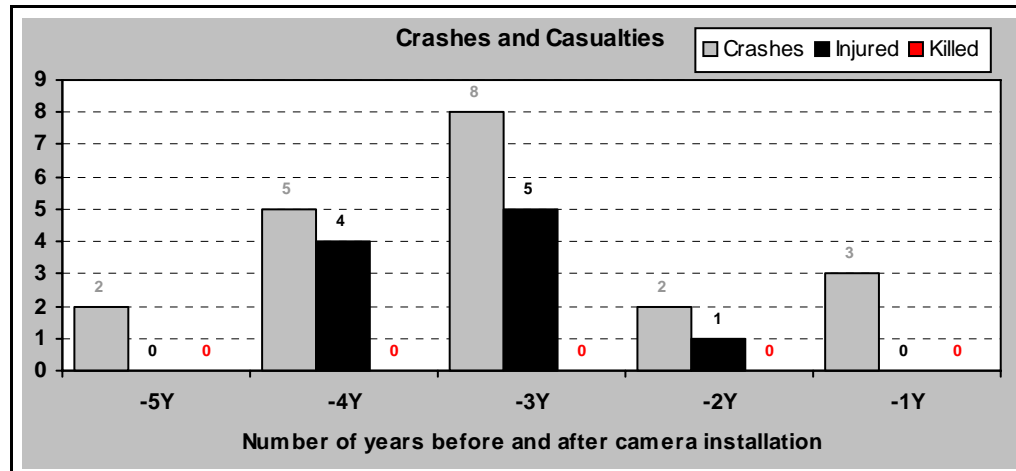
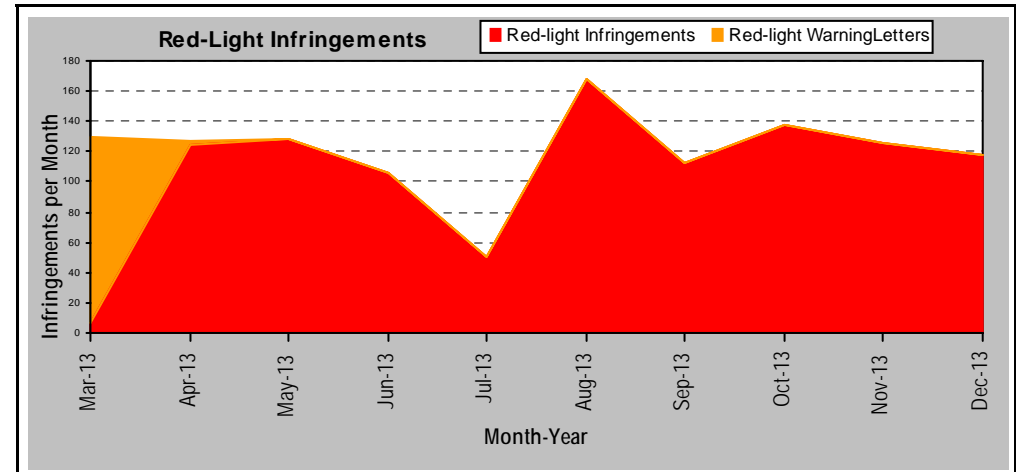
	5 years before installation ¹	309 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	10	2	+18%
<i>Pedestrian Casualties</i>	1	1	+491%
Crashes	20	4	+18%
<i>Adjacent Crashes</i>	15	2	21%
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	0	0	-

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



North Ryde - Cox's Road at Lane Cove Road (Northbound and Southbound) (School Zone)

- There are three cameras at this intersection.
- The camera at the intersection of Cox's Road and Lane Cove Road commenced issuing warning letters in April 2013. This camera enforces red-light running only.
- The camera at the intersection of Lane Cove Road (Northbound) and Cox's Road commenced issuing warning letters in April 2013.
- The camera at the intersection of Lane Cove Road (Southbound) and Cox's Road commenced issuing warning letters in April 2013.
- 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 since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

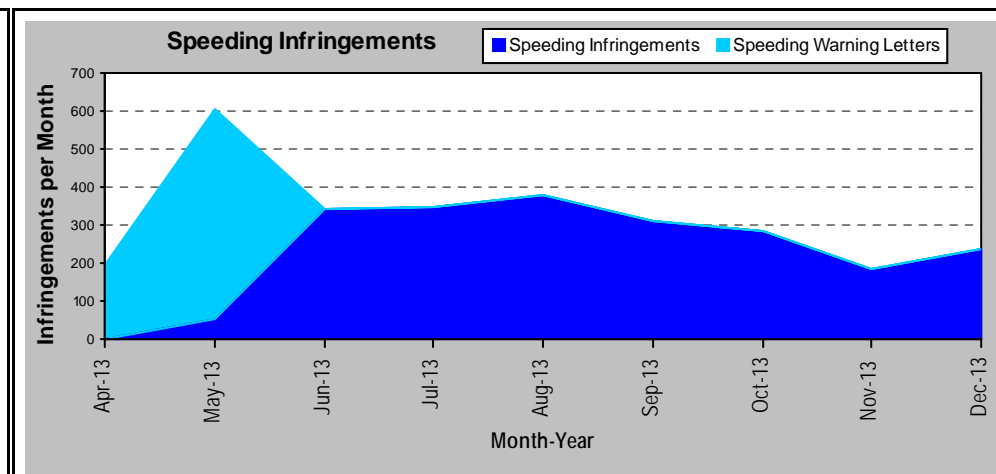
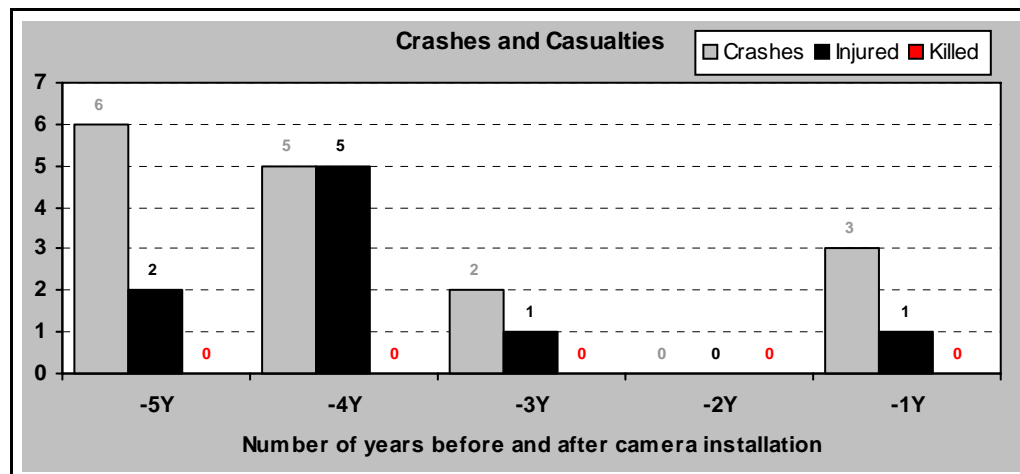
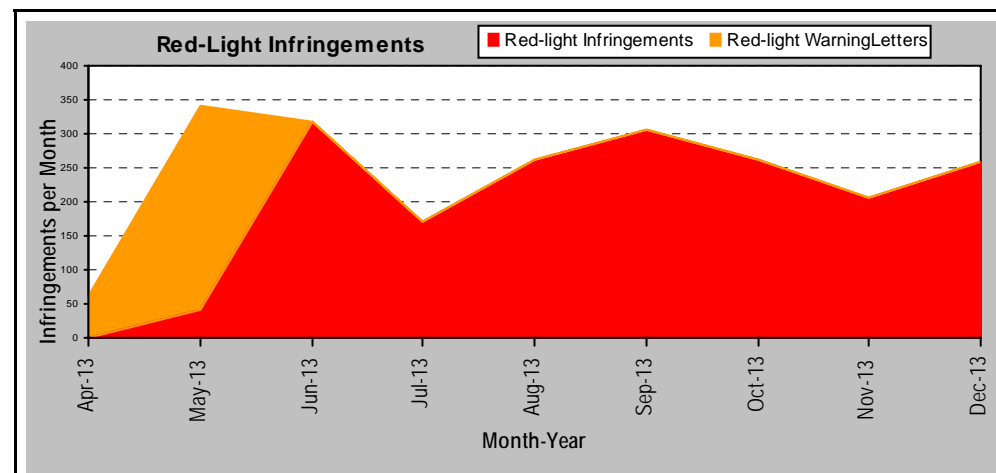
	5 years before installation ¹	252 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	9	0	100%
<i>Pedestrian Casualties</i>	3	0	100%
Crashes	16	0	100%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	3	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



North Ryde - Wicks Road at Epping Road

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Wicks Road and Epping Road 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

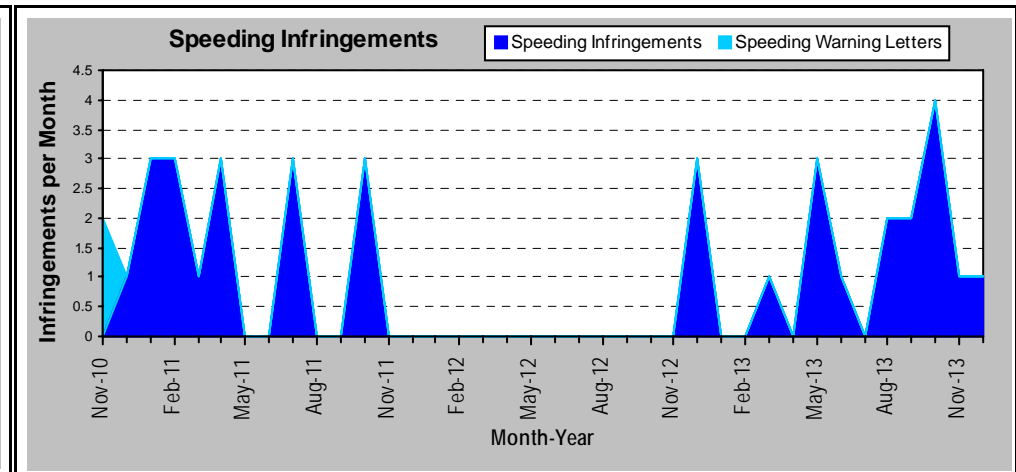
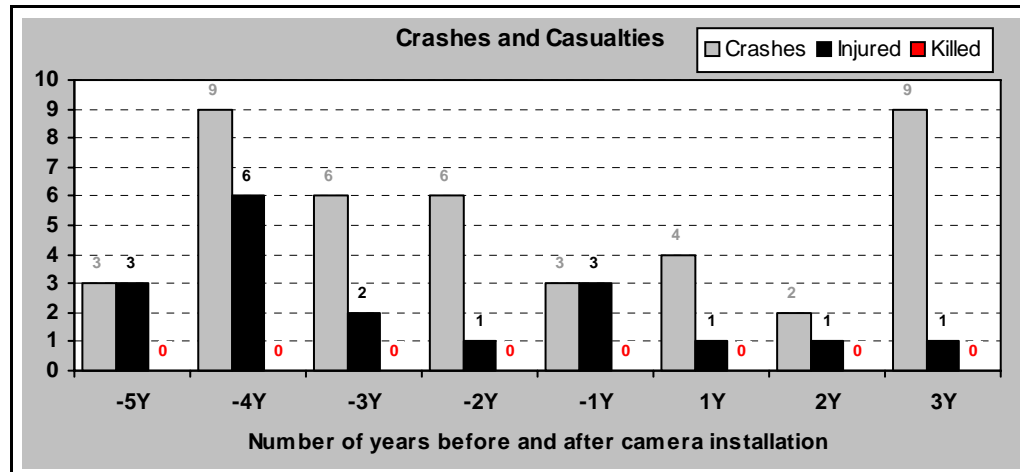
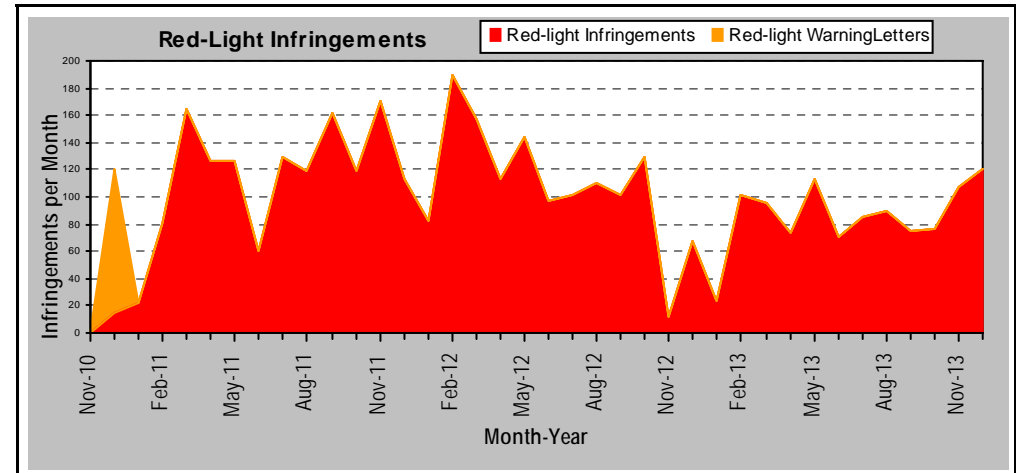
	5 years before installation ¹	3 years and 52 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	15	4	58%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	27	16	6%
<i>Adjacent Crashes</i>	1	0	100%
<i>Right Through Crashes</i>	0	1	-
<i>Rear End Crashes</i>	17	8	25%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Northmead - Briens Road at Redbank Road

- There is one camera at this intersection.
- The camera at the intersection of Briens Road and Redbank Road commenced issuing warning letters in September 2013.
- A longer period of time is required to assess 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

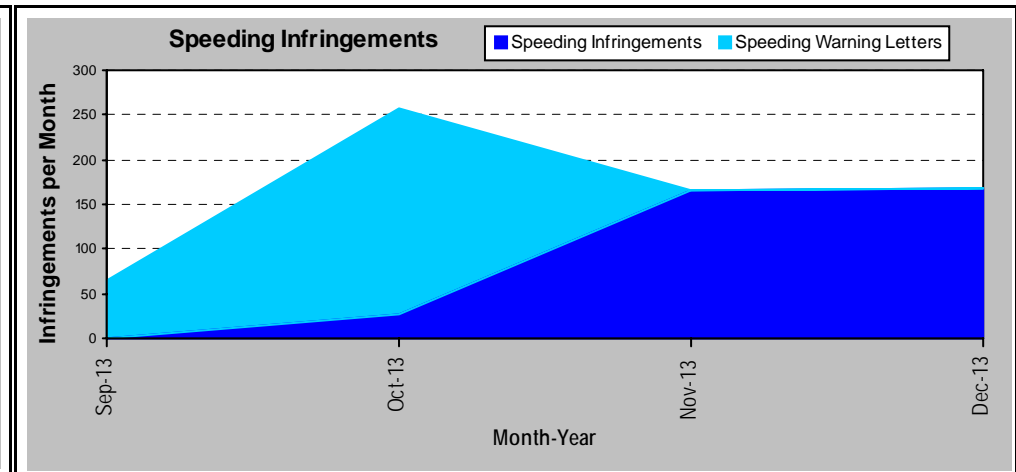
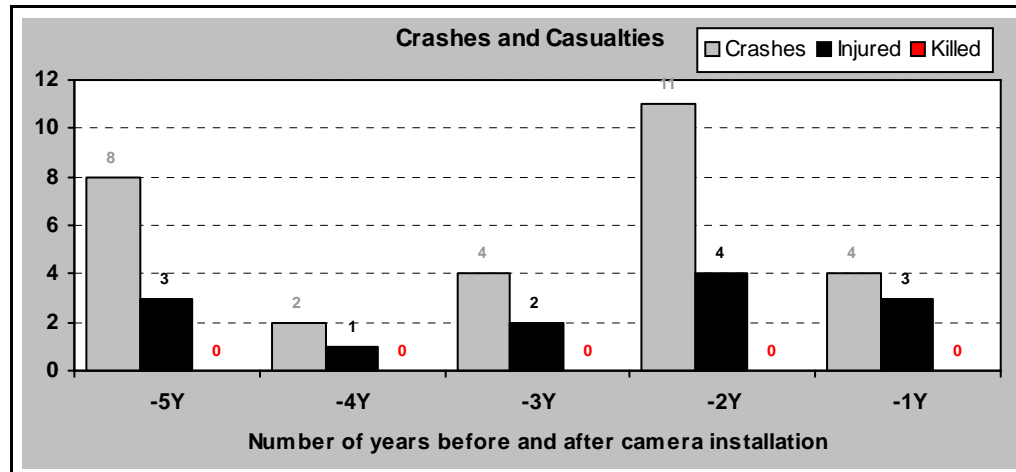
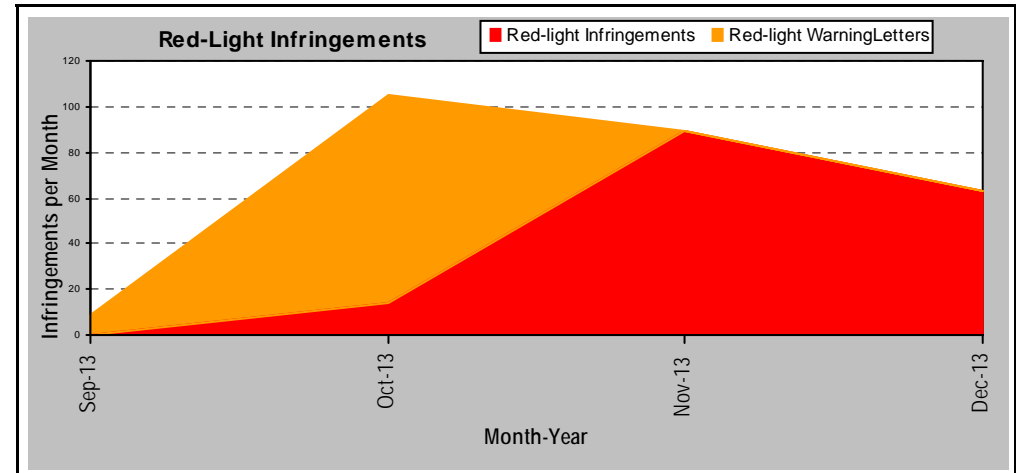
	5 years before installation ¹	97 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	13	1	+45%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	29	3	+95%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	5	0	100%
<i>Rear End Crashes</i>	11	2	+242%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Northmead - Old Windsor Road at Cumberland Highway

- 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 Road and Cumberland Highway commenced issuing warning letters in December 2010.
- While early results indicate a slight increase in casualties and 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

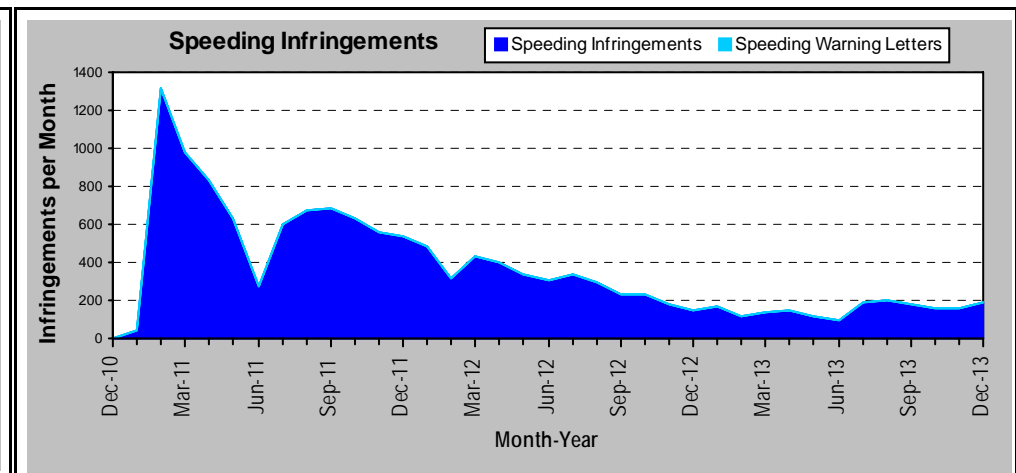
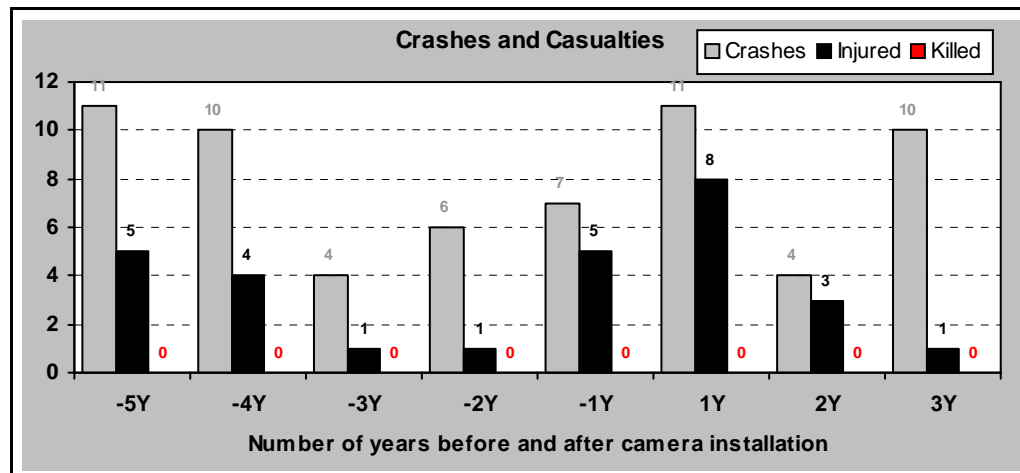
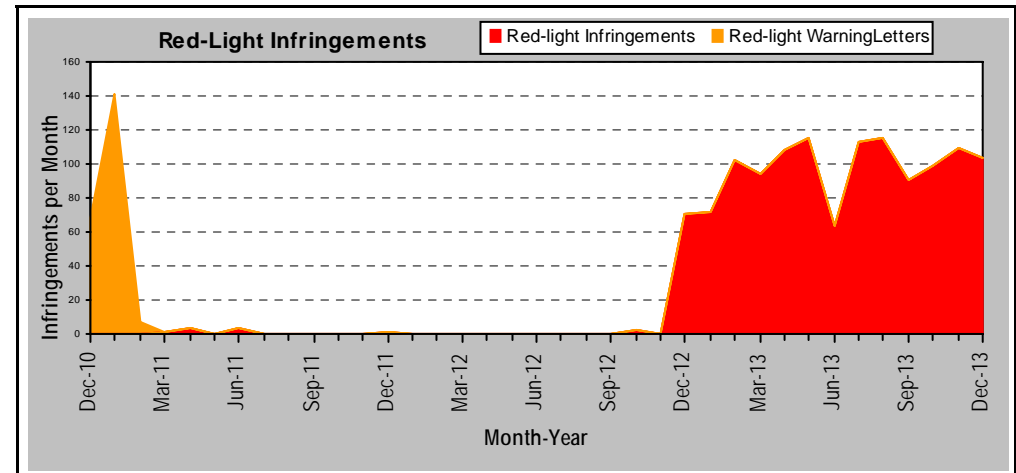
	5 years before installation ¹	3 years and 18 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	16	12	+23%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	38	25	+8%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	0	3	-
<i>Rear End Crashes</i>	18	18	+64%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Paddington - Moore Park Road at Lang Road

- 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 Road and Lang Road 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

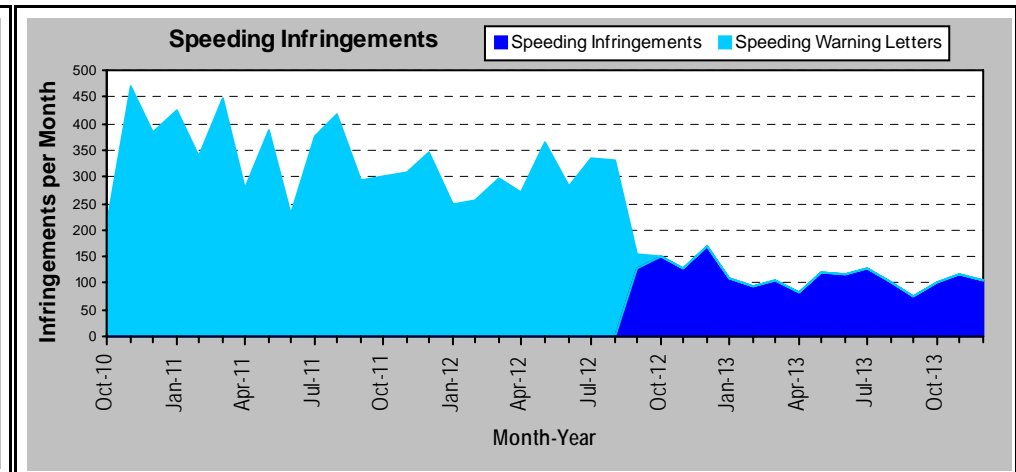
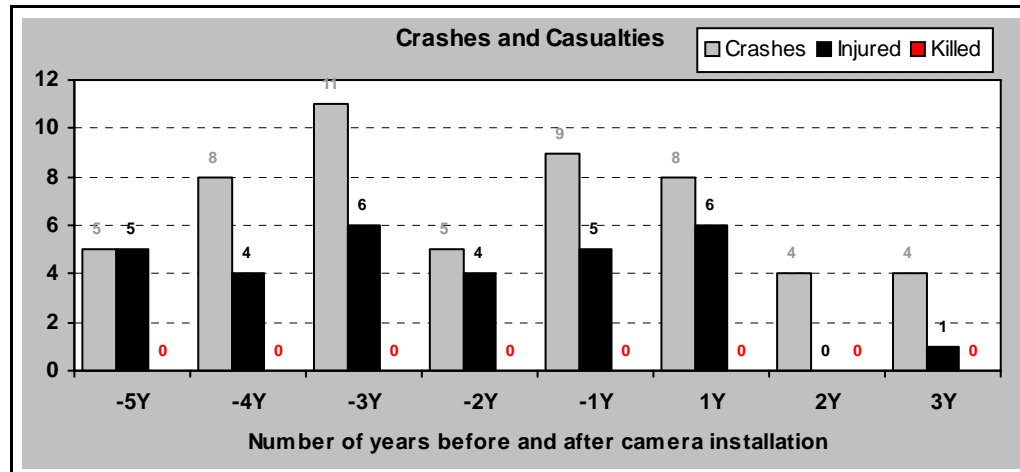
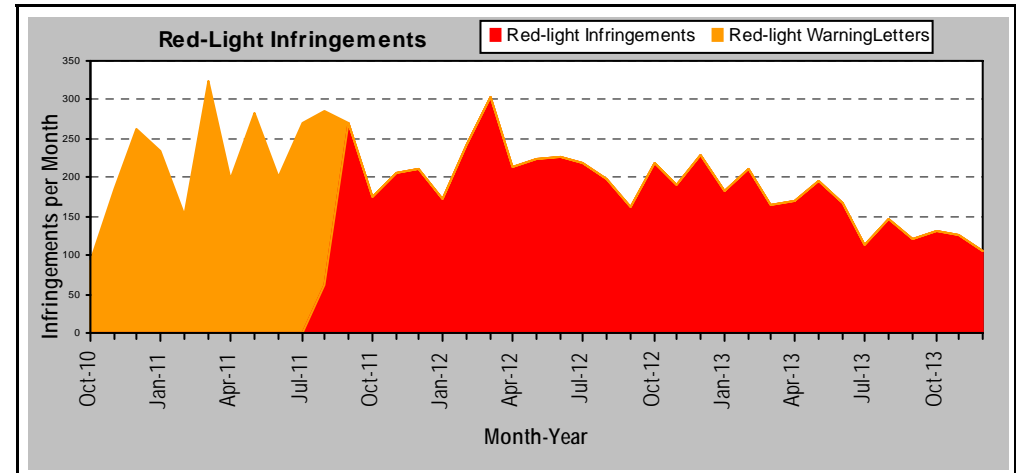
	5 years before installation ¹	3 years and 74 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	24	7	54%
<i>Pedestrian Casualties</i>	3	0	100%
Crashes	38	18	26%
<i>Adjacent Crashes</i>	11	7	1%
<i>Right Through Crashes</i>	8	2	61%
<i>Rear End Crashes</i>	7	2	55%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Paddington / Surry Hills - South Dowling Street at Fitzroy Street / Moore Park Road

- 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 Street and Fitzroy Street commenced issuing warning letters in June 2010.
- The camera at the intersection of South Dowling Street and Moore Park Road commenced issuing warning letters in June 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

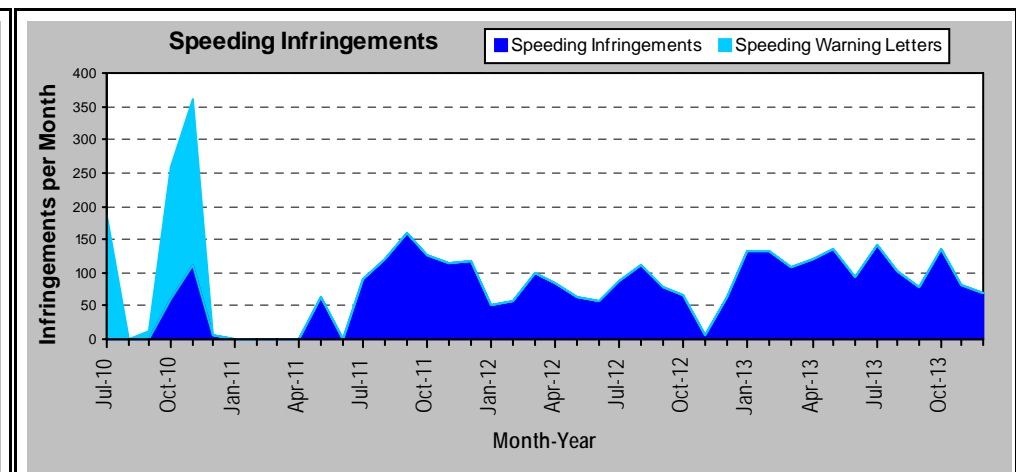
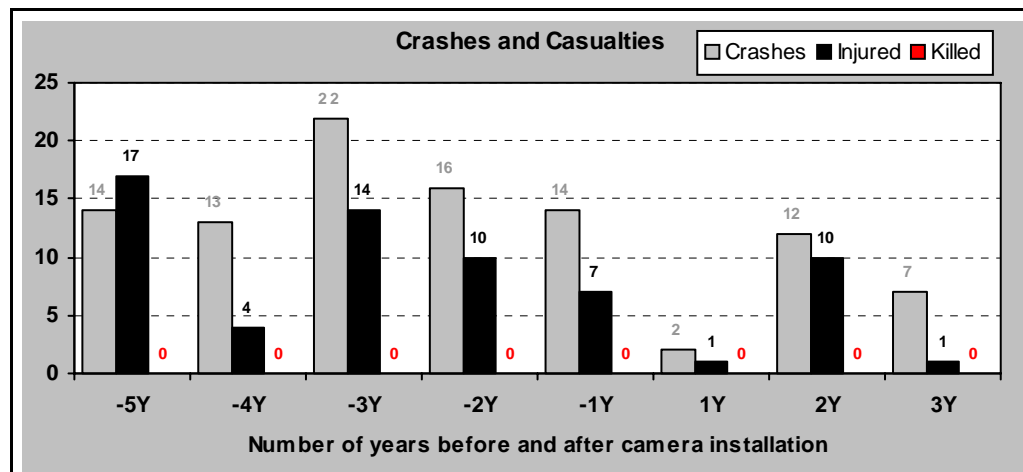
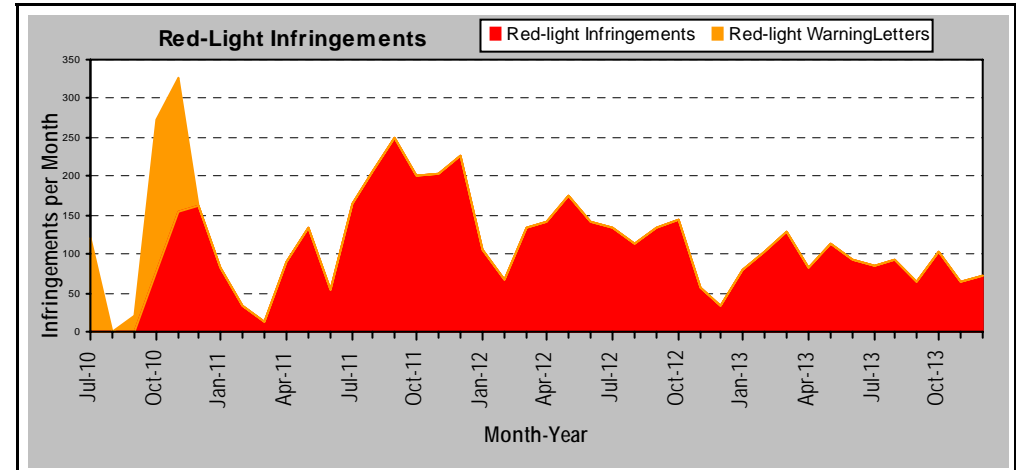
	5 years before installation ¹	3 years and 186 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	52	12	67%
<i>Pedestrian Casualties</i>	2	0	100%
Crashes	79	22	60%
<i>Adjacent Crashes</i>	54	15	60%
<i>Right Through Crashes</i>	3	3	+43%
<i>Rear End Crashes</i>	13	2	78%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Parramatta - O'Connell Street at Argyle Street

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of O'Connell Street and Argyle Street commenced issuing warning letters in May 2013.
- 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 since the camera began operation. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

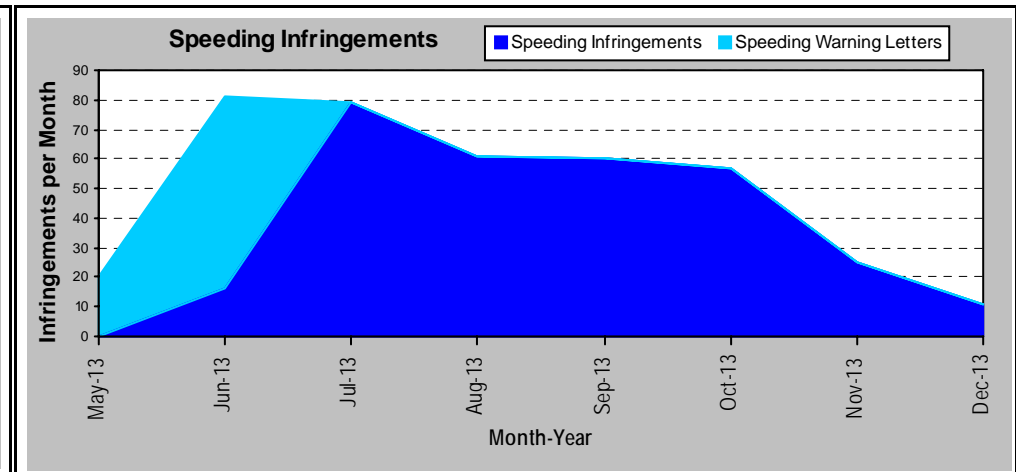
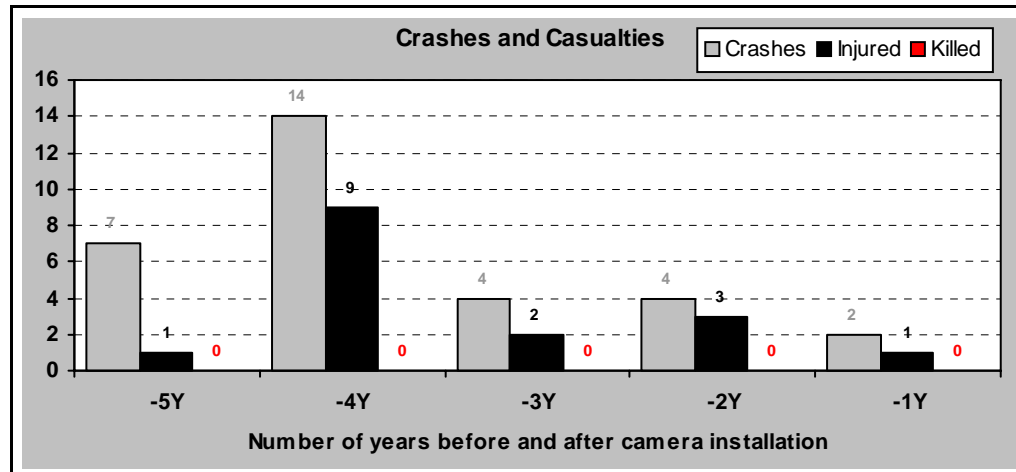
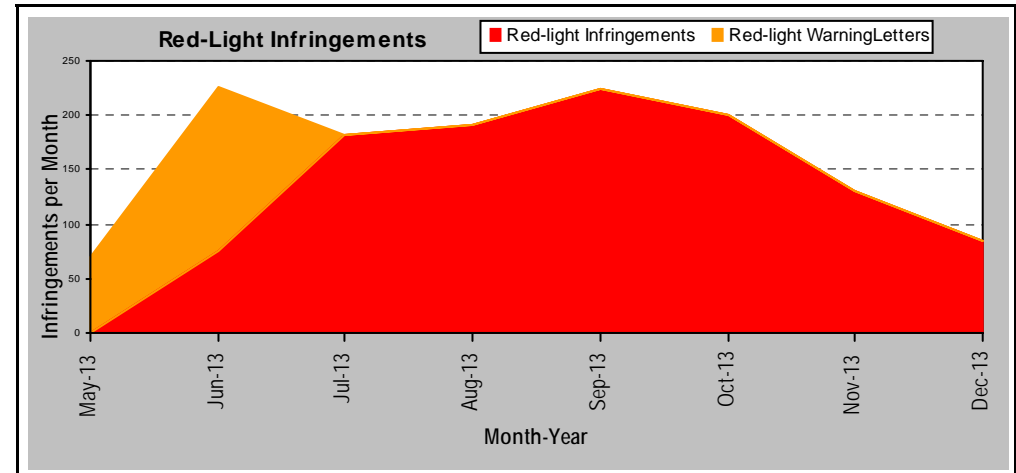
	5 years before installation ¹	224 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	16	1	49%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	31	1	74%
<i>Adjacent Crashes</i>	24	0	100%
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	3	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Parramatta - Victoria Road at Church Street

- 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 Church Street commenced issuing warning letters in June 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

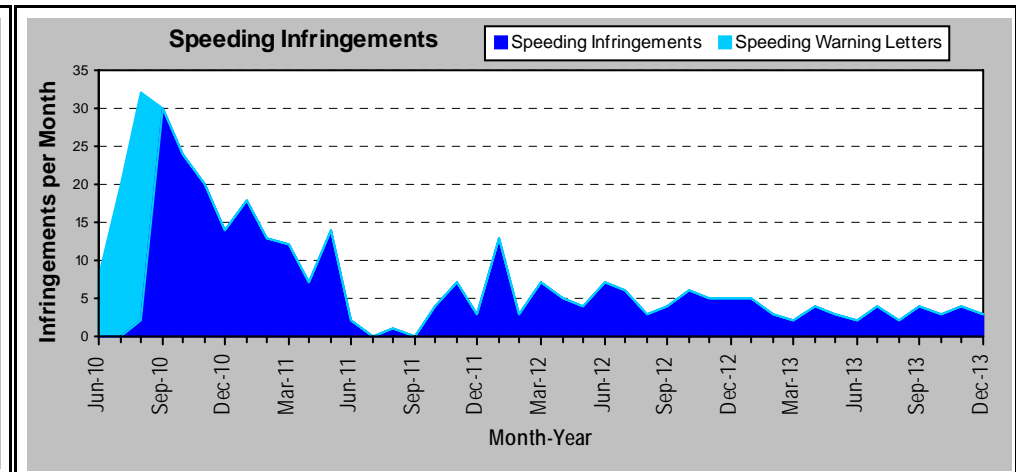
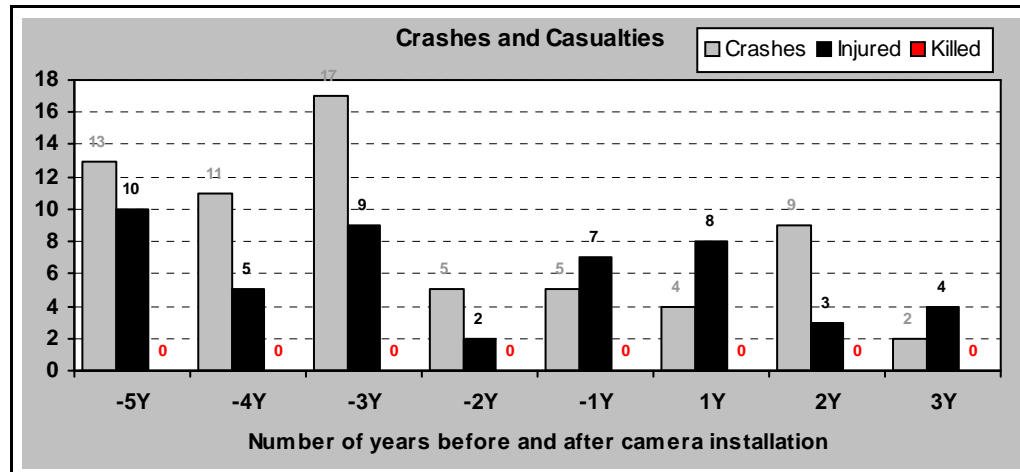
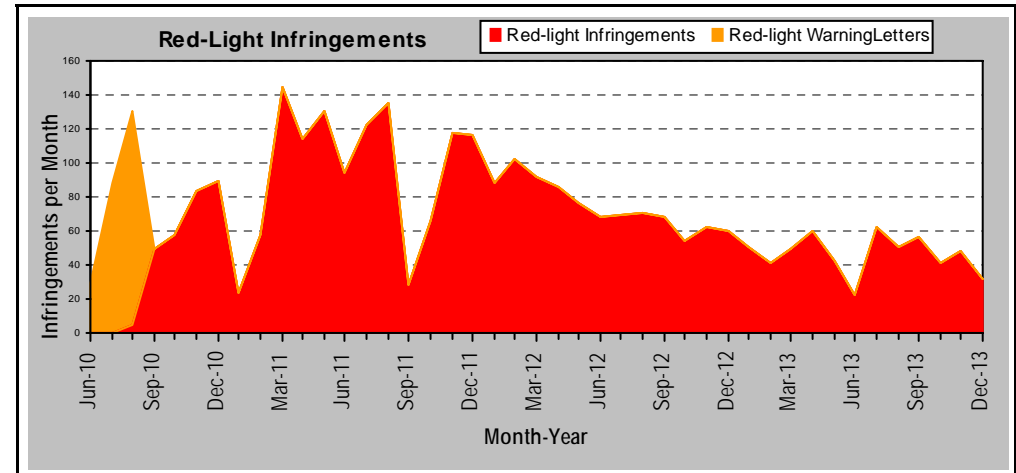
	5 years before installation ¹	3 years and 192 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	33	17	27%
<i>Pedestrian Casualties</i>	3	0	100%
Crashes	51	16	55%
<i>Adjacent Crashes</i>	2	0	100%
<i>Right Through Crashes</i>	29	10	51%
<i>Rear End Crashes</i>	7	2	59%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Pennant Hills - Pennant Hills Road at Beecroft Road (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 Road and Beecroft Road 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

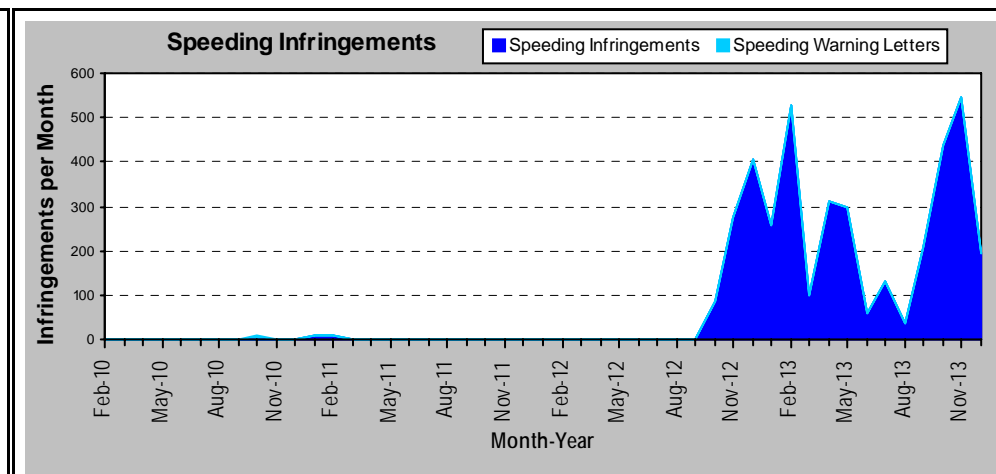
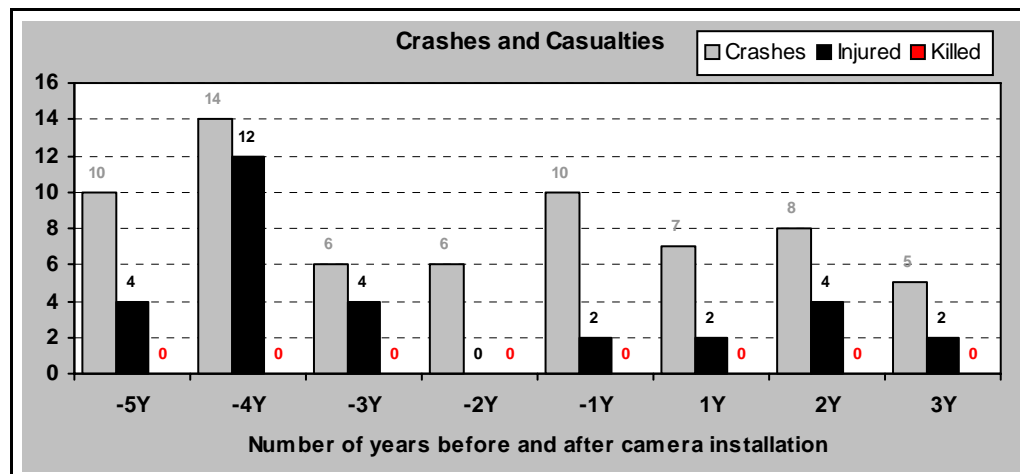
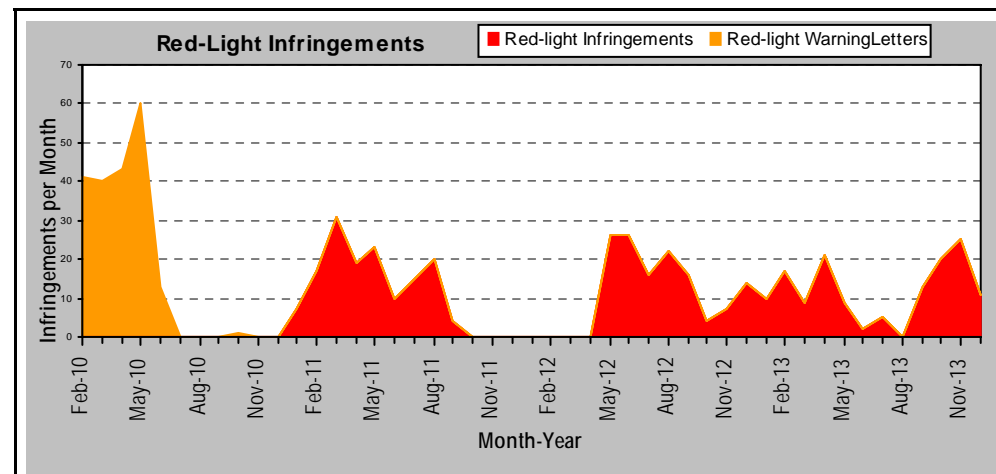
	5 years before installation ¹	3 years and 123 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	22	10	32%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	46	25	19%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	43	18	37%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Petersham - Gordon Street at New Canterbury Road

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Gordon Street and New Canterbury Road commenced issuing warning letters in November 2010. This camera enforces red-light running only.
- While early results indicate a slight increase in casualties and 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

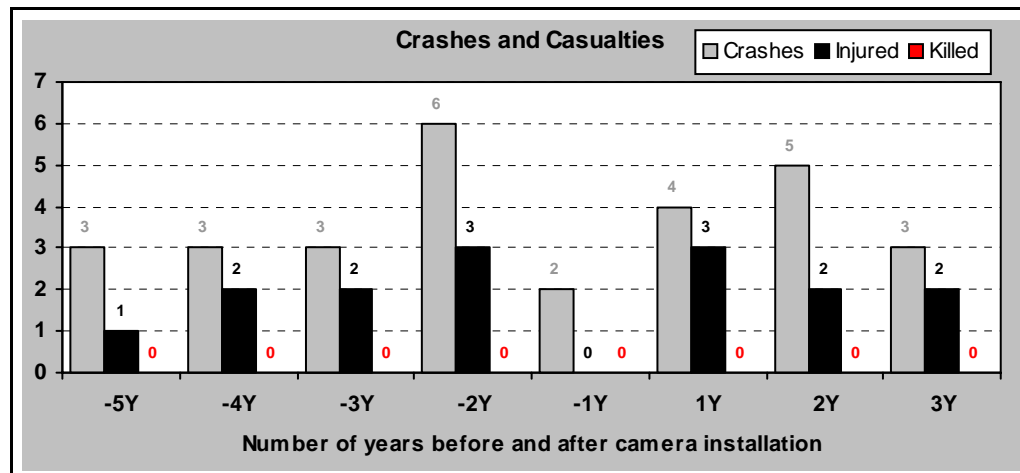
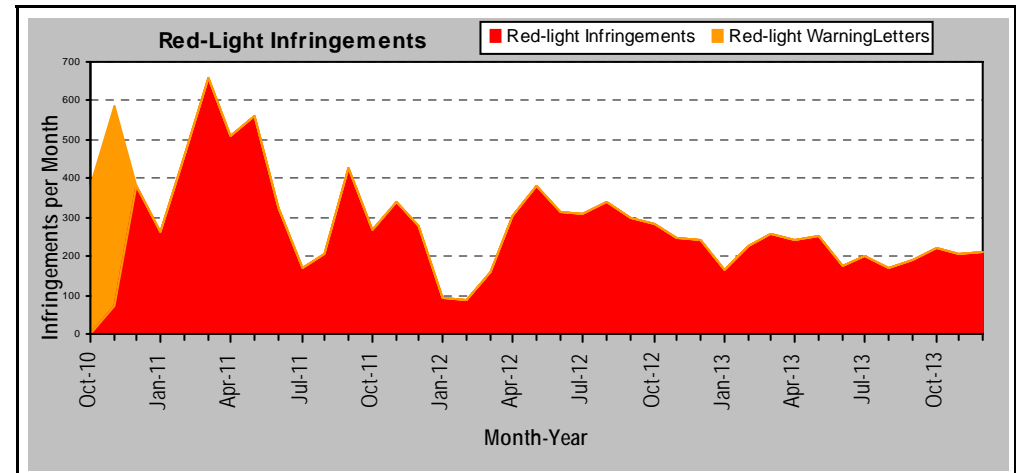
	5 years before installation ¹	3 years and 54 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	8	7	+39%
<i>Pedestrian Casualties</i>	1	3	+377%
Crashes	17	12	+12%
<i>Adjacent Crashes</i>	5	1	68%
<i>Right Through Crashes</i>	4	2	21%
<i>Rear End Crashes</i>	3	4	+112%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Petersham - Parramatta Road at West Street

- 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 West Street 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

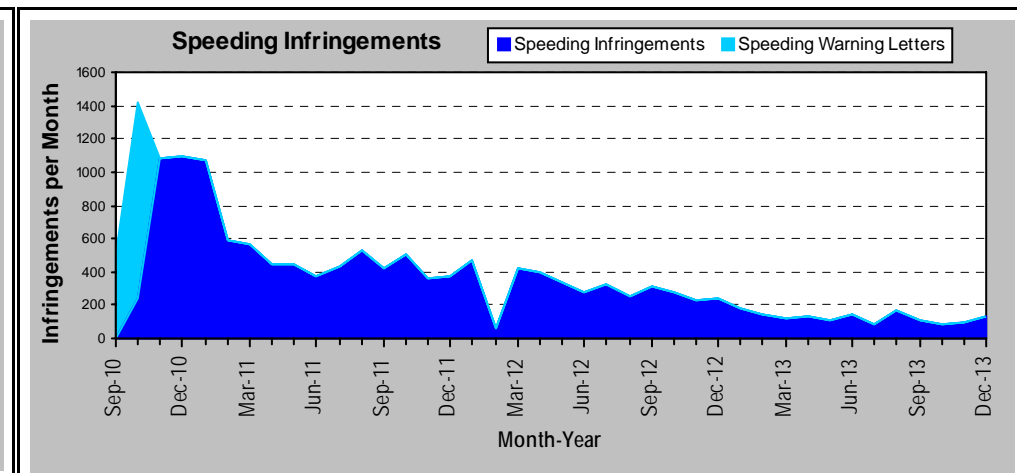
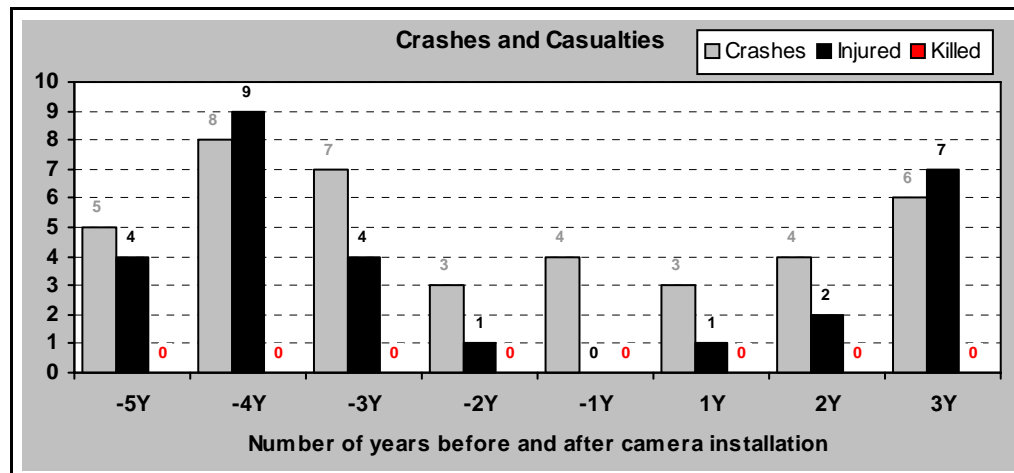
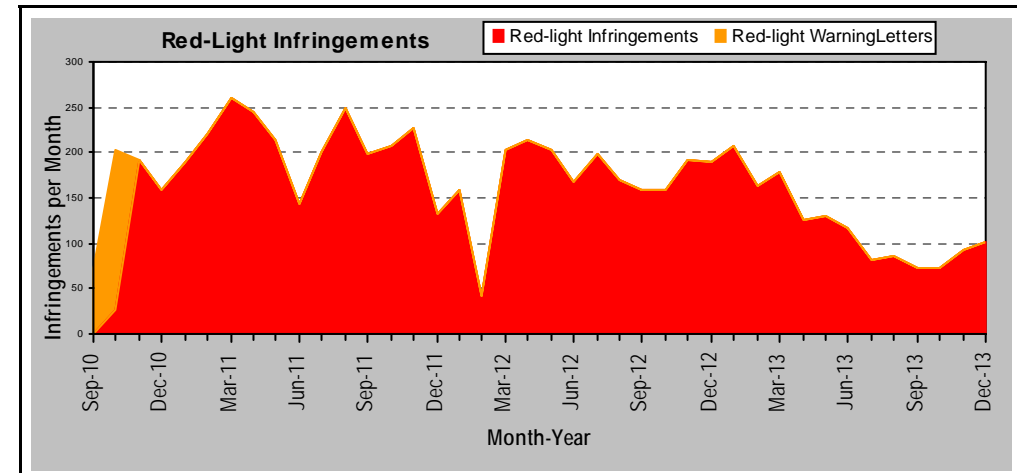
	5 years before installation ¹	3 years and 101 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	18	10	15%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	27	15	15%
<i>Adjacent Crashes</i>	4	1	62%
<i>Right Through Crashes</i>	9	8	+36%
<i>Rear End Crashes</i>	10	4	39%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Ramsgate - Rocky Point Road at Ramsgate Road

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Rocky Point Road and Ramsgate Road commenced issuing warning letters in September 2013.
- A longer period of time is required to assess 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

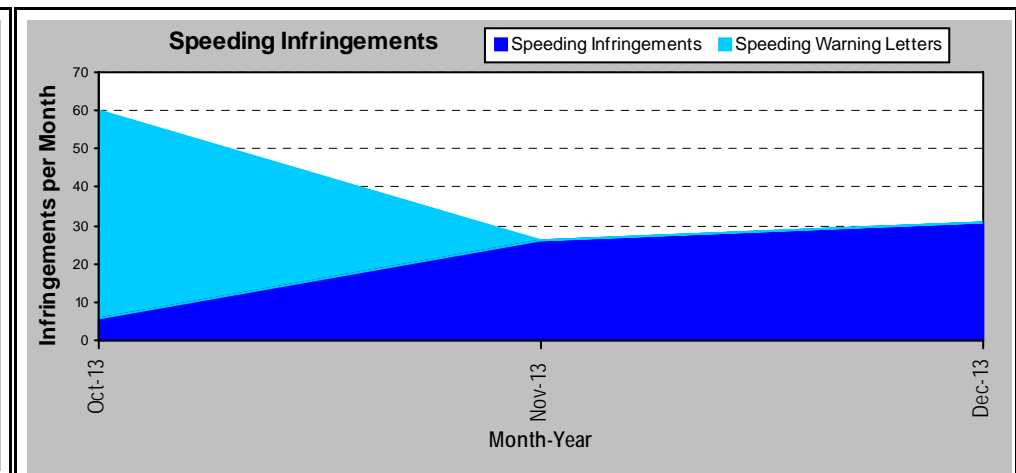
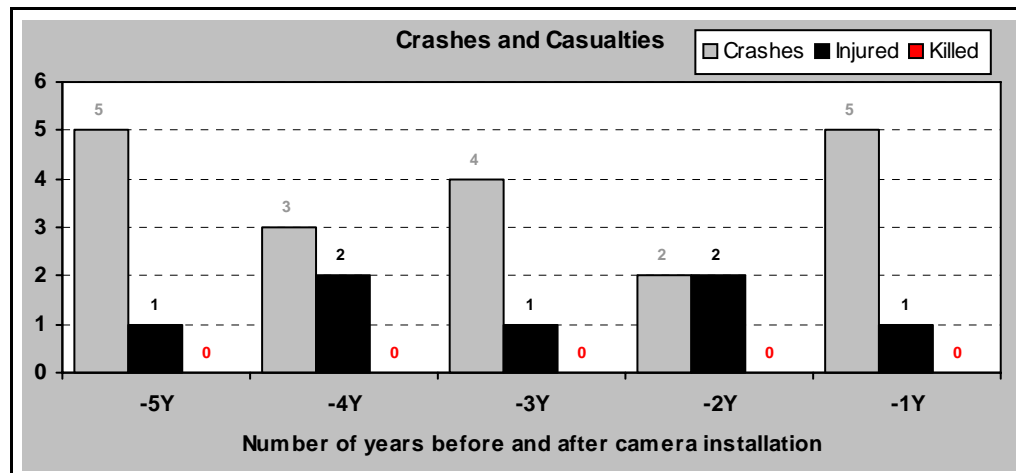
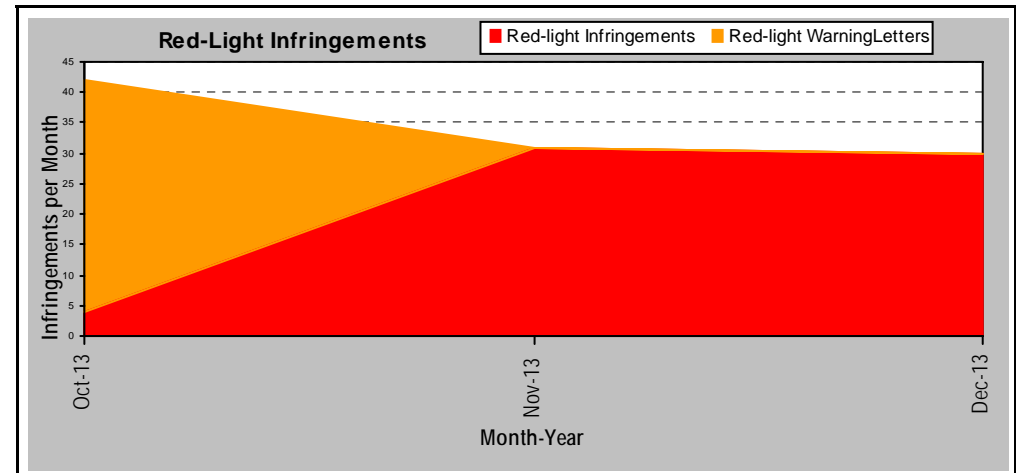
	5 years before installation ¹	96 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	7	0	100%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	19	1	0%
<i>Adjacent Crashes</i>	7	0	100%
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	4	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Randwick - Alison Street at Avoca Street

- There is one camera at this intersection.
- The camera at the intersection of Alison Road and Avoca Street commenced issuing warning letters in November 2013.
- A longer period of time is required to assess 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

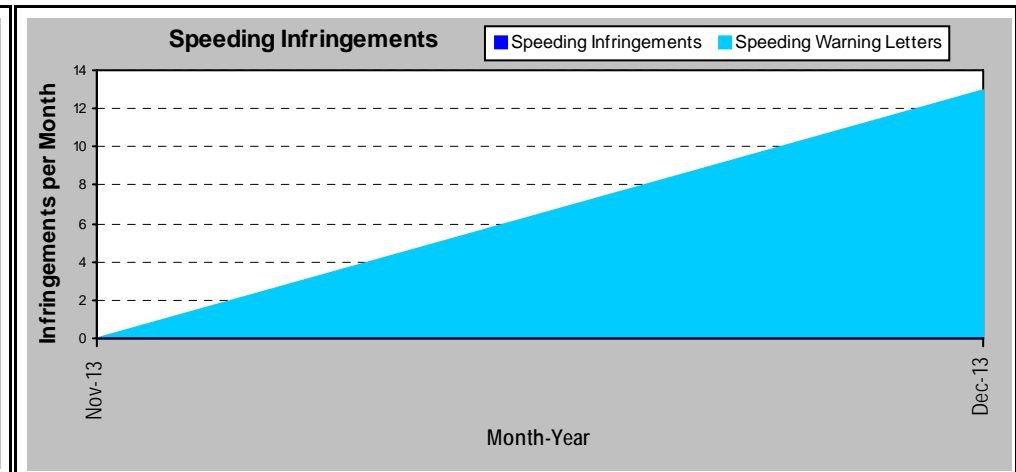
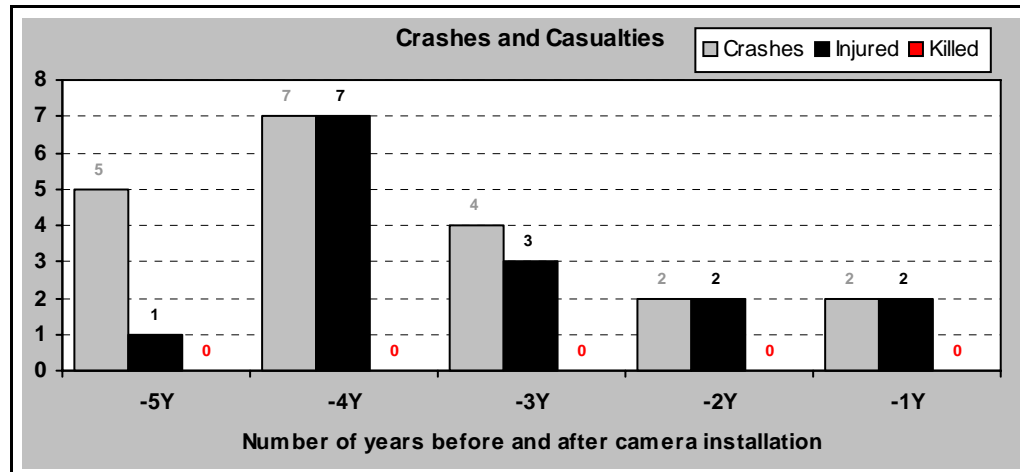
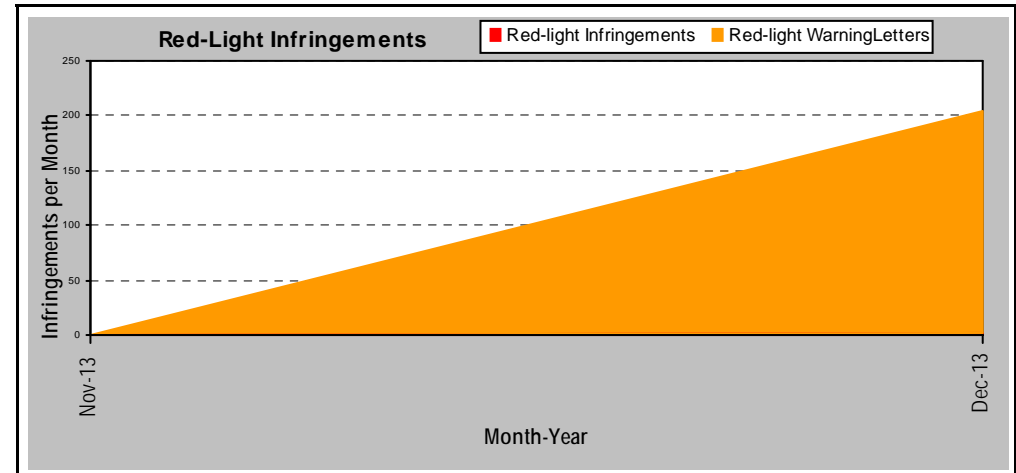
	5 years before installation ¹	33 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	15	0	100%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	20	0	100%
<i>Adjacent Crashes</i>	8	0	100%
<i>Right Through Crashes</i>	1	0	100%
<i>Rear End Crashes</i>	5	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Randwick - Avoca Street at Darley Road

- 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 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

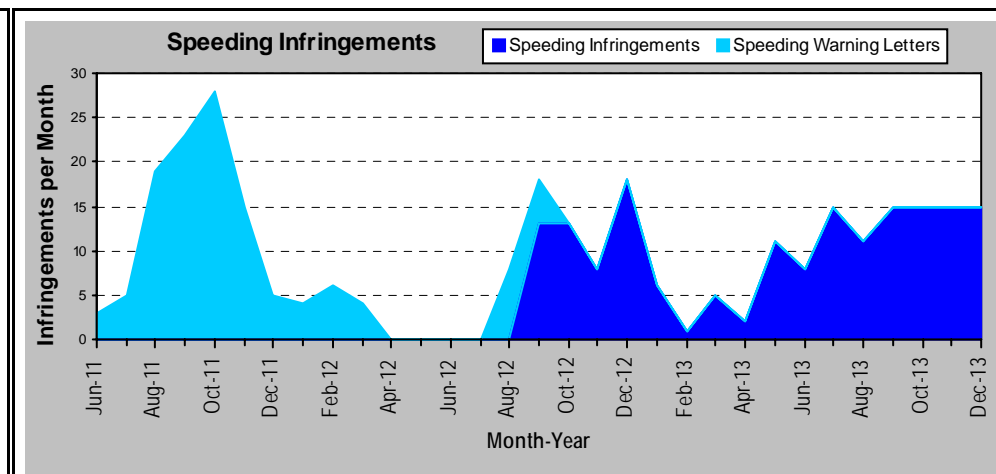
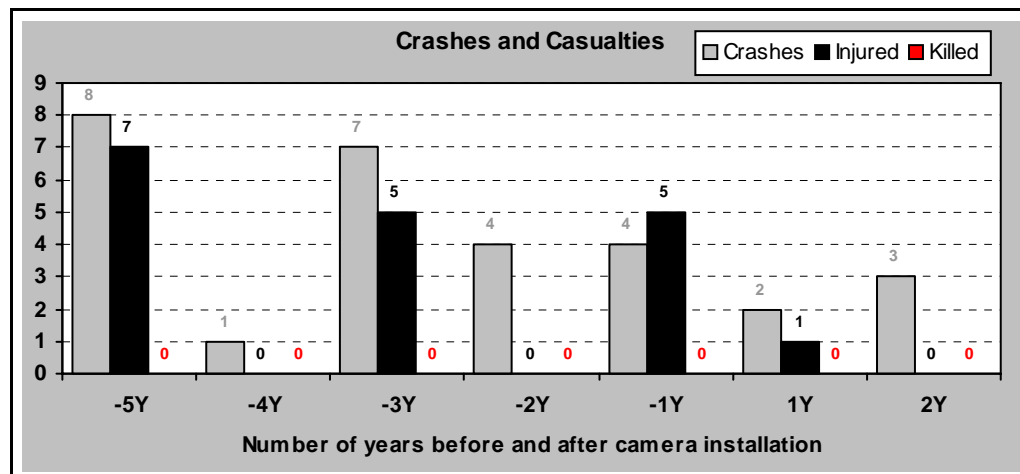
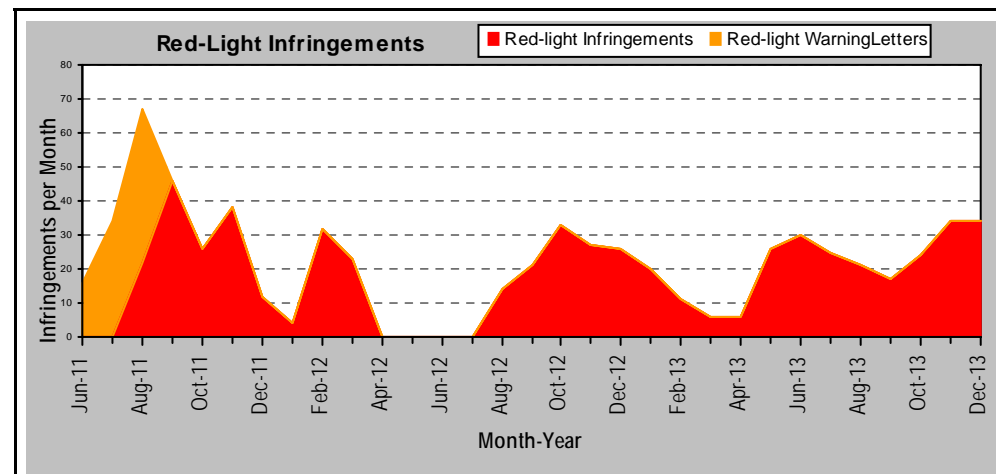
	5 years before installation ¹	2 years and 195 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	17	3	65%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	24	6	51%
<i>Adjacent Crashes</i>	3	2	+32%
<i>Right Through Crashes</i>	10	3	41%
<i>Rear End Crashes</i>	5	1	61%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Redfern - Chalmers Street at Cleveland Street (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

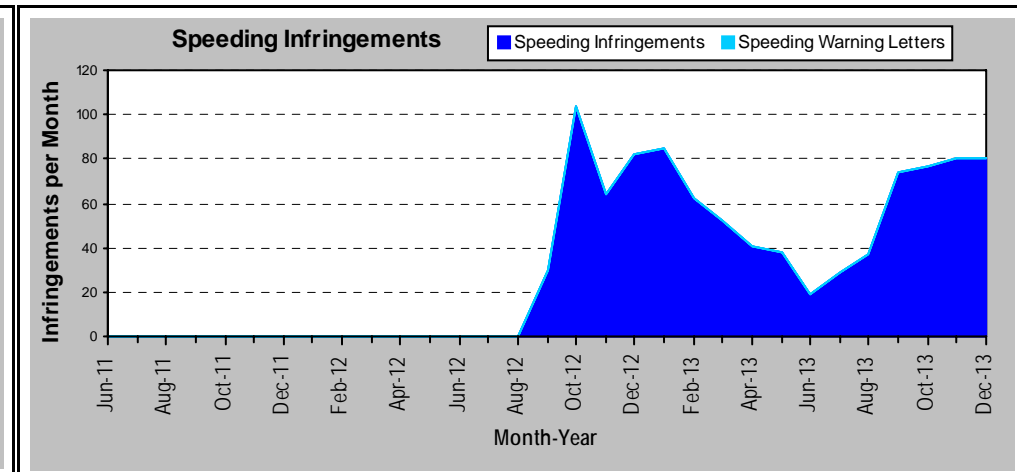
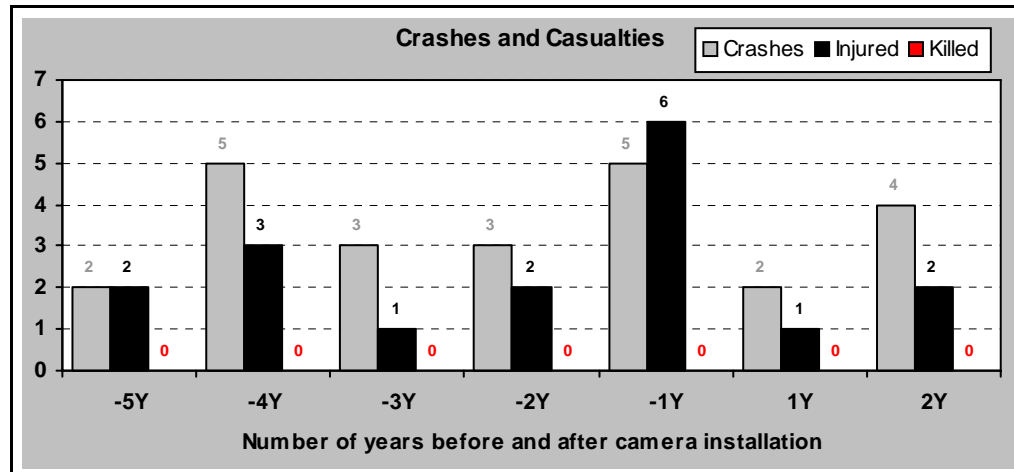
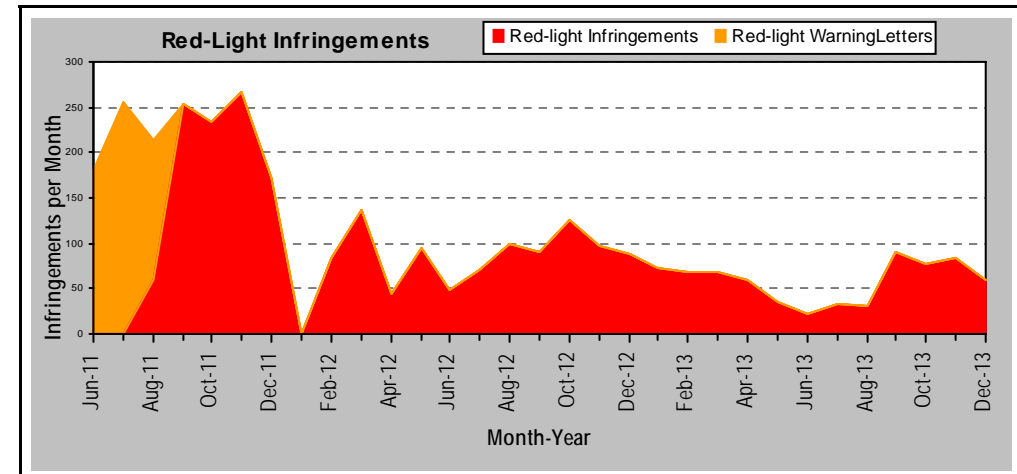
	5 years before installation ¹	2 years and 206 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	14	4	44%
<i>Pedestrian Casualties</i>	3	0	100%
Crashes	18	8	13%
<i>Adjacent Crashes</i>	1	3	+485%
<i>Right Through Crashes</i>	0	0	-
<i>Rear End Crashes</i>	9	3	35%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Rockdale - Bestic Street at West Botany Street

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Bestic Street 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

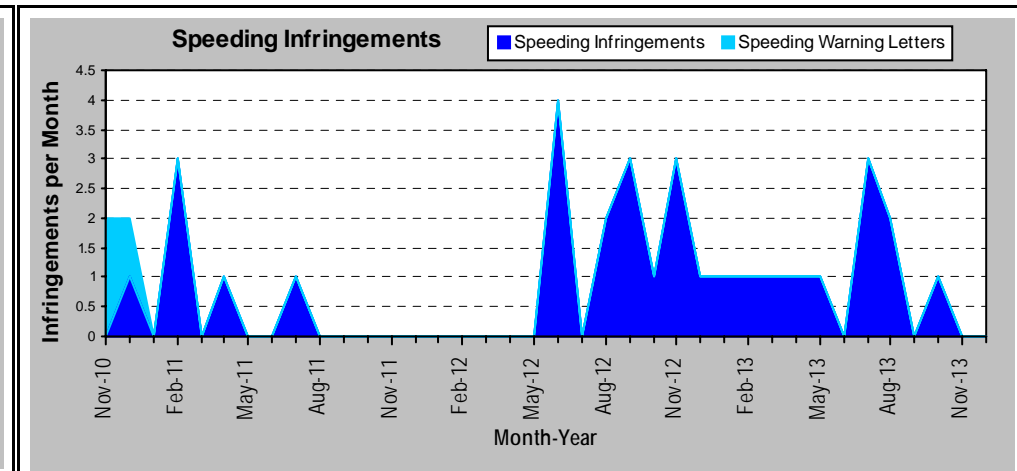
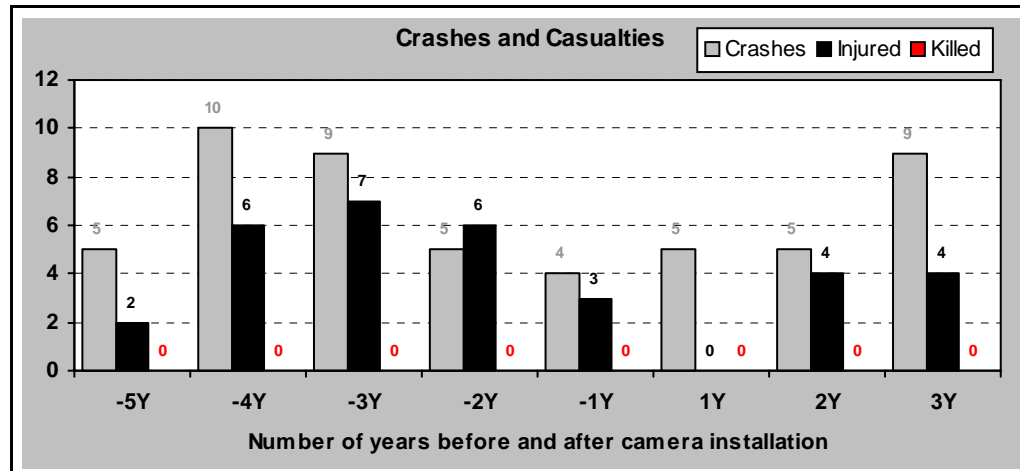
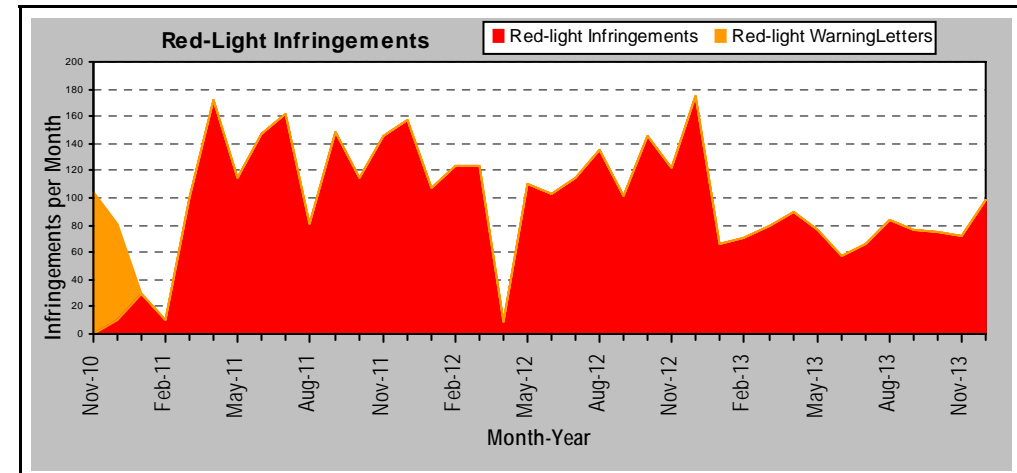
	5 years before installation ¹	3 years and 52 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	24	8	47%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	33	20	4%
<i>Adjacent Crashes</i>	13	12	+47%
<i>Right Through Crashes</i>	13	2	76%
<i>Rear End Crashes</i>	4	5	+99%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Rockdale - Princes Highway at Bay Street / The Seven Ways

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Princes Highway and Bay Street commenced issuing warning letters in June 2011.
- The camera at the intersection of Princes Highway and The Seven Ways 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

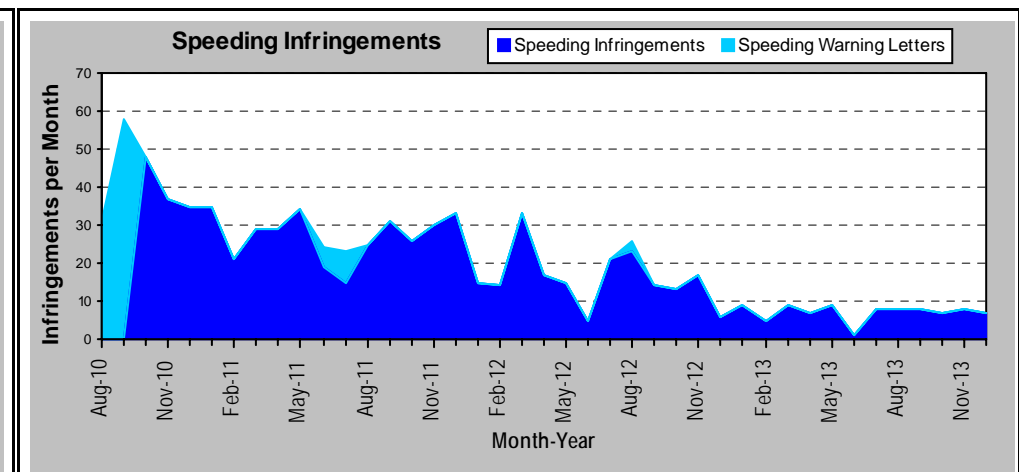
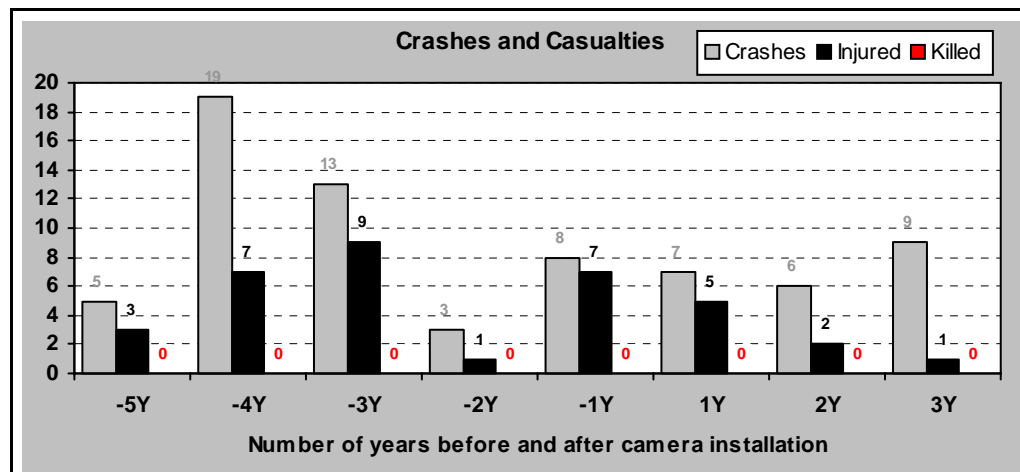
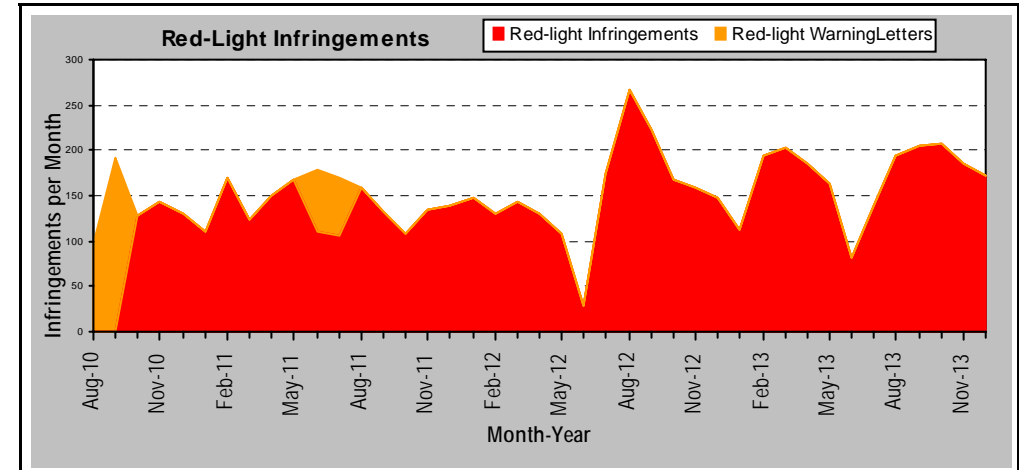
	5 years before installation ¹	3 years and 156 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	27	10	46%
<i>Pedestrian Casualties</i>	3	1	51%
Crashes	48	27	18%
<i>Adjacent Crashes</i>	3	1	51%
<i>Right Through Crashes</i>	21	8	44%
<i>Rear End Crashes</i>	13	9	+1%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Roselands - King Georges Road at Moorefields Road

- 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 Road and Moorefields Road 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. In October 2011, the speed limit was changed from 70 km/h to 60 km/h. Roadworks and camera maintenance may influence the number of infringements issued.

Crashes at enforced intersection

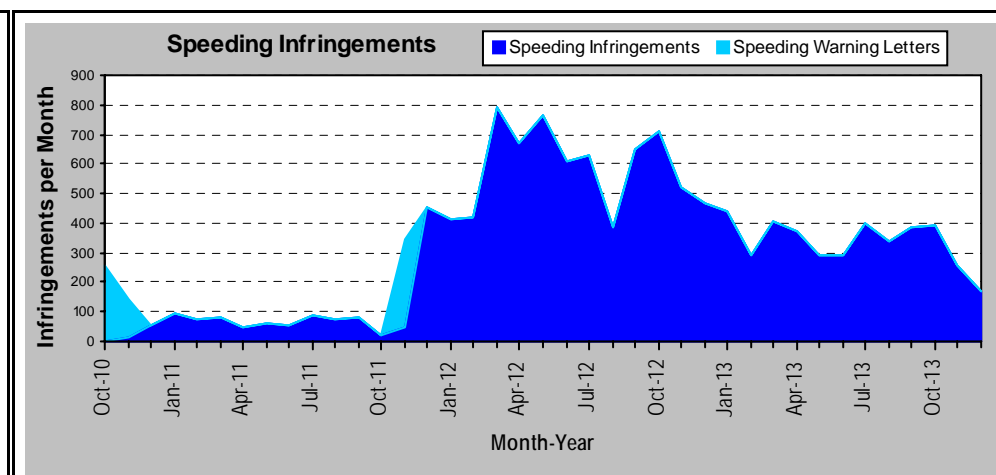
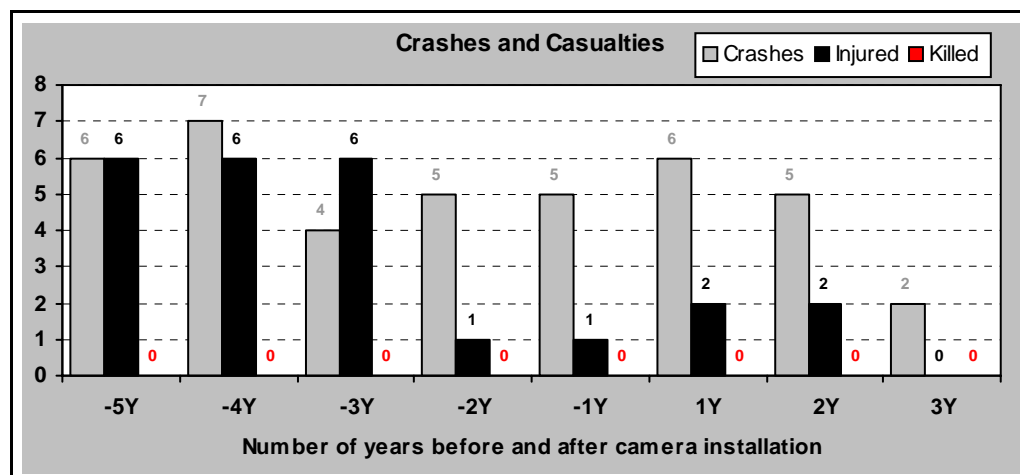
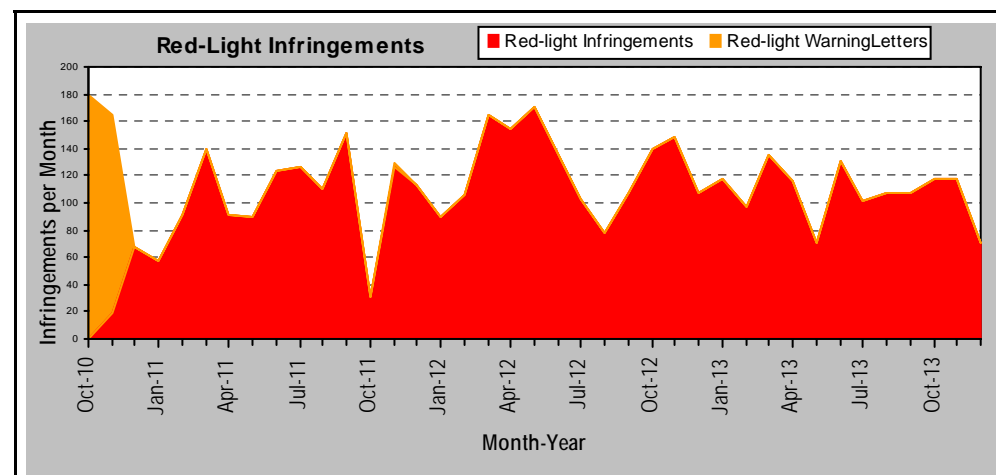
	5 years before installation ¹	3 years and 93 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	20	5	62%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	27	15	15%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	9	0	100%
<i>Rear End Crashes</i>	12	10	+28%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Roselands / Wiley Park - Canterbury Road at King Georges Road

- There are two cameras at this intersection.
- The camera at the intersection of Canterbury Road and King Georges Road commenced issuing warning letters in June 2010.
- The camera at the intersection of Canterbury Road and King Georges Road 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

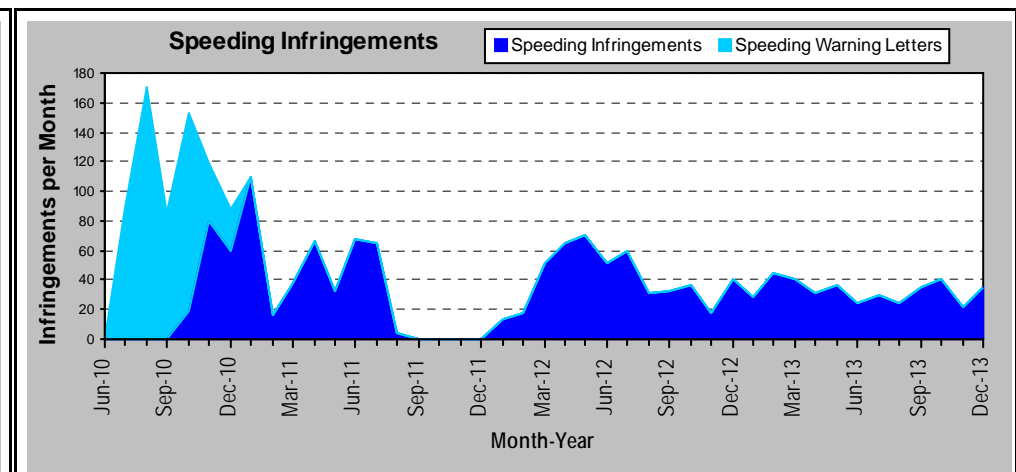
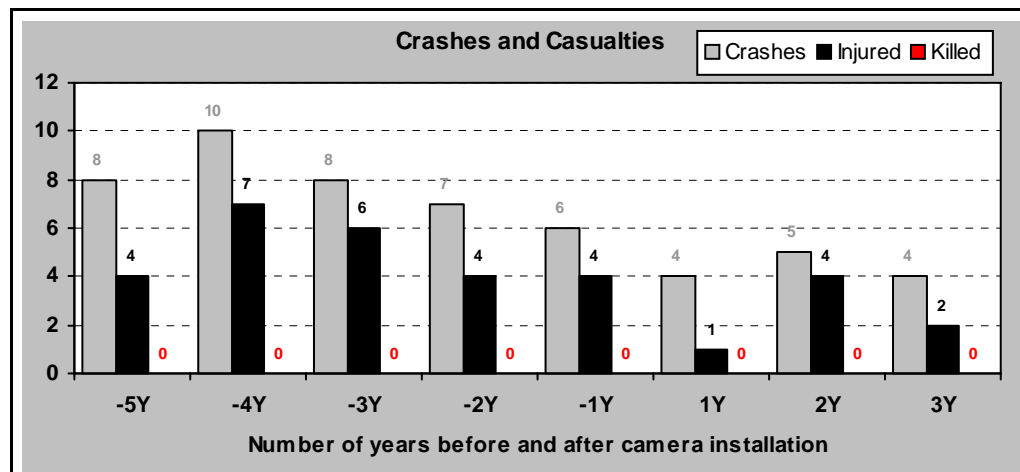
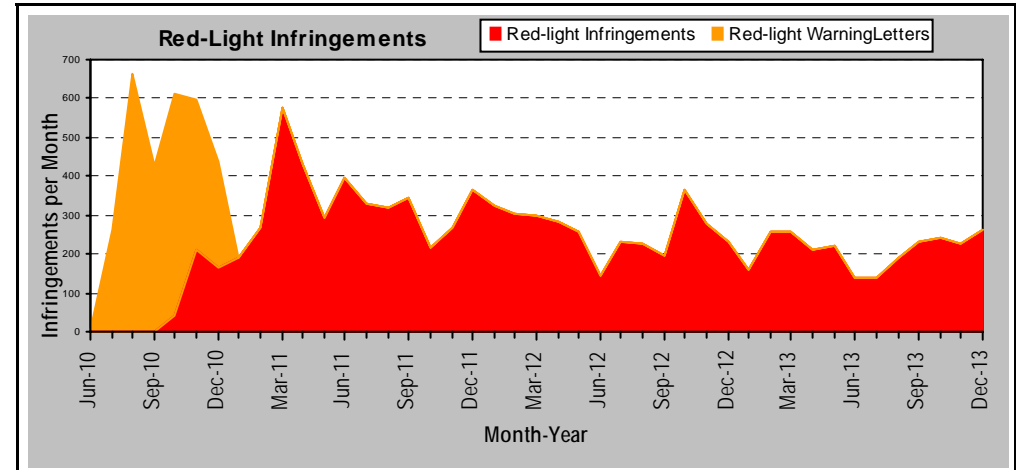
	5 years before installation ¹	3 years and 187 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	25	7	60%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	39	15	45%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	6	0	100%
<i>Rear End Crashes</i>	22	11	29%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Rozelle - Victoria Road at Evans Street

- 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 Evans Street 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

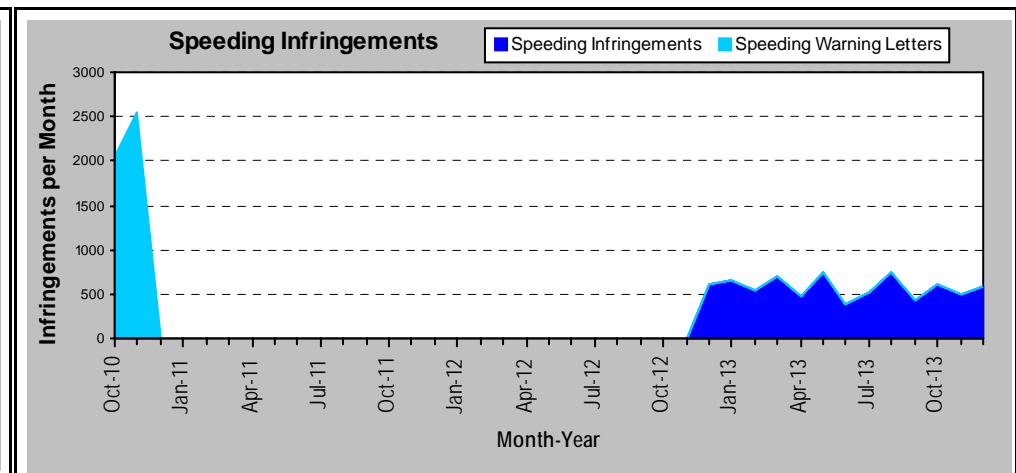
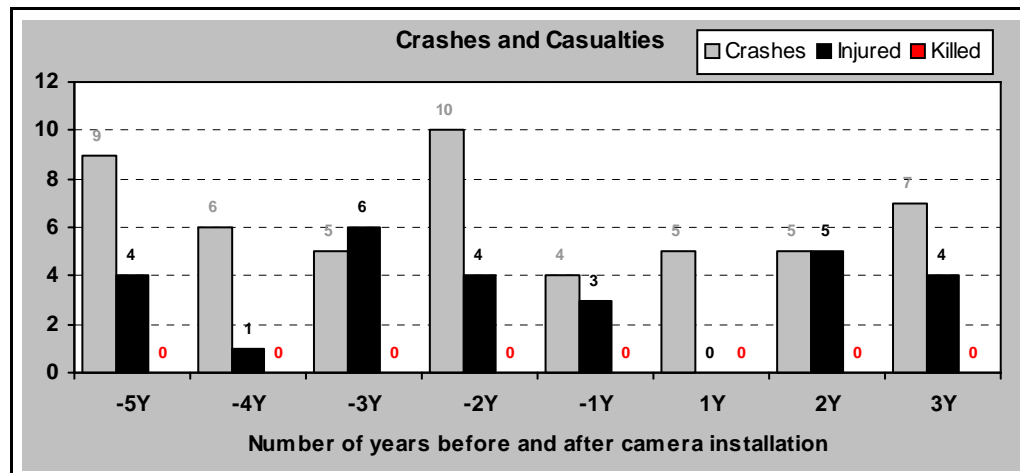
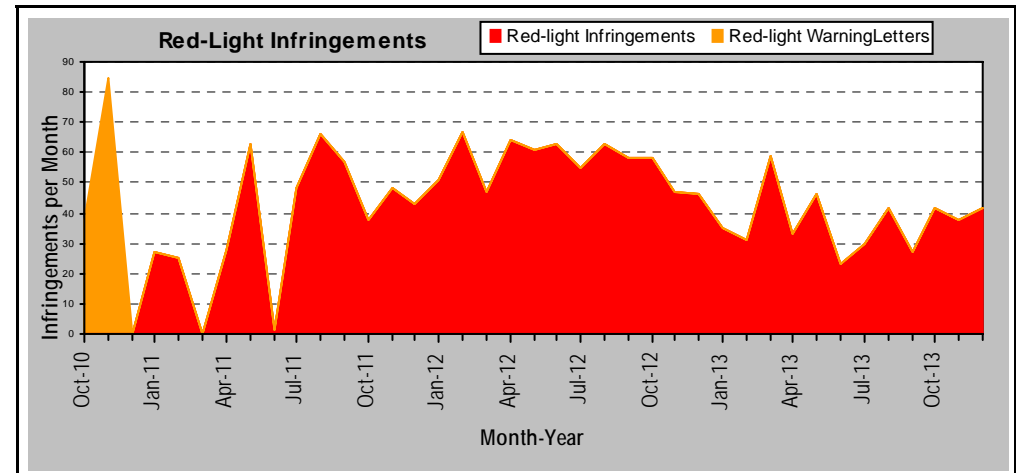
	5 years before installation ¹	3 years and 79 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	18	10	14%
<i>Pedestrian Casualties</i>	2	1	22%
Crashes	34	19	13%
<i>Adjacent Crashes</i>	16	12	+17%
<i>Right Through Crashes</i>	3	1	48%
<i>Rear End Crashes</i>	7	4	11%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Rozelle - Wellington Street at Victoria Road

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Wellington Street and Victoria Road commenced issuing warning letters in September 2010. This camera enforces red-light running only.
- 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

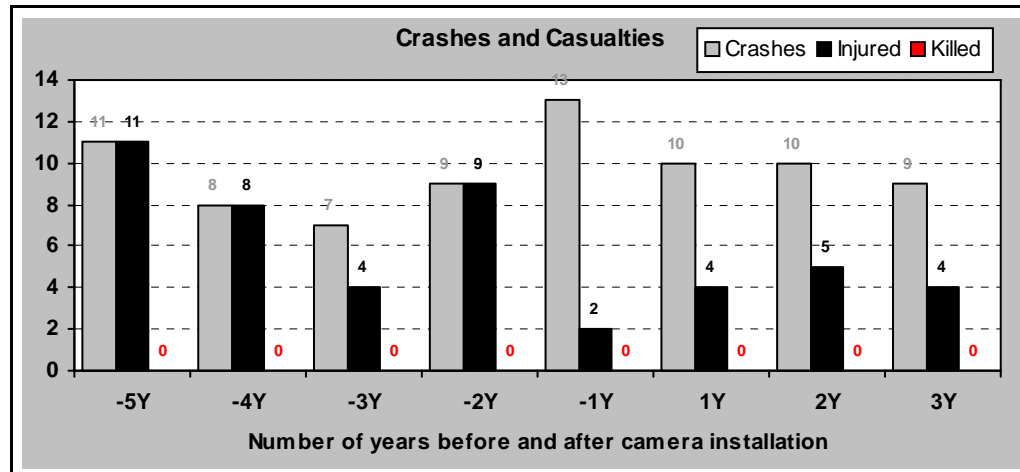
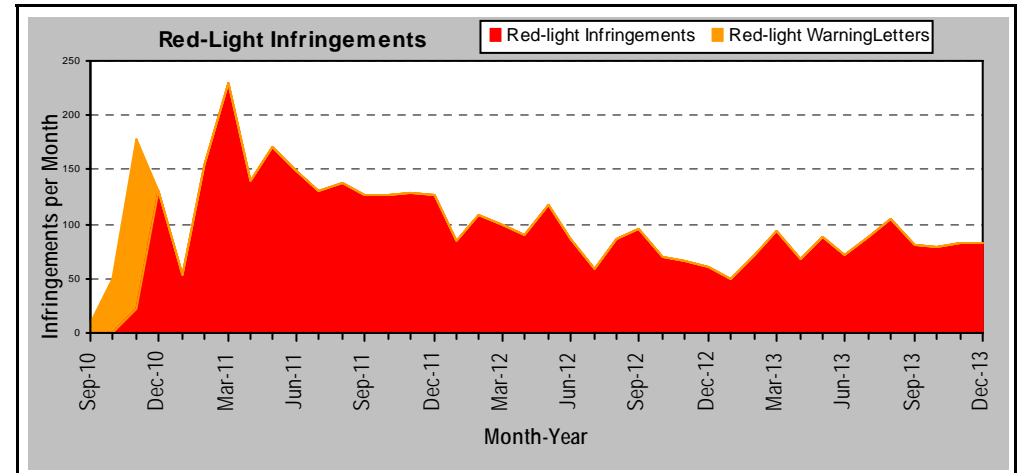
	5 years before installation ¹	3 years and 96 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	34	14	37%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	48	30	4%
<i>Adjacent Crashes</i>	9	6	+2%
<i>Right Through Crashes</i>	3	1	49%
<i>Rear End Crashes</i>	7	7	+53%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Ryde - Victoria Road at Devlin Street

- 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

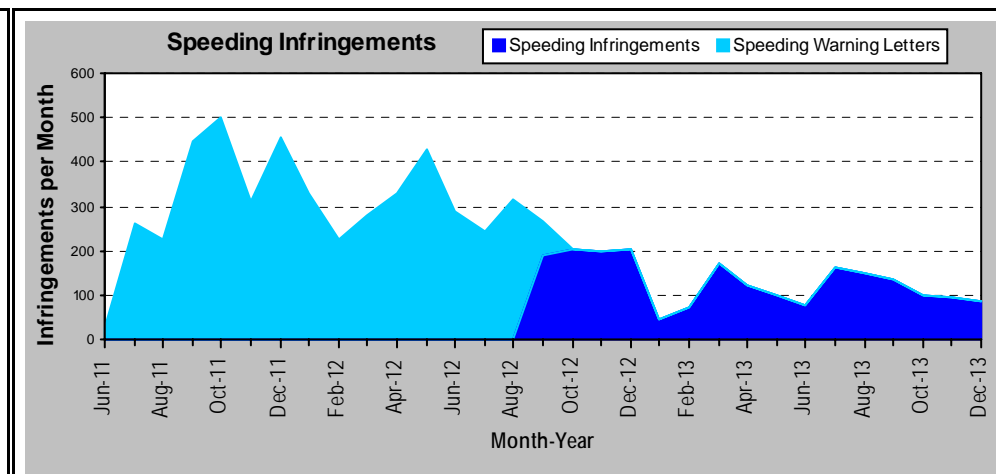
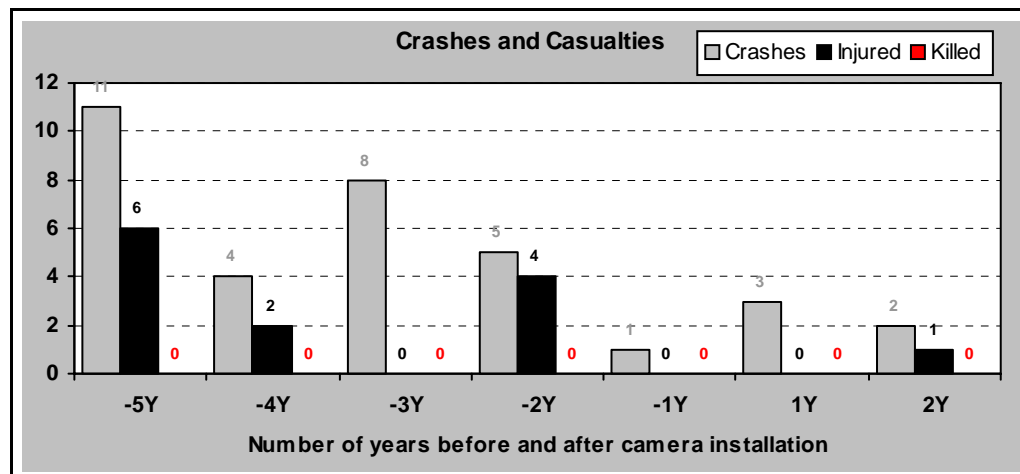
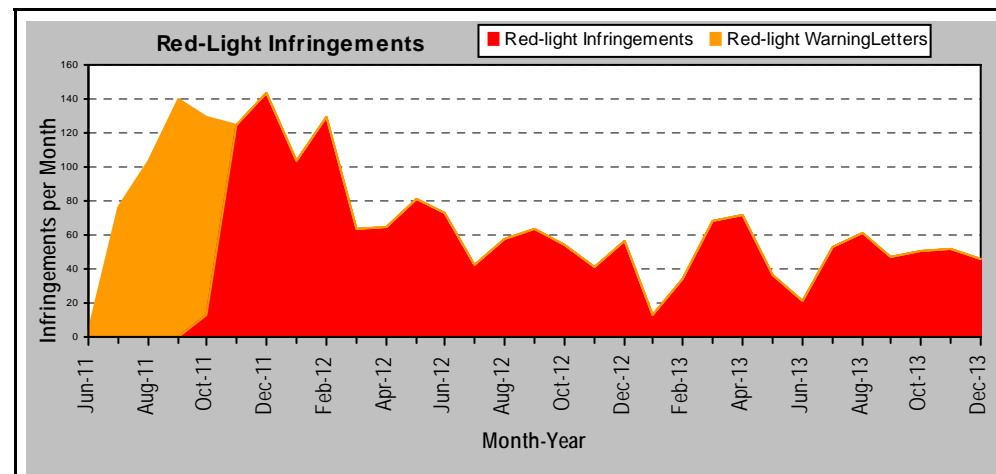
	5 years before installation ¹	2 years and 189 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	12	1	83%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	29	5	66%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	14	2	72%
<i>Rear End Crashes</i>	6	3	1%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Seven Hills - Abbott Road at Station Road

- There is one camera at this intersection.
- The camera at the intersection of Abbott Road and Station Road commenced issuing warning letters in December 2013.
- A longer period of time is required to assess 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

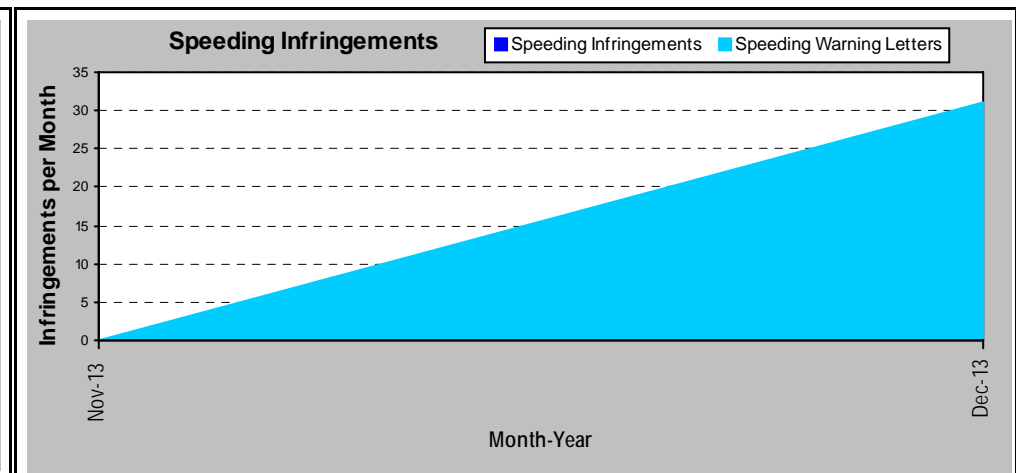
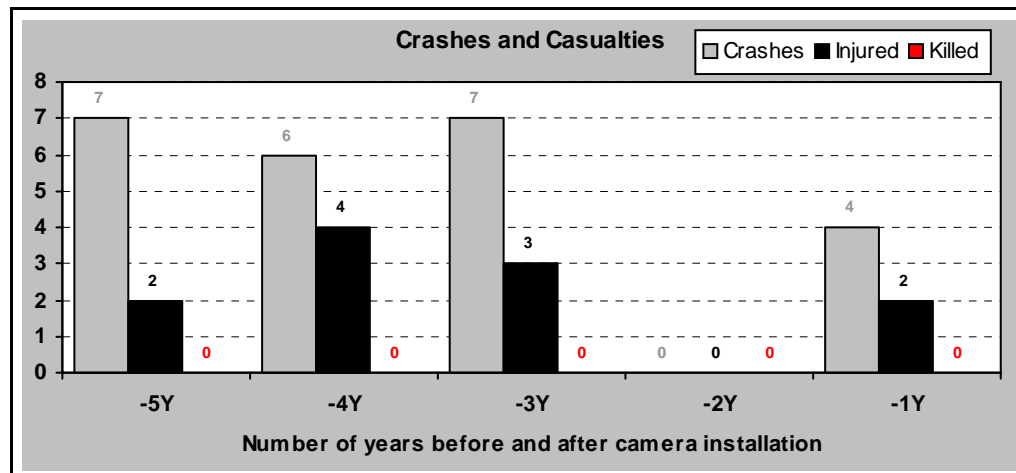
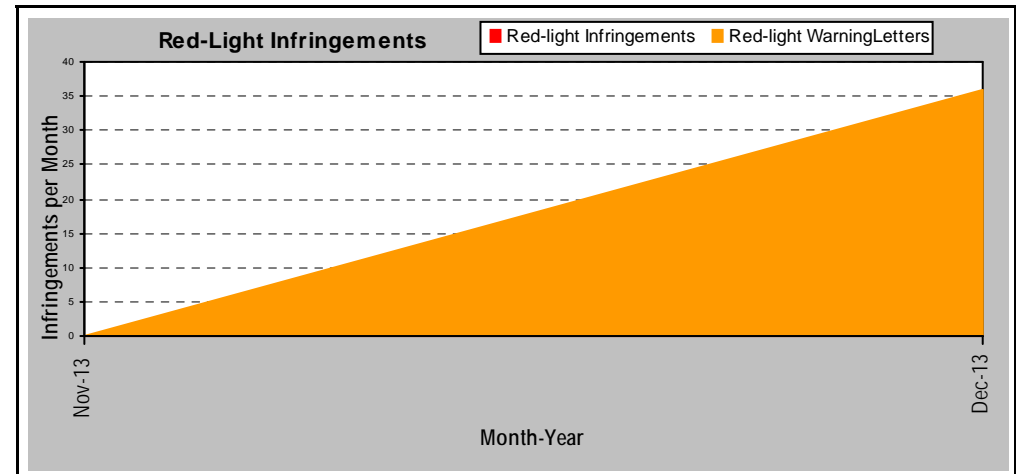
	5 years before installation ¹	18 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	11	0	100%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	24	0	100%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	4	0	100%
<i>Rear End Crashes</i>	8	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Silverwater - Silverwater Road at M4 On-ramp (Eastbound)

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Silverwater Road and M4 Eastbound On-ramp commenced issuing warning letters in June 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

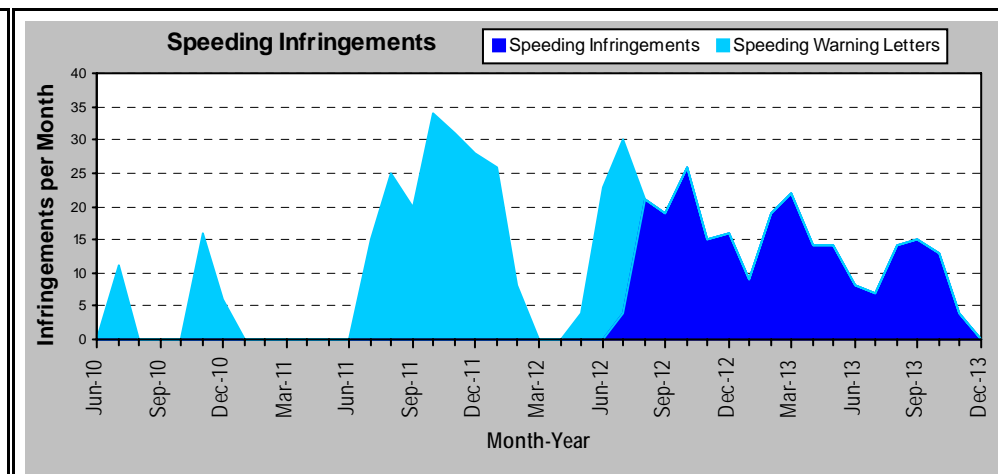
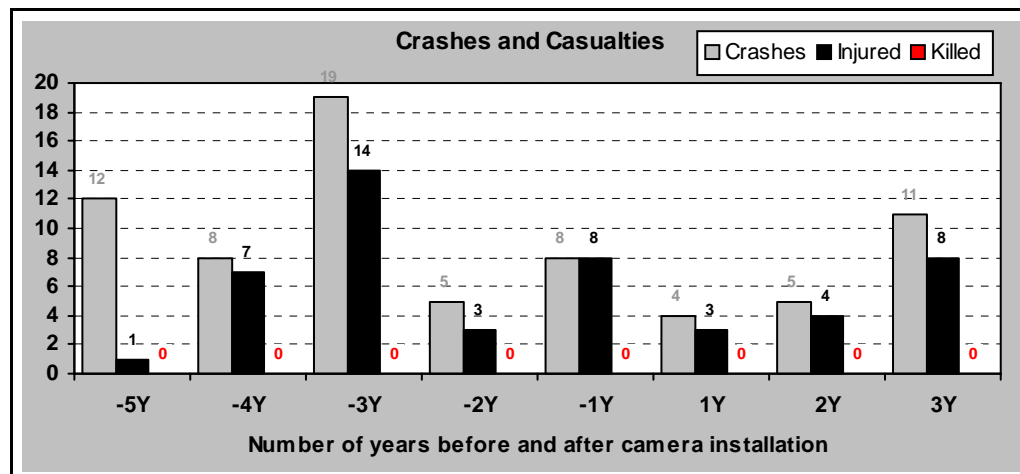
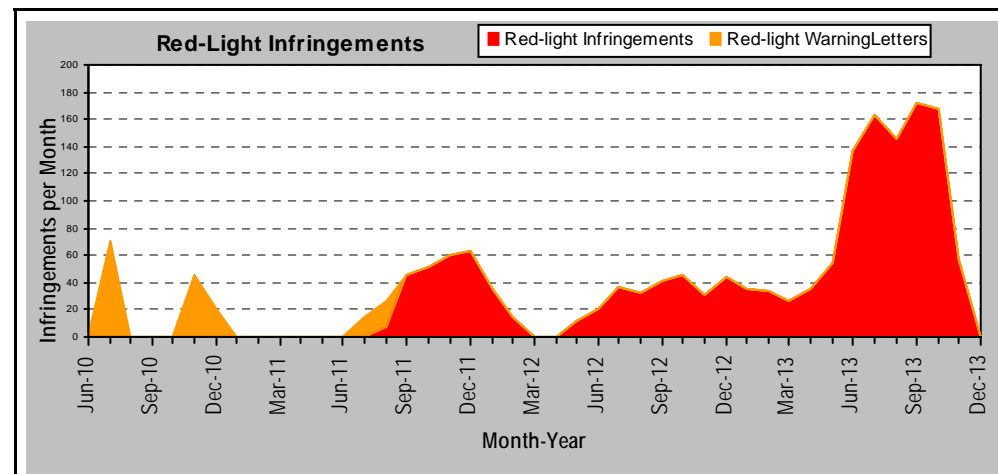
	5 years before installation ¹	3 years and 187 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	33	18	22%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	52	24	34%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	34	11	54%
<i>Rear End Crashes</i>	7	2	59%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Smithfield - Cumberland Highway at The Horsley Drive

- There is one camera at this intersection.
- The camera at the intersection of Cumberland Highway and The Horsley Drive commenced issuing warning letters in November 2013.
- A longer period of time is required to assess 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

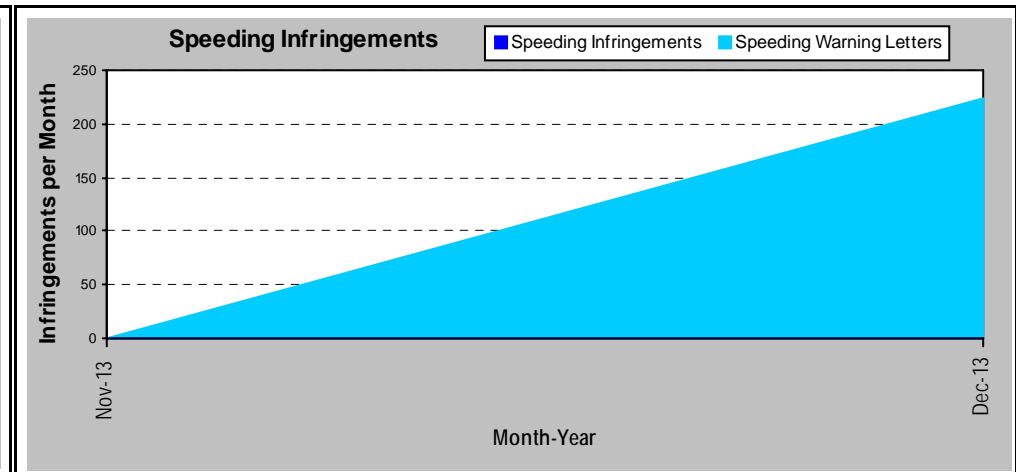
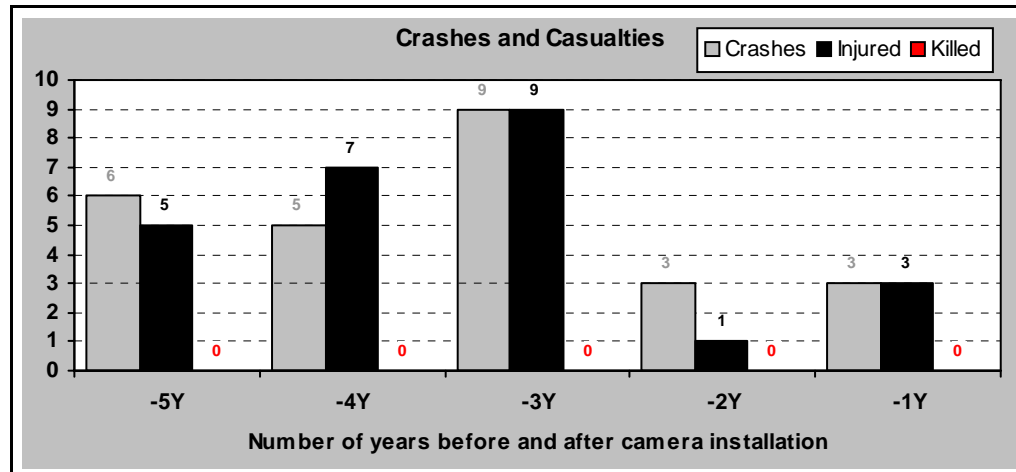
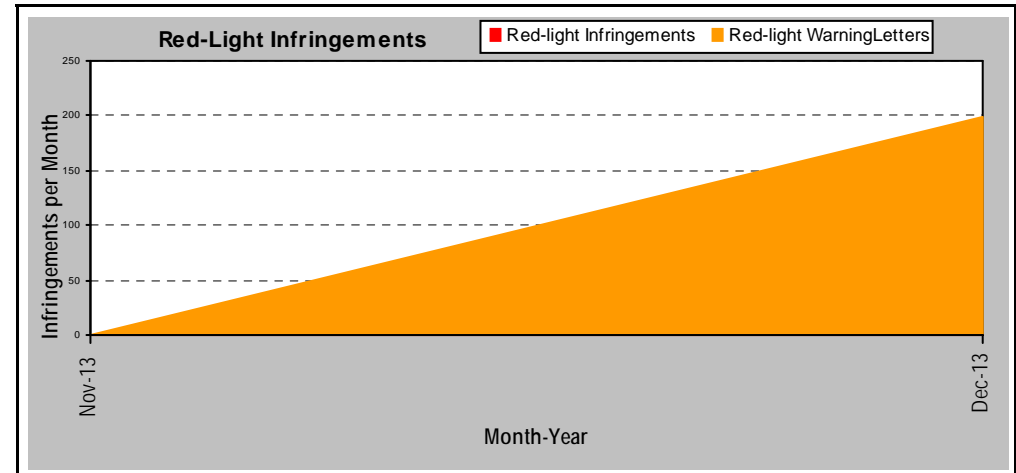
	5 years before installation ¹	33 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	25	2	+343%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	26	2	+326%
<i>Adjacent Crashes</i>	8	0	100%
<i>Right Through Crashes</i>	2	0	100%
<i>Rear End Crashes</i>	9	1	+515%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Smithfield - The Horsley Drive at Gipps Street

- There is one camera at this intersection.
- The camera at the intersection of The Horsley Drive and Gipps Street commenced issuing warning letters in August 2013.
- A longer period of time is required to assess 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

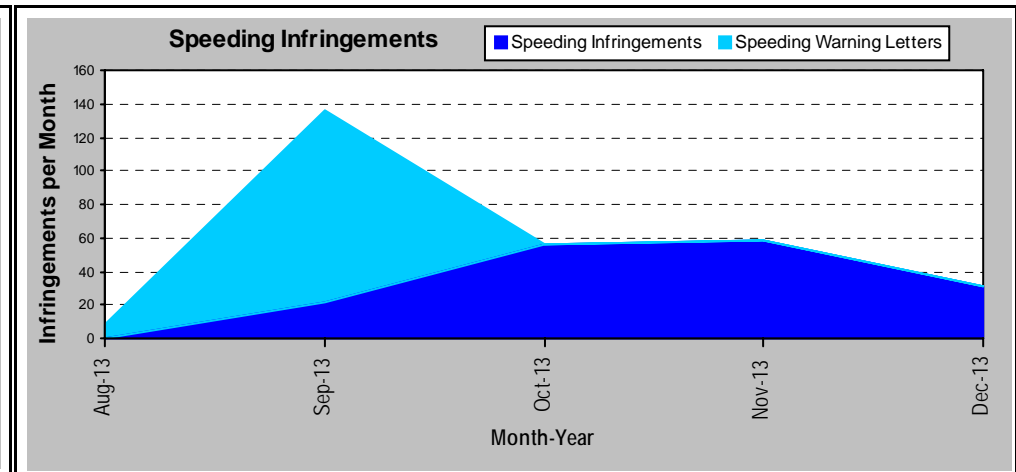
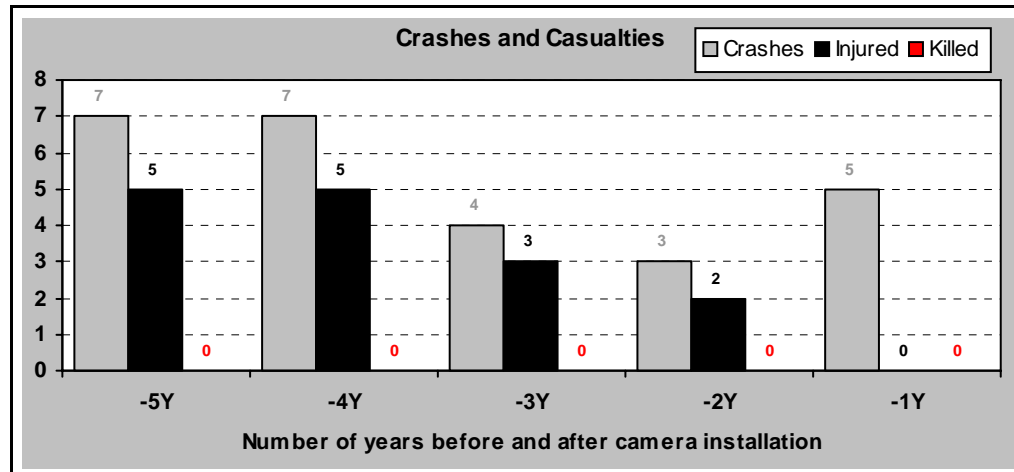
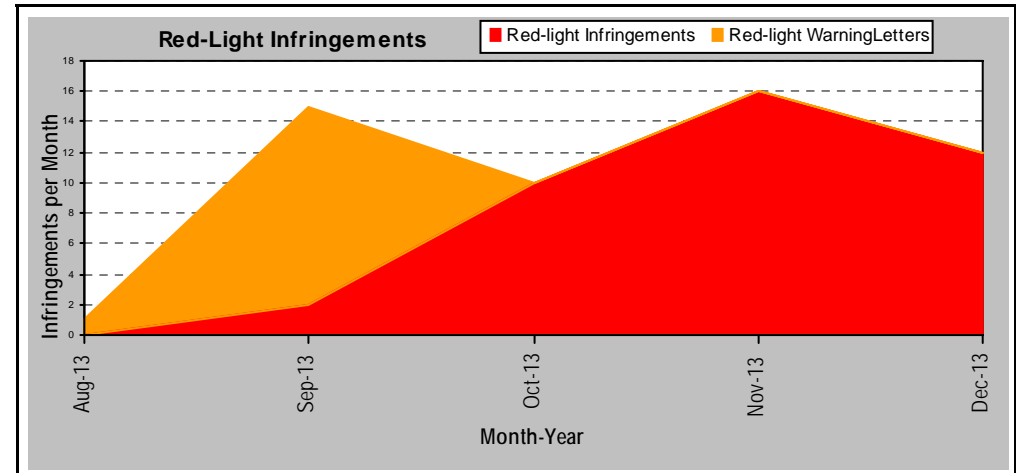
	5 years before installation ¹	127 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	15	1	4%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	26	4	+121%
<i>Adjacent Crashes</i>	7	3	+516%
<i>Right Through Crashes</i>	9	0	100%
<i>Rear End Crashes</i>	4	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Smithfield - Victoria Street at Hassall Street

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Victoria Street and Hassall 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

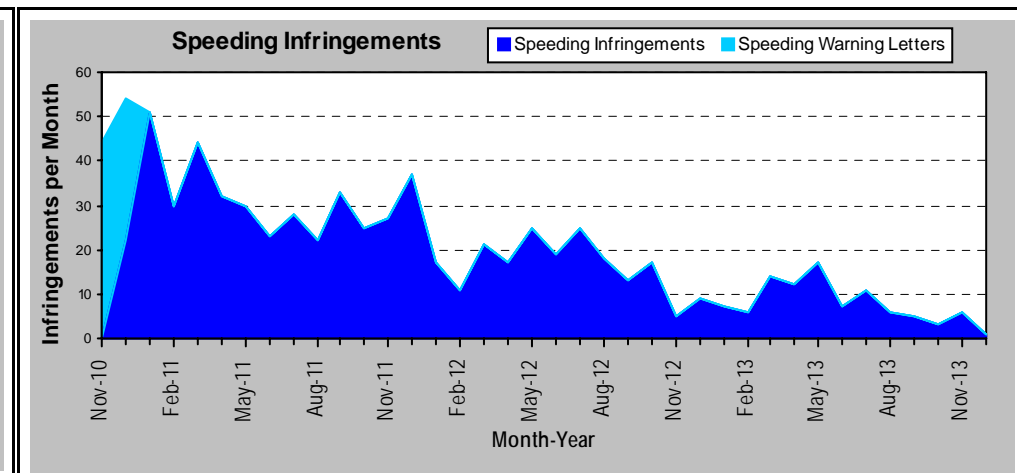
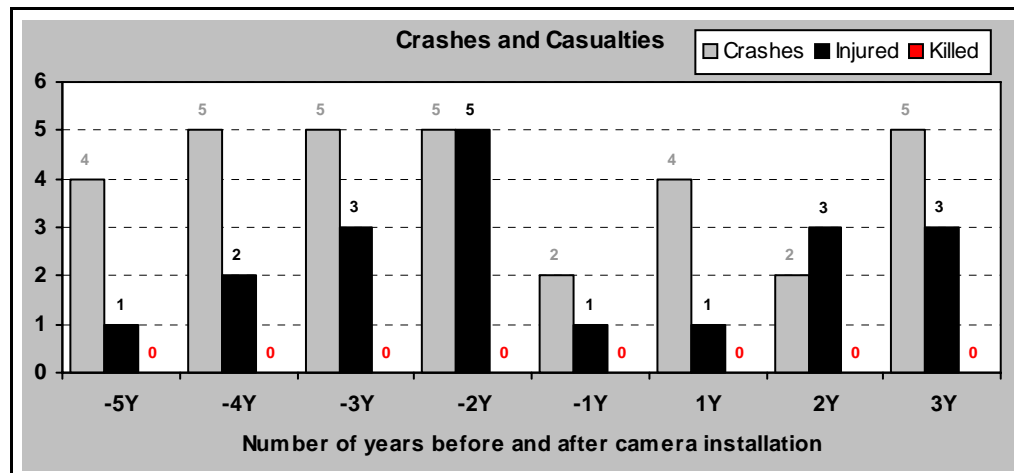
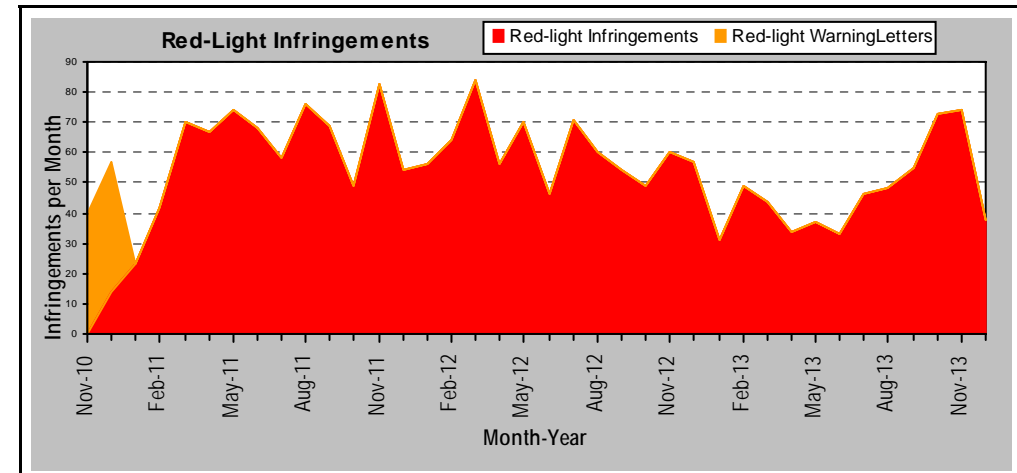
	5 years before installation ¹	3 years and 52 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	12	7	7%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	21	11	17%
<i>Adjacent Crashes</i>	5	3	4%
<i>Right Through Crashes</i>	9	4	29%
<i>Rear End Crashes</i>	1	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



South Penrith - Parker Street at Jamison Road

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Parker Street and Jamison Road commenced issuing warning letters in November 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

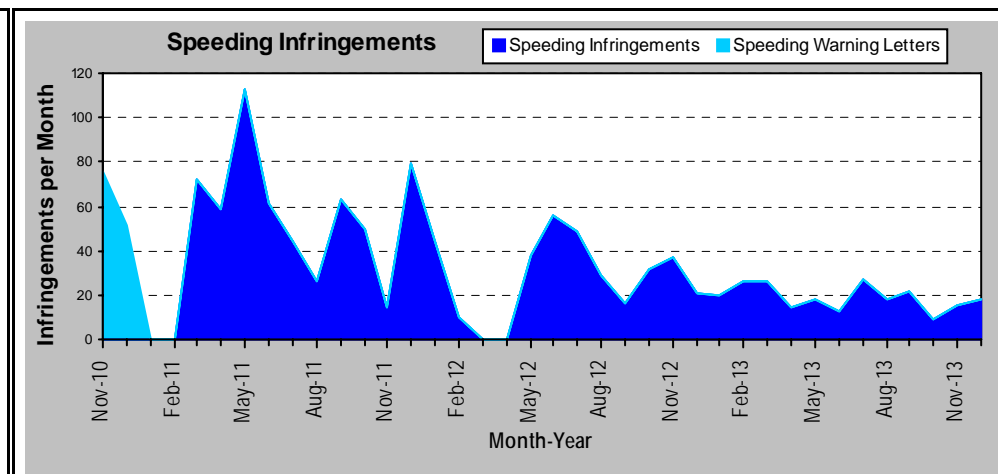
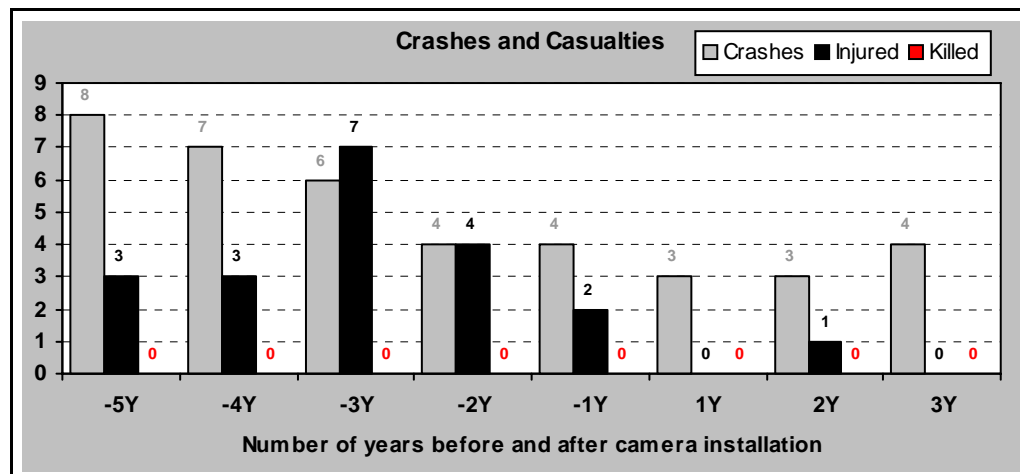
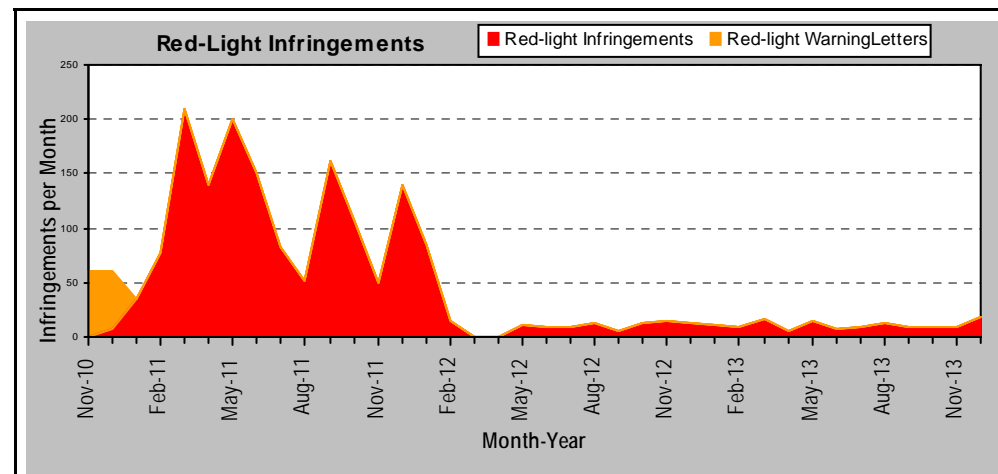
	5 years before installation ¹	3 years and 52 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	19	1	92%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	29	11	40%
<i>Adjacent Crashes</i>	4	0	100%
<i>Right Through Crashes</i>	12	4	47%
<i>Rear End Crashes</i>	10	6	4%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



South Wentworthville - Cumberland Highway at Old Prospect Road

- 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

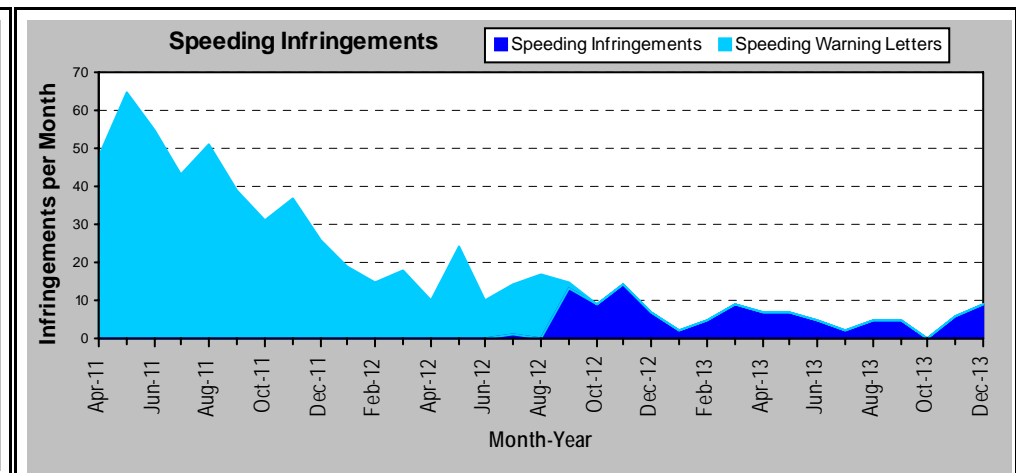
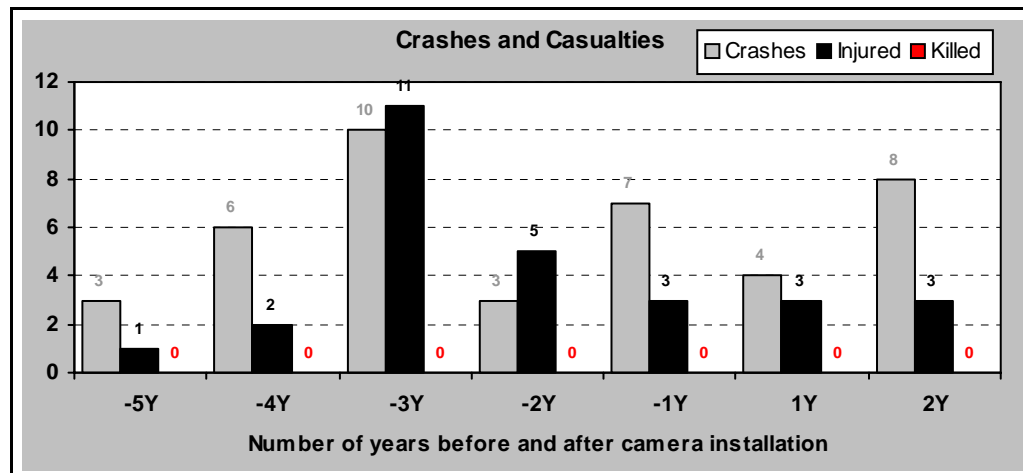
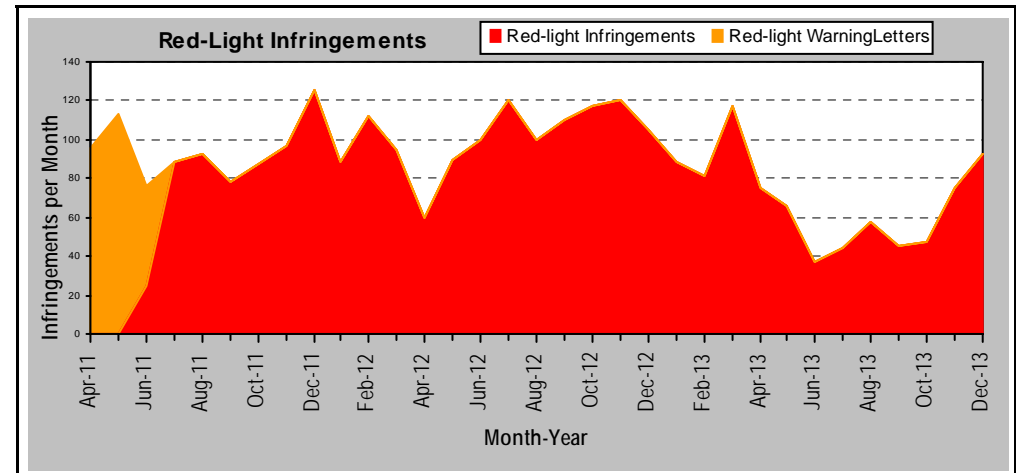
	5 years before installation ¹	2 years and 270 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	22	7	42%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	29	15	6%
<i>Adjacent Crashes</i>	2	1	9%
<i>Right Through Crashes</i>	12	5	24%
<i>Rear End Crashes</i>	11	5	17%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Spring Hill - Springhill Road (Northbound and Southbound) at Masters Road

- There are two cameras at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Springhill Road (Northbound) and Masters Road commenced issuing warning letters in December 2013.
- The camera at the intersection of Springhill Road (Southbound) and Masters Road commenced issuing warning letters in December 2013.
- A longer period of time is required to assess the effectiveness of the cameras.
- 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

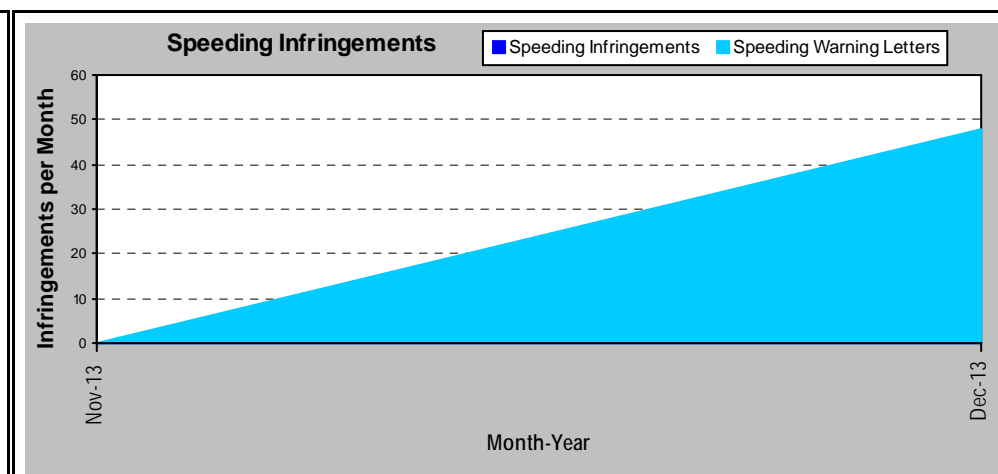
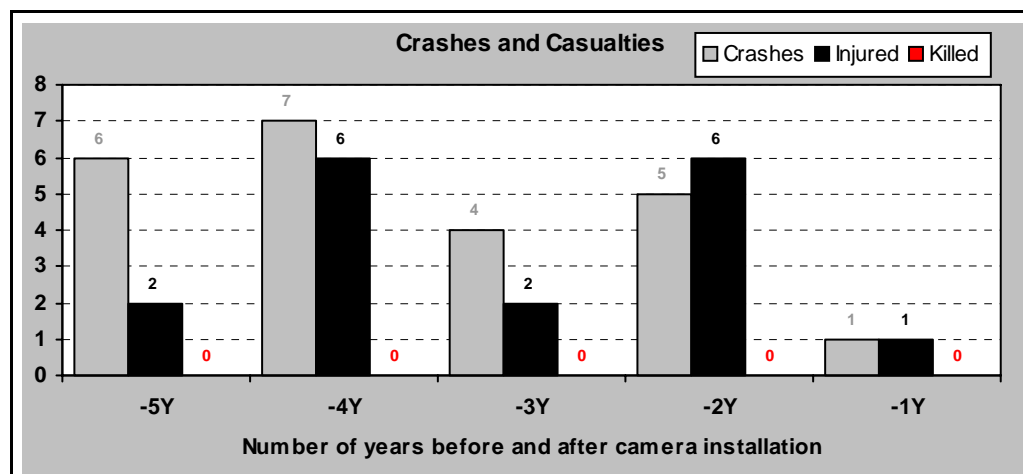
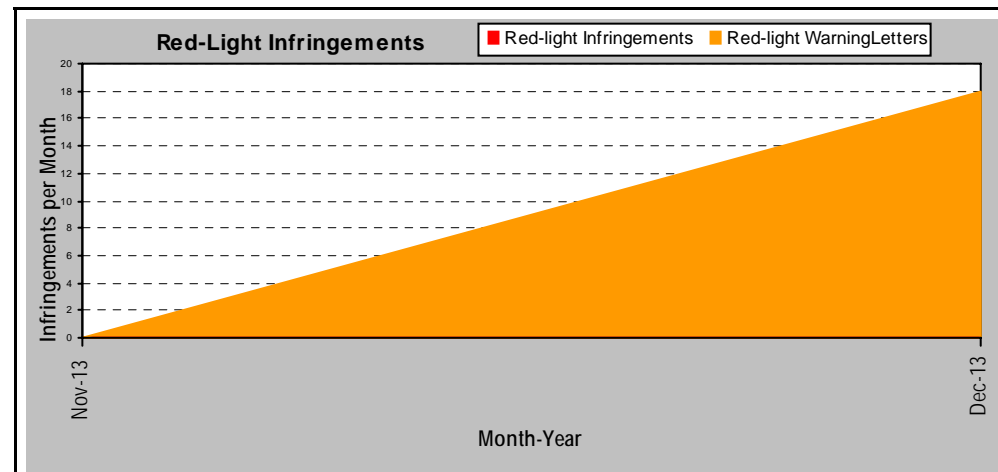
	5 years before installation ¹	18 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	17	0	100%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	23	0	100%
<i>Adjacent Crashes</i>	1	0	100%
<i>Right Through Crashes</i>	9	0	100%
<i>Rear End Crashes</i>	7	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



St Marys - Great Western Highway at Charles Hackett Drive / Pages Road

- There are two cameras at this intersection.
- The camera at the intersection of Great Western Highway and Charles Hackett Drive commenced issuing warning letters in July 2010.
- The camera at the intersection of Great Western Highway and Pages Road 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

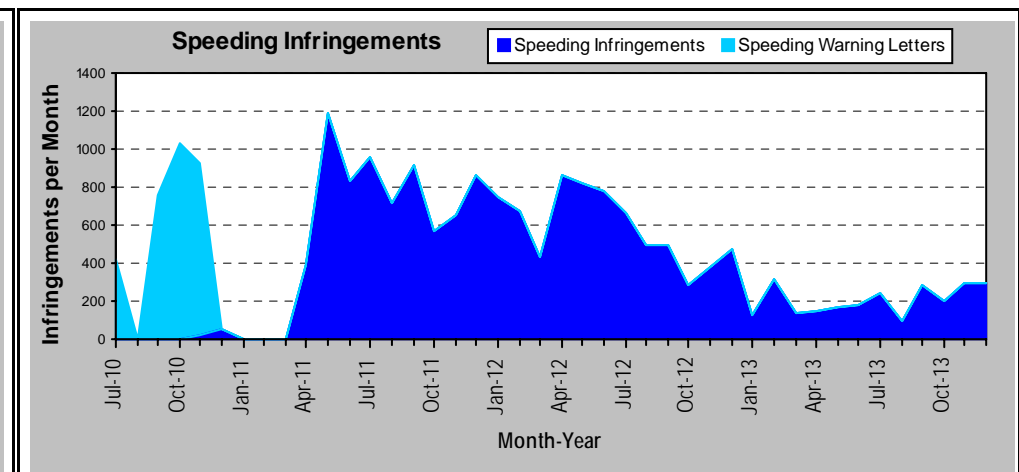
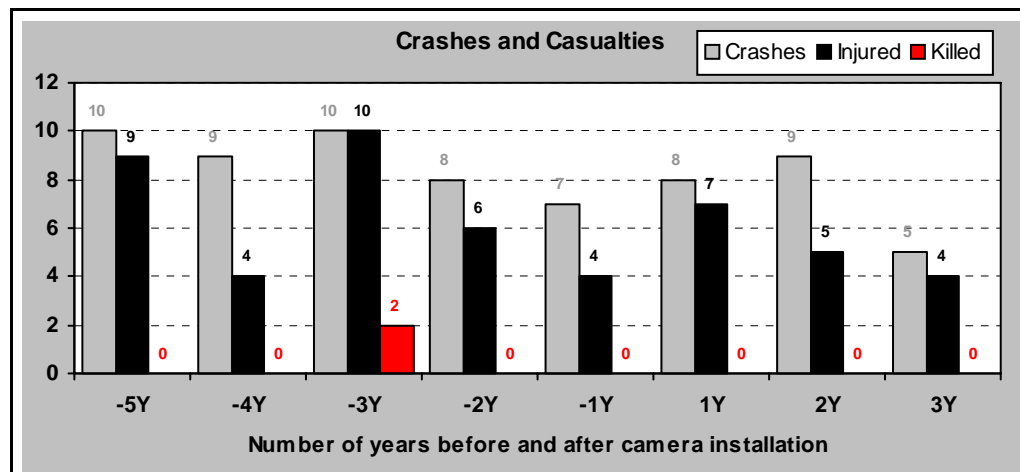
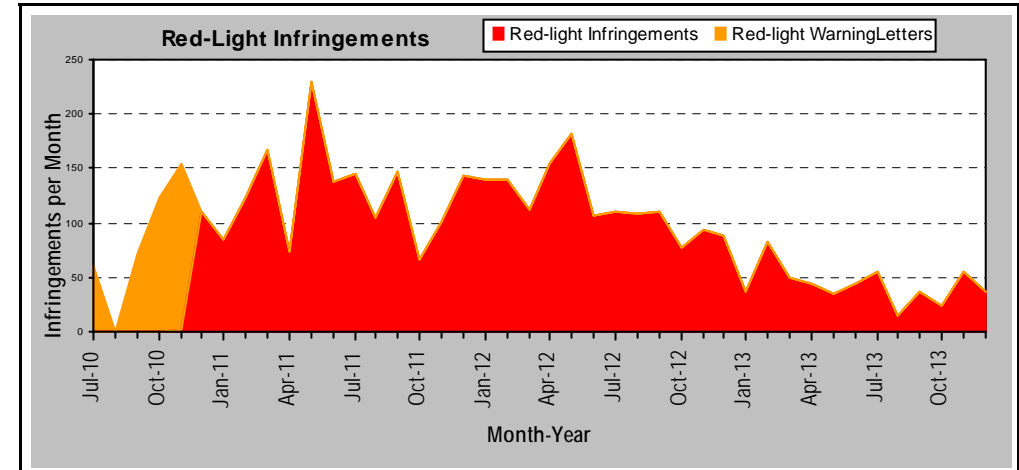
	5 years before installation ¹	3 years and 178 days after installation ²	Percentage reduction ³
Fatalities	2	0	100%
Injuries	33	16	30%
<i>Pedestrian Casualties</i>	1	1	+43%
Crashes	44	23	25%
<i>Adjacent Crashes</i>	4	0	100%
<i>Right Through Crashes</i>	29	8	60%
<i>Rear End Crashes</i>	6	13	+211%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



St Marys - Mamre Road at Saddington Street (School Zone)

- There is one camera at this intersection.
- The camera at the intersection of Mamre Road and Saddington Street commenced issuing warning letters in September 2013.
- A longer period of time is required to assess 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

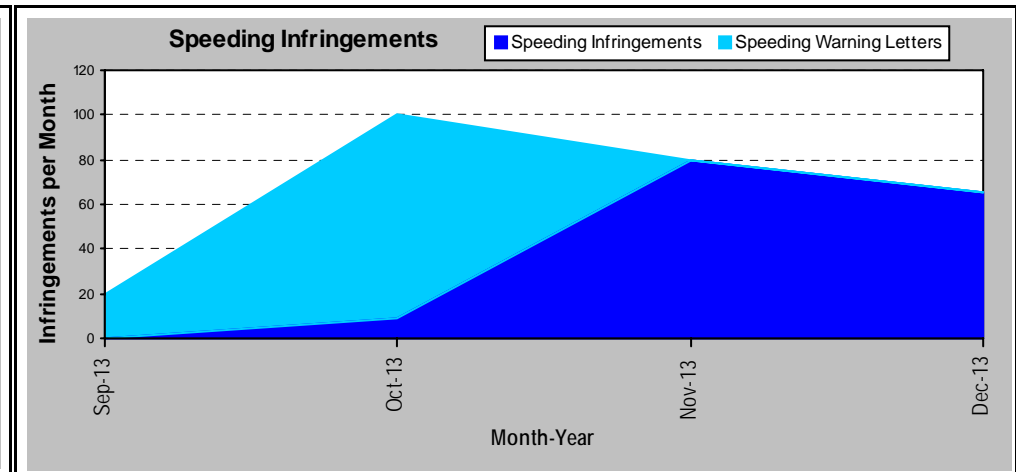
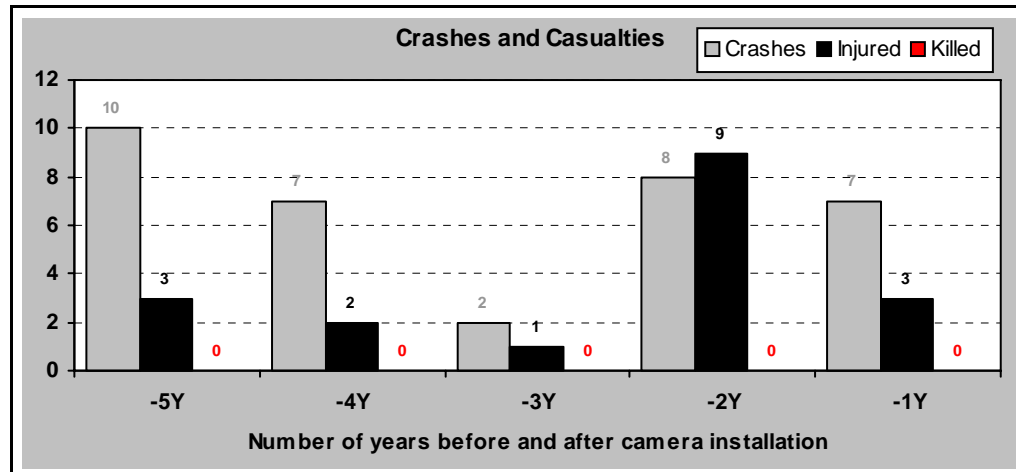
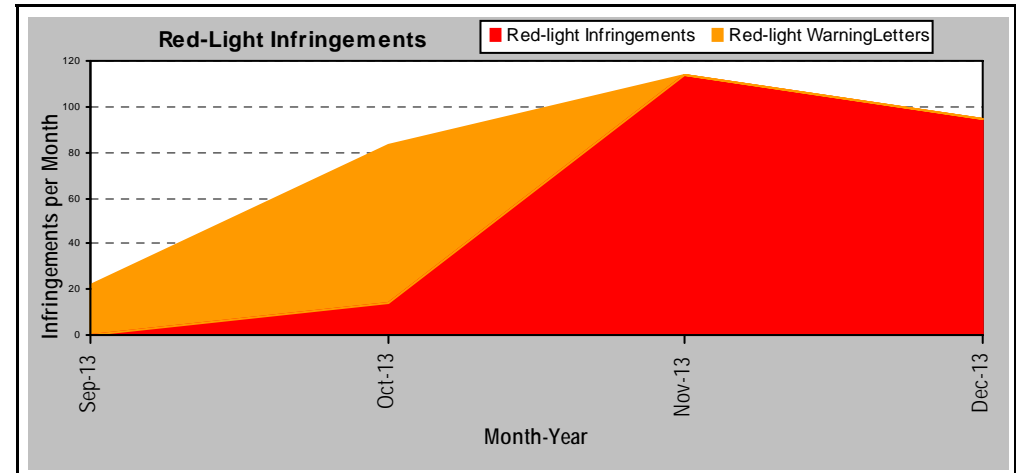
	5 years before installation ¹	97 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	18	3	+214%
<i>Pedestrian Casualties</i>	0	1	-
Crashes	34	3	+66%
<i>Adjacent Crashes</i>	13	0	100%
<i>Right Through Crashes</i>	11	1	+71%
<i>Rear End Crashes</i>	3	1	+527%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Strathfield - Arthur Street at Centenary Drive

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Arthur Street and Centenary Drive 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

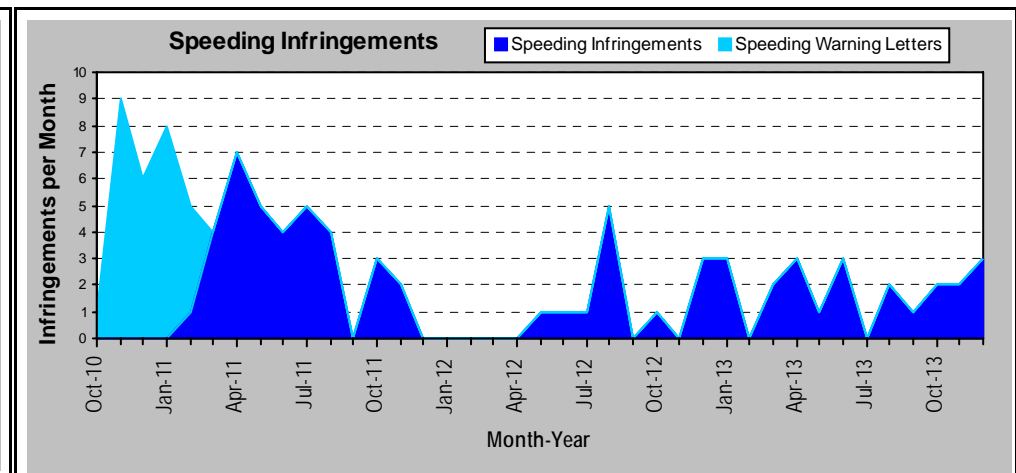
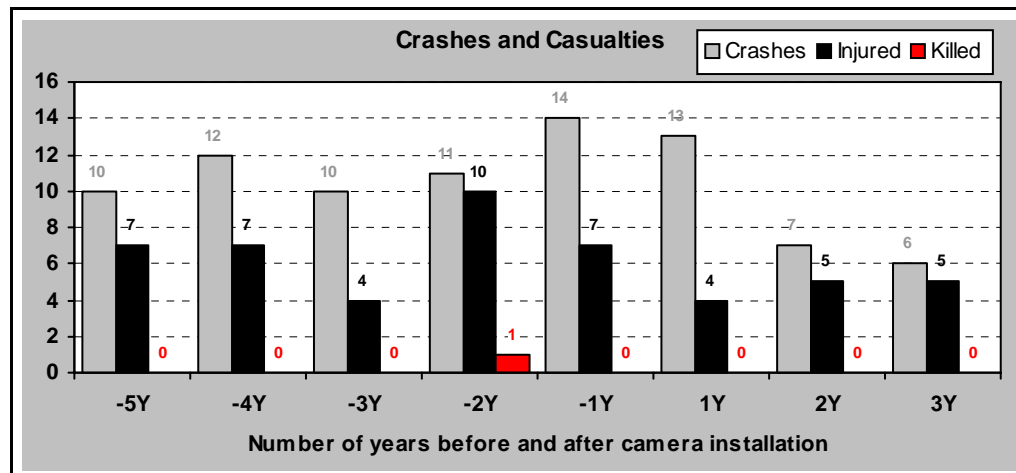
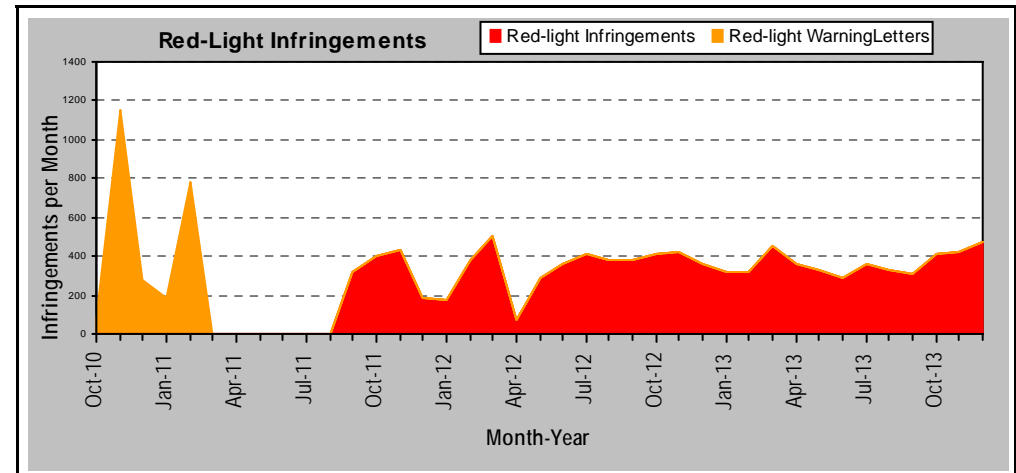
	5 years before installation ¹	3 years and 67 days after installation ²	Percentage reduction ³
Fatalities	1	0	100%
Injuries	35	14	37%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	57	27	26%
<i>Adjacent Crashes</i>	18	3	74%
<i>Right Through Crashes</i>	9	4	30%
<i>Rear End Crashes</i>	20	11	14%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Surry Hills - Cleveland Street at South Dowling Street

- There is one camera at this intersection.
- The camera at the intersection of Cleveland Street and South Dowling Street 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

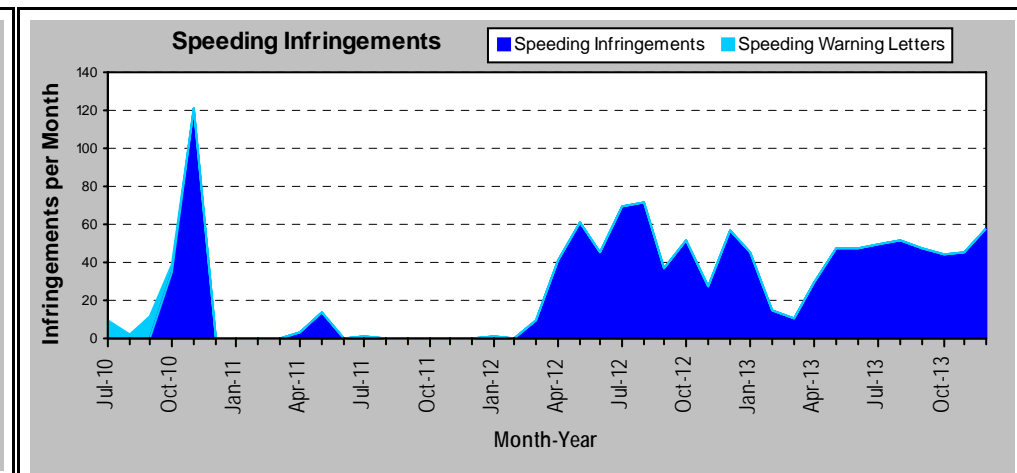
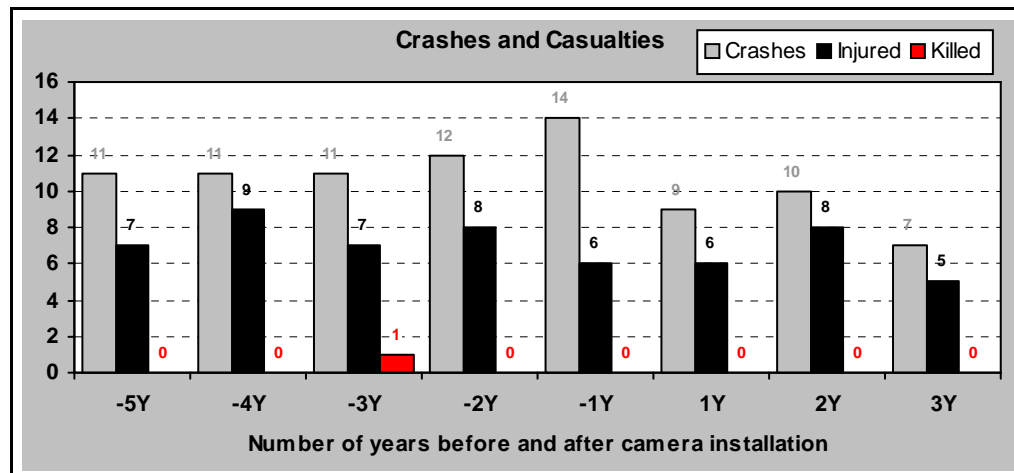
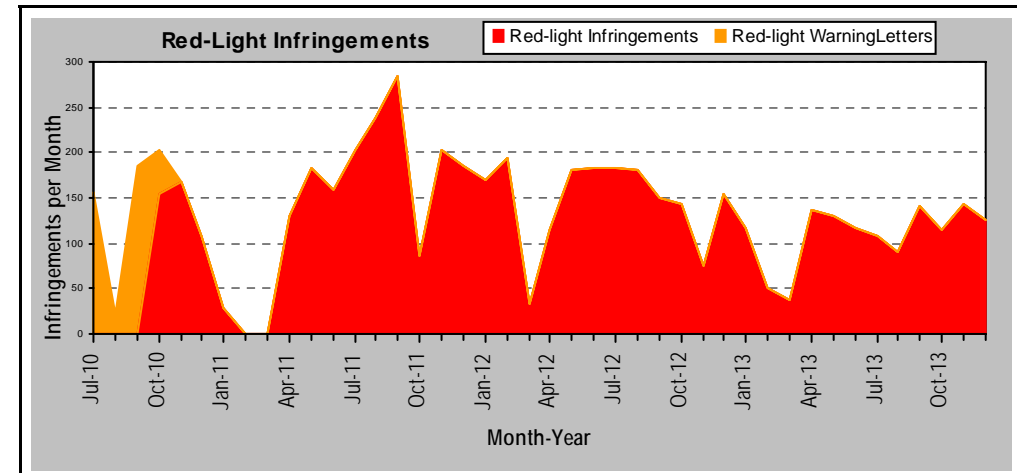
	5 years before installation ¹	3 years and 186 days after installation ²	Percentage reduction ³
Fatalities	1	0	100%
Injuries	37	20	23%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	59	29	30%
<i>Adjacent Crashes</i>	9	7	+11%
<i>Right Through Crashes</i>	11	6	22%
<i>Rear End Crashes</i>	18	10	21%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Thornleigh - Pennant Hills Road at Parkes Street

- 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 Road and Parkes Street 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

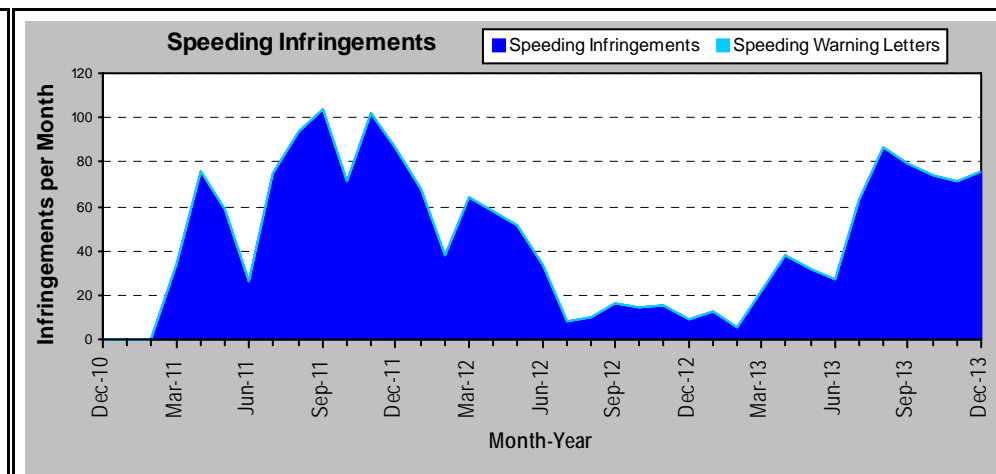
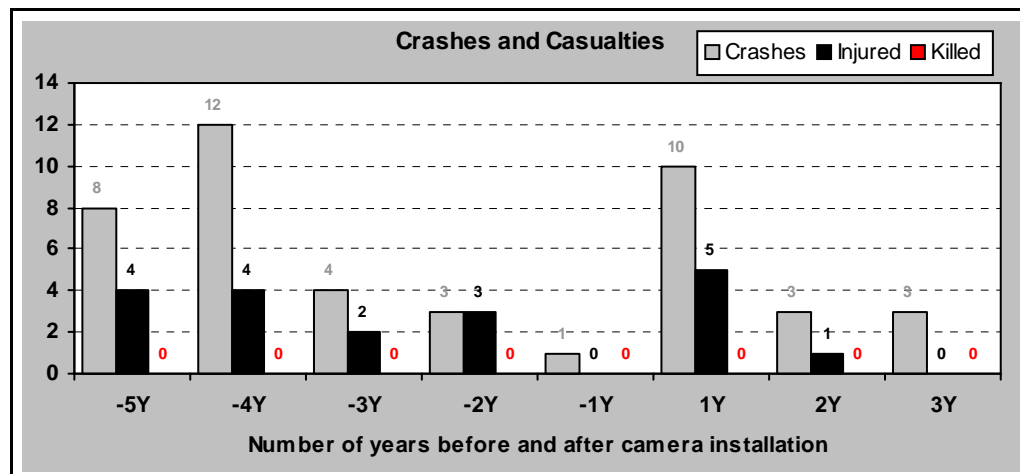
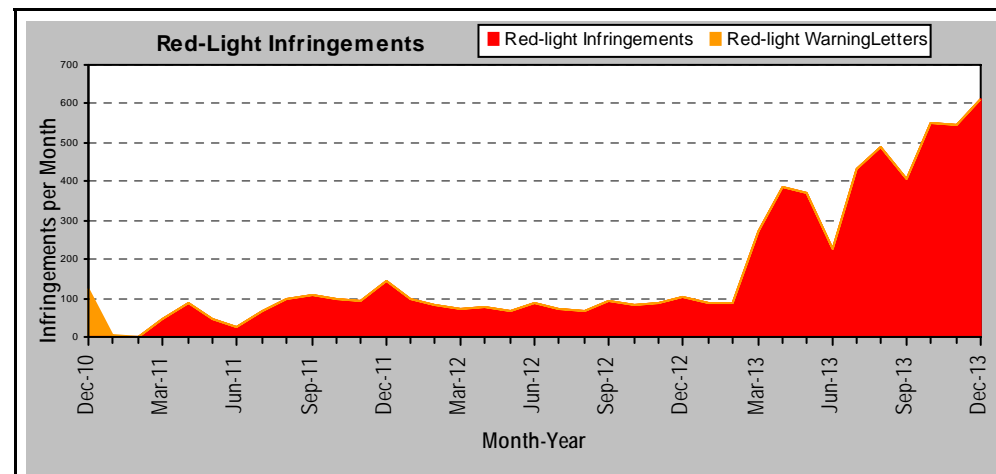
	5 years before installation ¹	3 years and 18 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	13	6	24%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	28	16	6%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	4	1	59%
<i>Rear End Crashes</i>	16	13	+33%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Ultimo - Wattle Street at William Henry Street

- 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 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

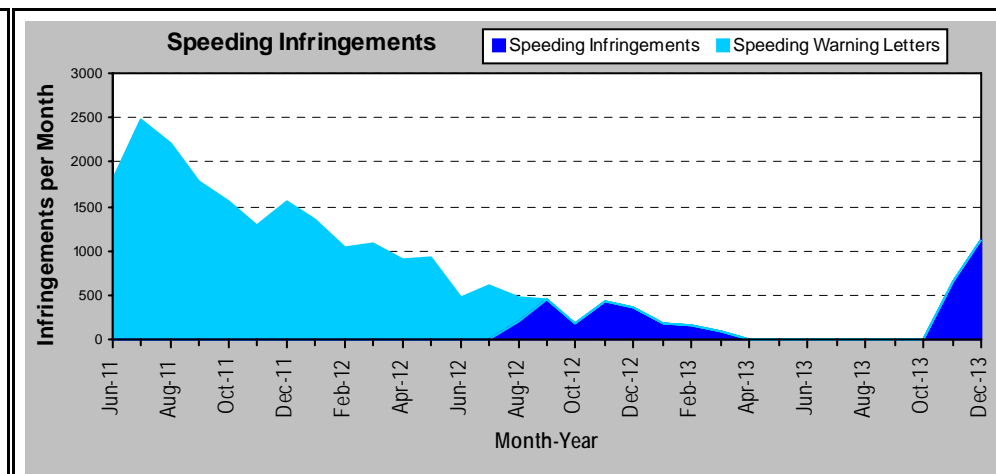
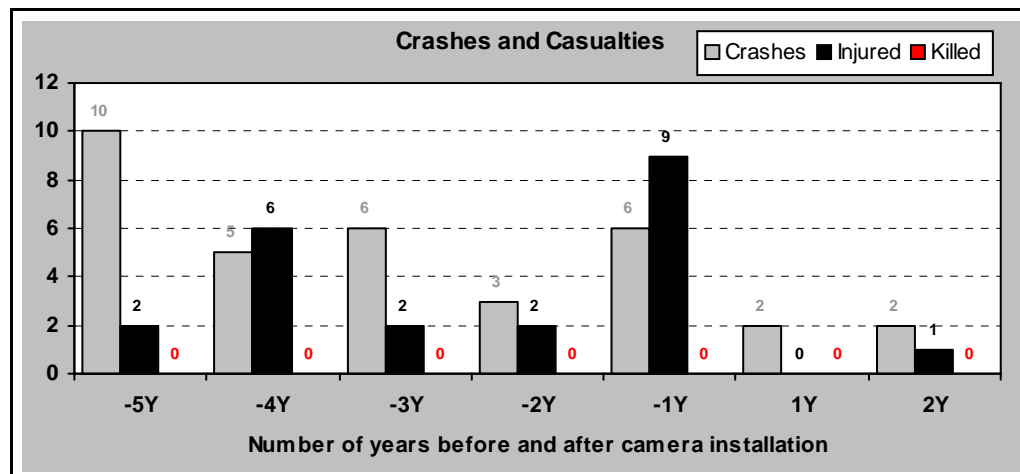
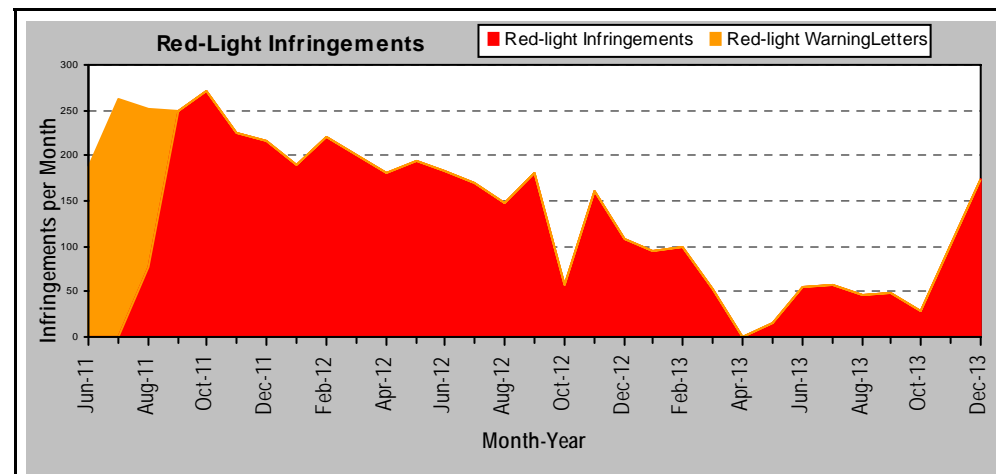
	5 years before installation ¹	2 years and 206 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	21	4	63%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	30	5	67%
<i>Adjacent Crashes</i>	14	3	58%
<i>Right Through Crashes</i>	8	0	100%
<i>Rear End Crashes</i>	5	2	22%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Unanderra - Princes Highway at Five Islands Road

- 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

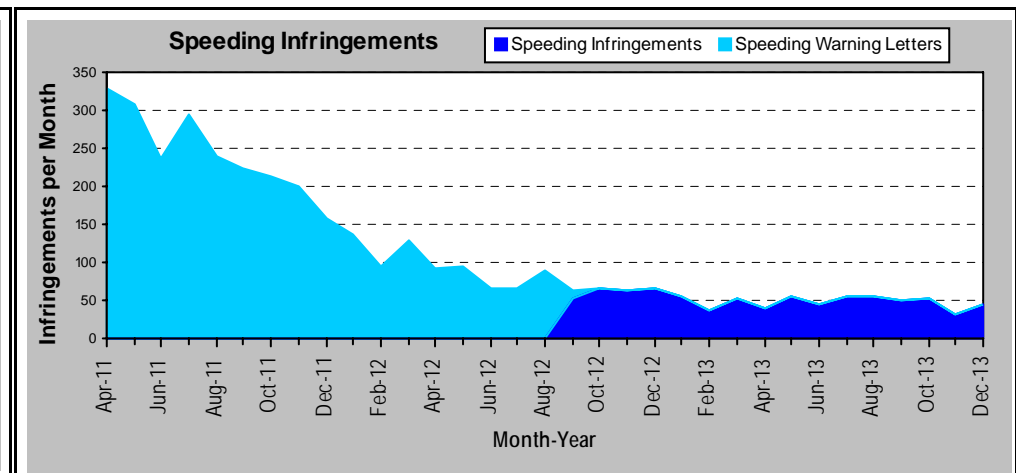
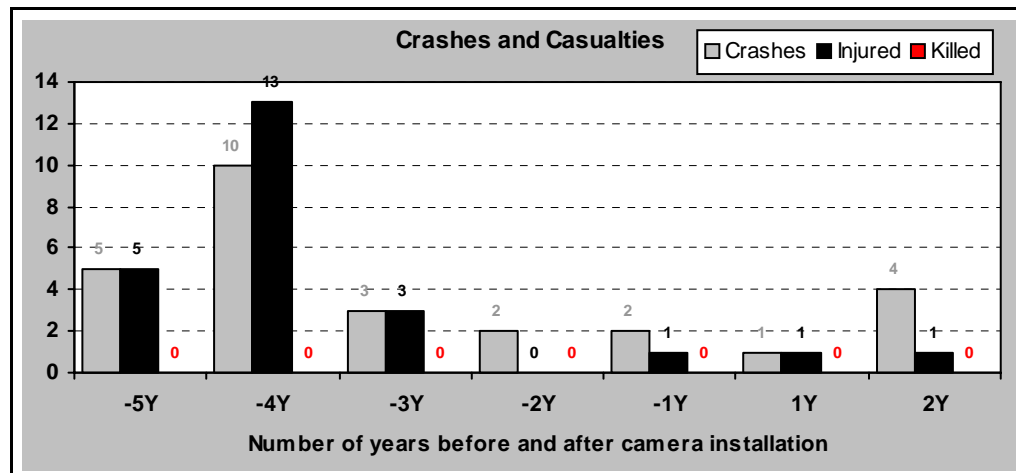
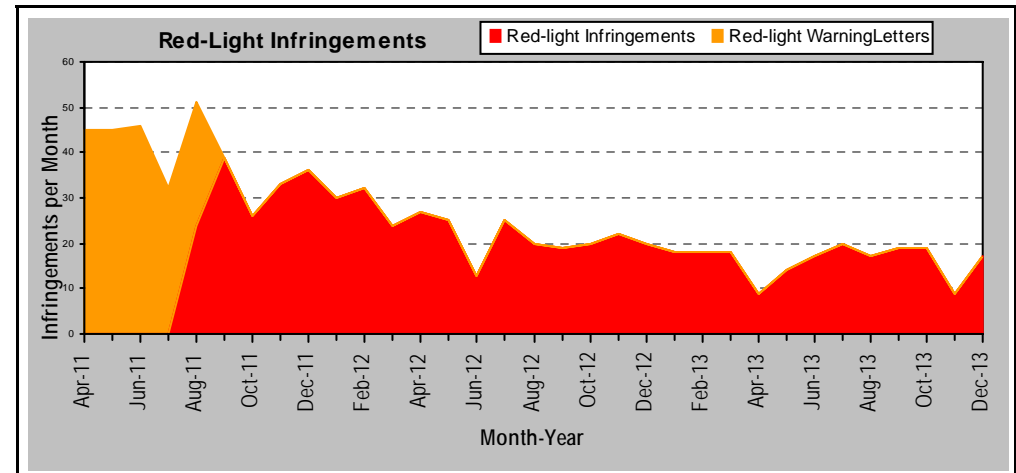
	5 years before installation ¹	2 years and 265 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	22	2	83%
<i>Pedestrian Casualties</i>	0	1	-
Crashes	22	5	58%
<i>Adjacent Crashes</i>	0	0	-
<i>Right Through Crashes</i>	15	2	76%
<i>Rear End Crashes</i>	4	1	54%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Wallsend - Thomas Street at Metcalfe Street

- There is one camera at this intersection.
- The camera at the intersection of Thomas Street and Metcalfe Street commenced issuing warning letters in September 2013.
- A longer period of time is required to assess 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

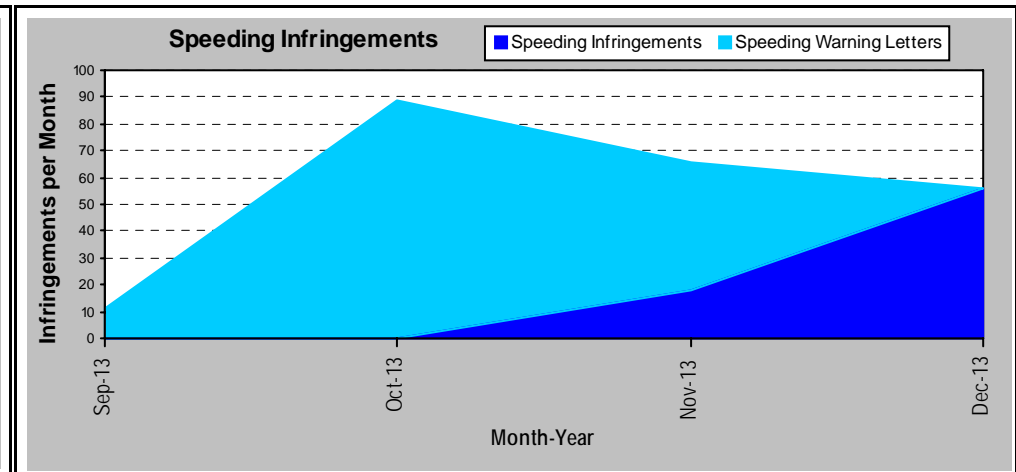
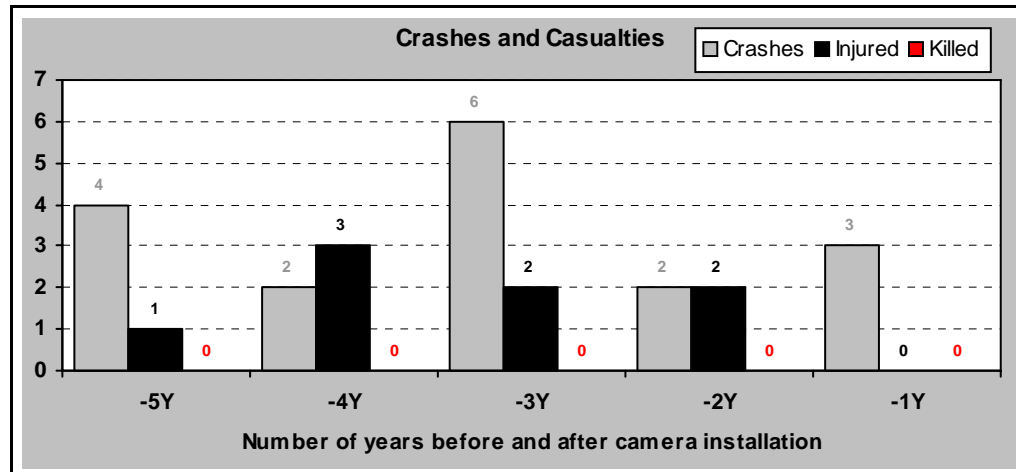
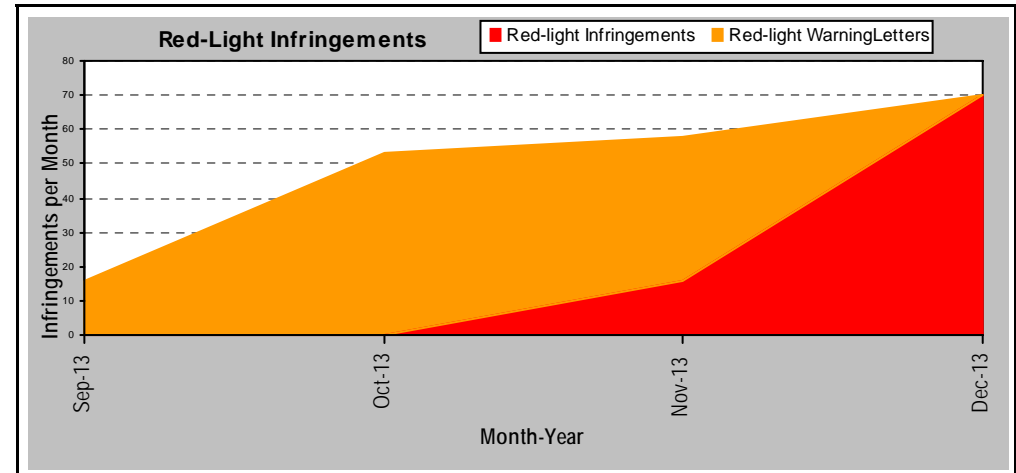
	5 years before installation ¹	97 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	8	1	+135%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	17	2	+121%
<i>Adjacent Crashes</i>	4	0	100%
<i>Right Through Crashes</i>	5	0	100%
<i>Rear End Crashes</i>	8	2	+371%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Warrawong - King Street (Grand Pacific Drive) at Cowper Street

- There is one camera at this intersection.
- The camera at the intersection of King Street (Grand Pacific Drive) and Cowper Street commenced issuing warning letters in October 2013.
- A longer period of time is required to assess 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

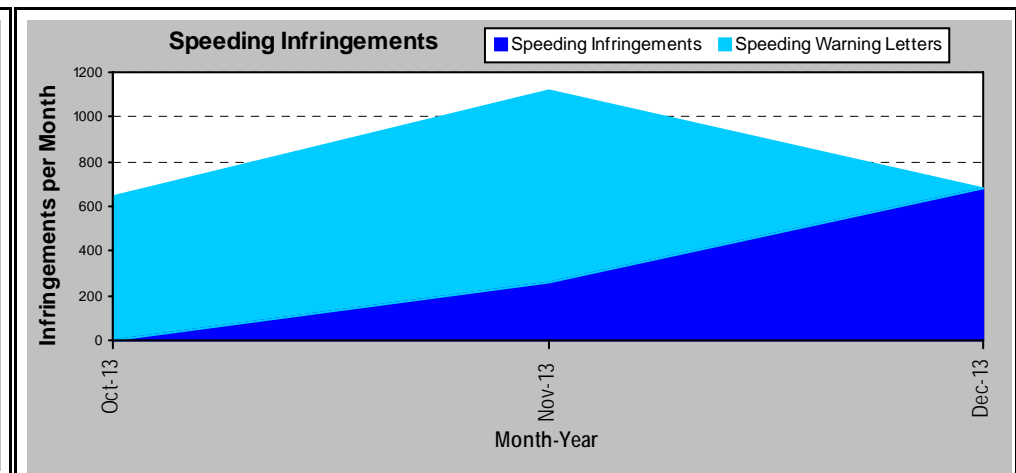
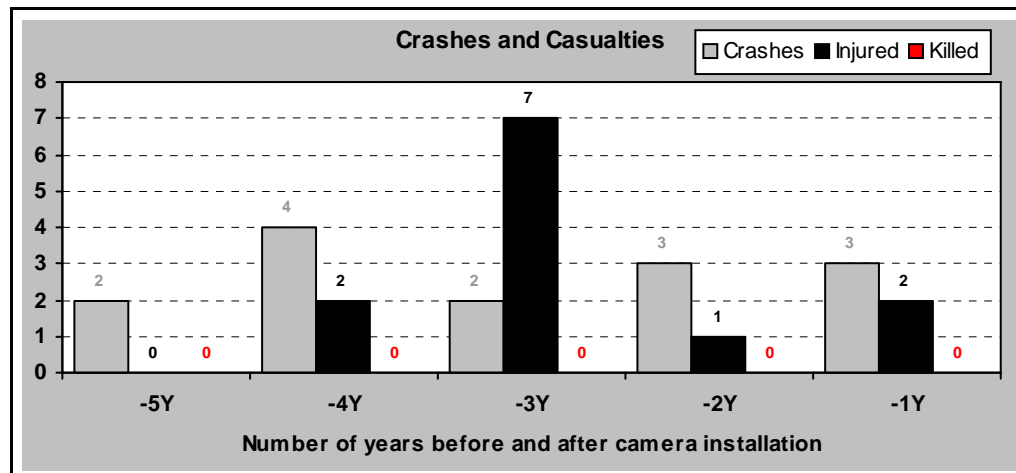
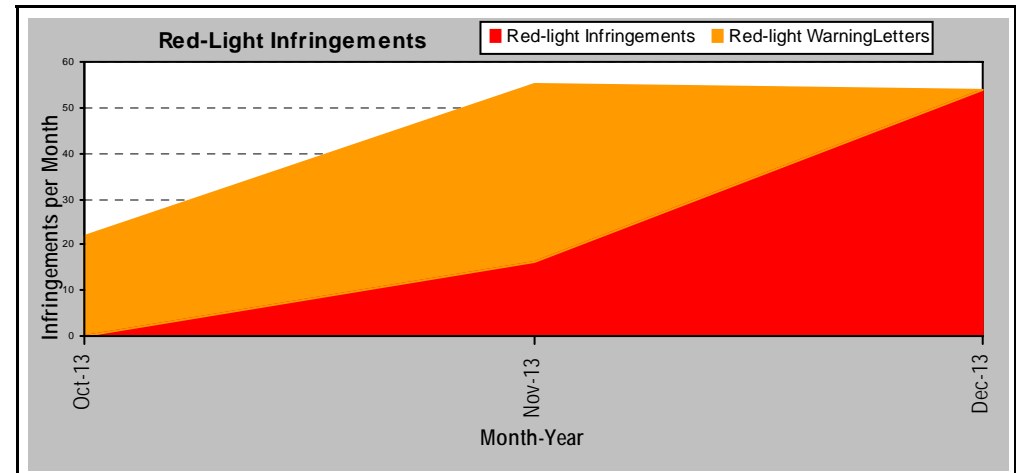
	5 years before installation ¹	71 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	12	0	100%
<i>Pedestrian Casualties</i>	1	0	100%
Crashes	14	0	100%
<i>Adjacent Crashes</i>	3	0	100%
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	4	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Warwick Farm - Hume Highway at Bigge Street

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Hume Highway and Bigge 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

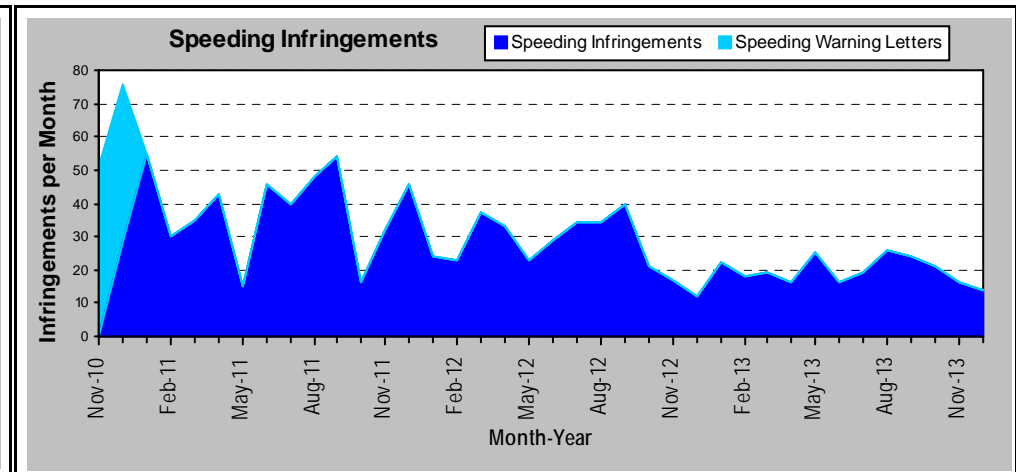
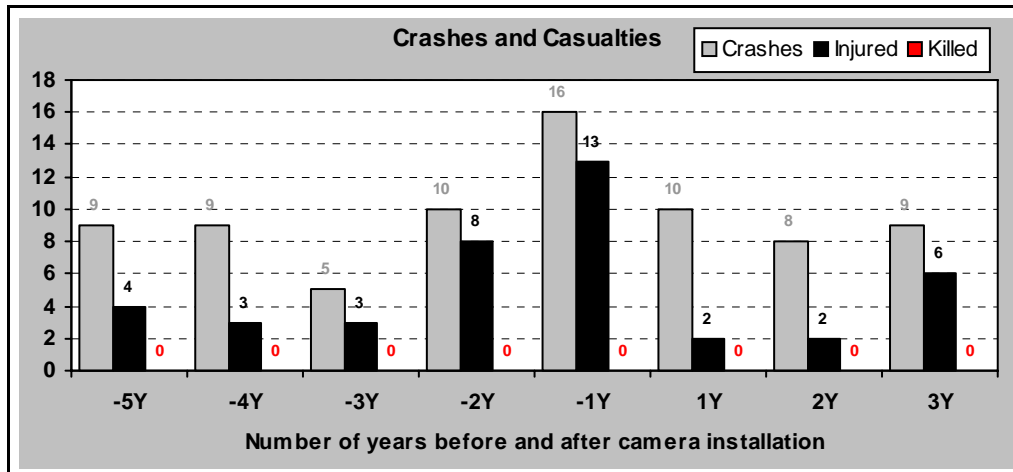
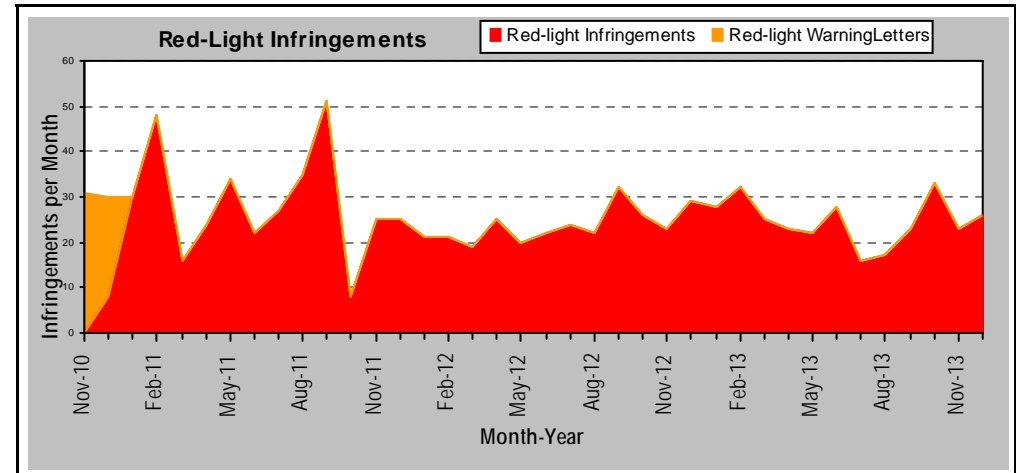
	5 years before installation ¹	3 years and 48 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	31	10	48%
<i>Pedestrian Casualties</i>	1	1	+60%
Crashes	49	28	9%
<i>Adjacent Crashes</i>	1	0	100%
<i>Right Through Crashes</i>	15	8	15%
<i>Rear End Crashes</i>	21	15	+14%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Wentworthville - Great Western Highway at Station Street

- 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 Highway and Station Street 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 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

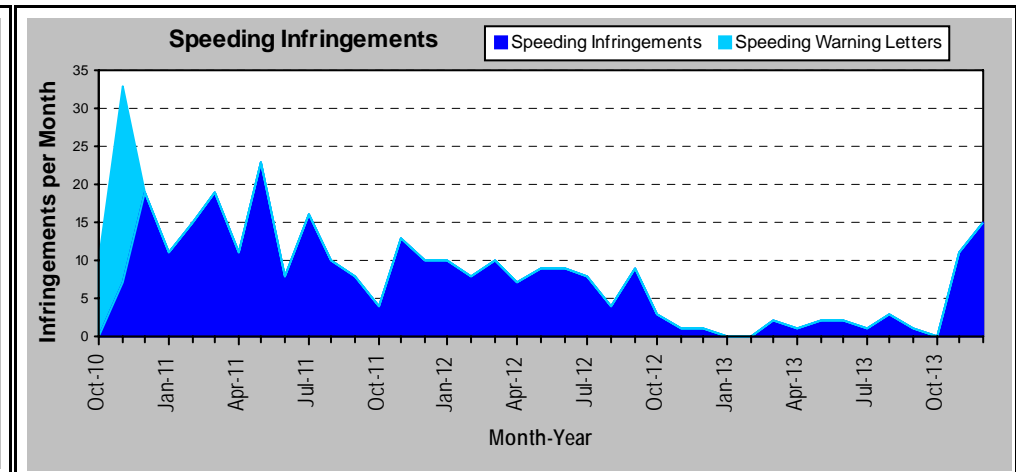
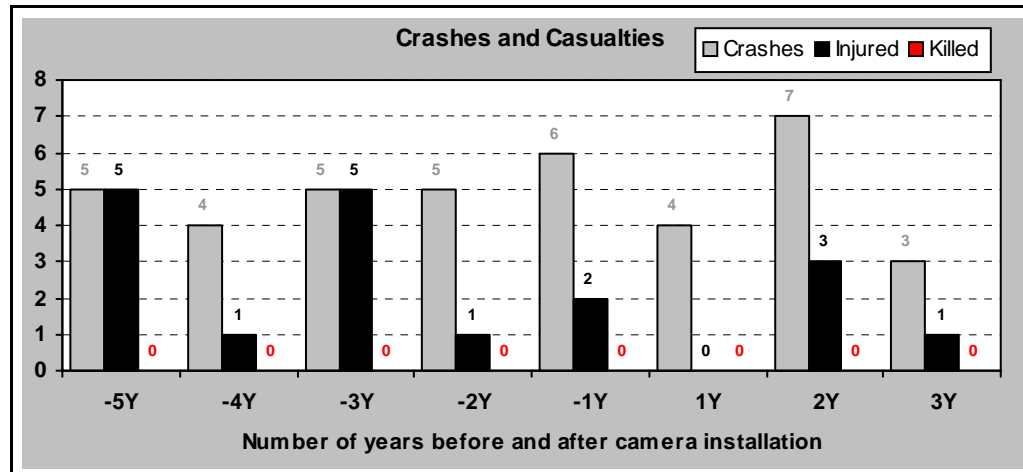
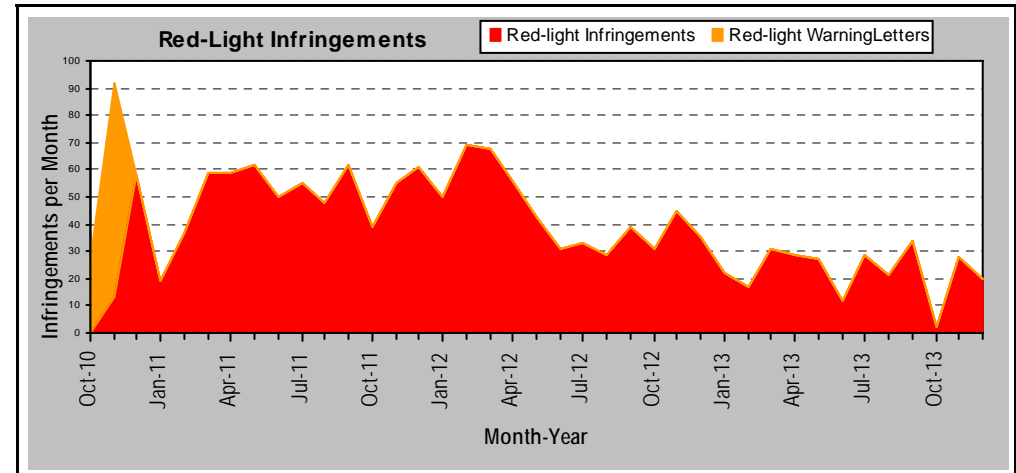
	5 years before installation ¹	3 years and 97 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	14	4	56%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	25	15	8%
<i>Adjacent Crashes</i>	5	1	69%
<i>Right Through Crashes</i>	5	2	39%
<i>Rear End Crashes</i>	10	9	+38%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



West Pennant Hills - Pennant Hills Road at Eaton Road

- 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 Road and Eaton Road 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

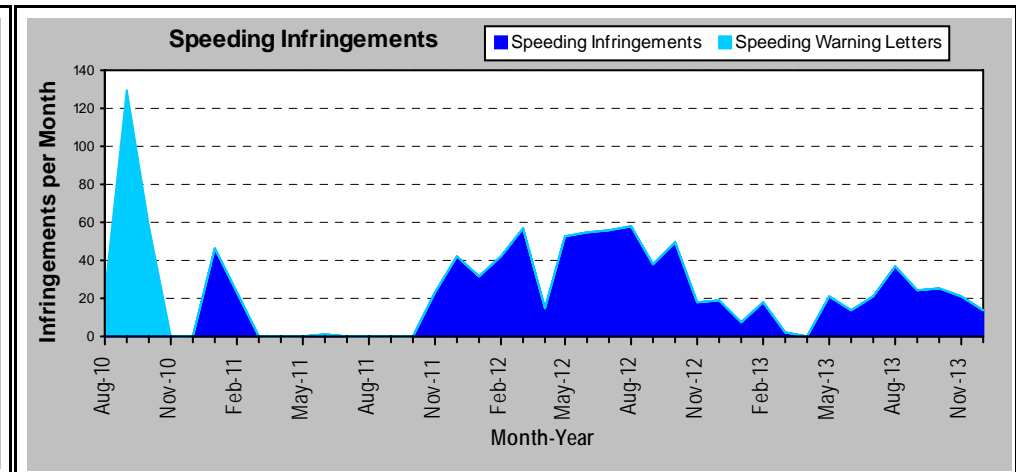
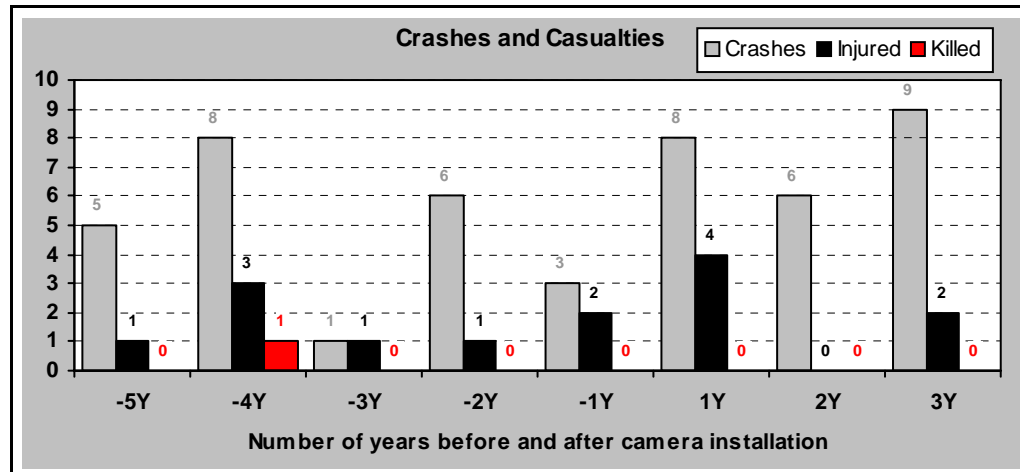
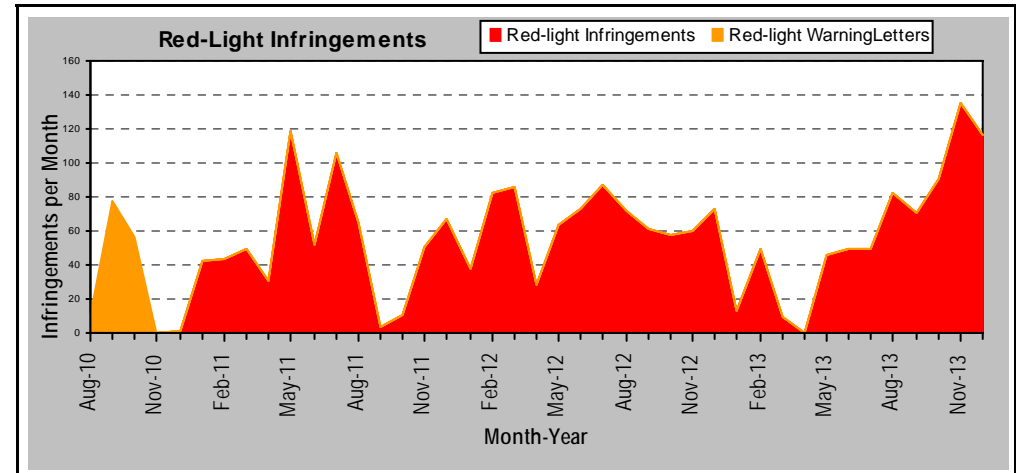
	5 years before installation ¹	3 years and 129 days after installation ²	Percentage reduction ³
Fatalities	1	0	100%
Injuries	8	6	+12%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	23	25	+62%
<i>Adjacent Crashes</i>	2	4	+198%
<i>Right Through Crashes</i>	4	1	63%
<i>Rear End Crashes</i>	11	17	+131%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



West Pymble - Ryde Road at Lady Game Drive

- 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 Lady Game Drive 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

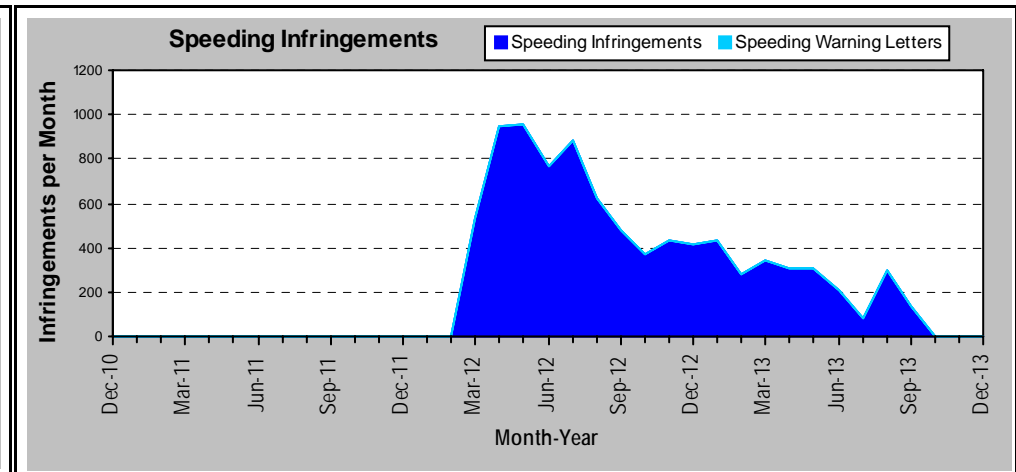
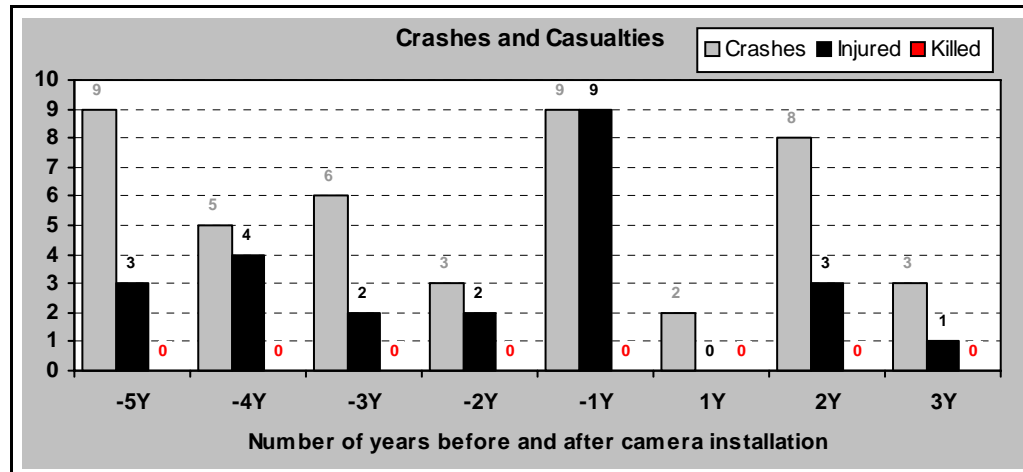
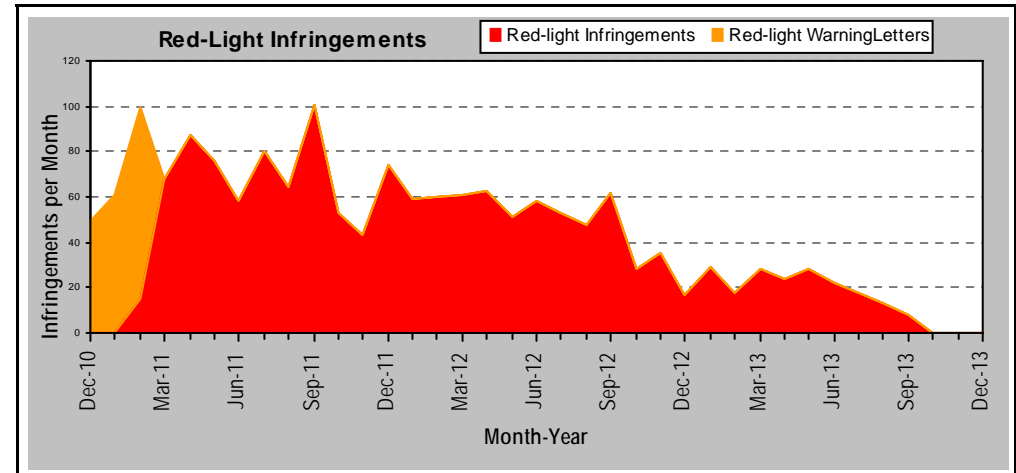
	5 years before installation ¹	3 years and 18 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	20	4	67%
<i>Pedestrian Casualties</i>	0	1	-
Crashes	32	13	33%
<i>Adjacent Crashes</i>	1	0	100%
<i>Right Through Crashes</i>	3	1	45%
<i>Rear End Crashes</i>	20	7	43%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Wiley Park - The Boulevard at King Georges Road (School Zone)

- There is one camera at this intersection.
- The camera at the intersection of The Boulevard and King Georges Road commenced issuing warning letters in March 2013.
- While early results indicate a slight increase in casualties and 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

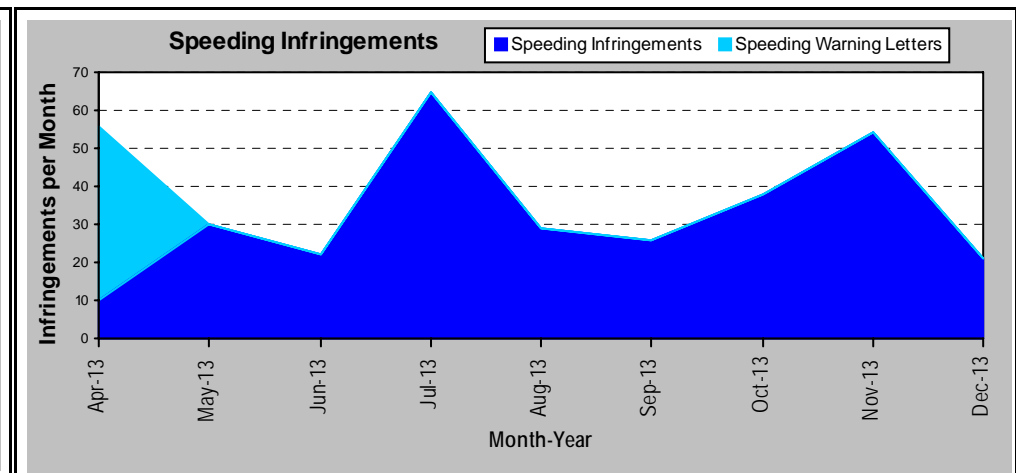
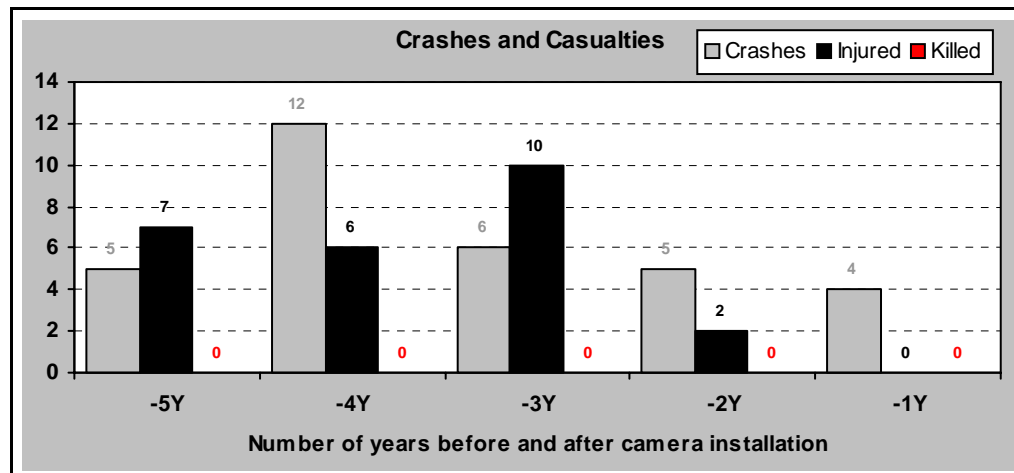
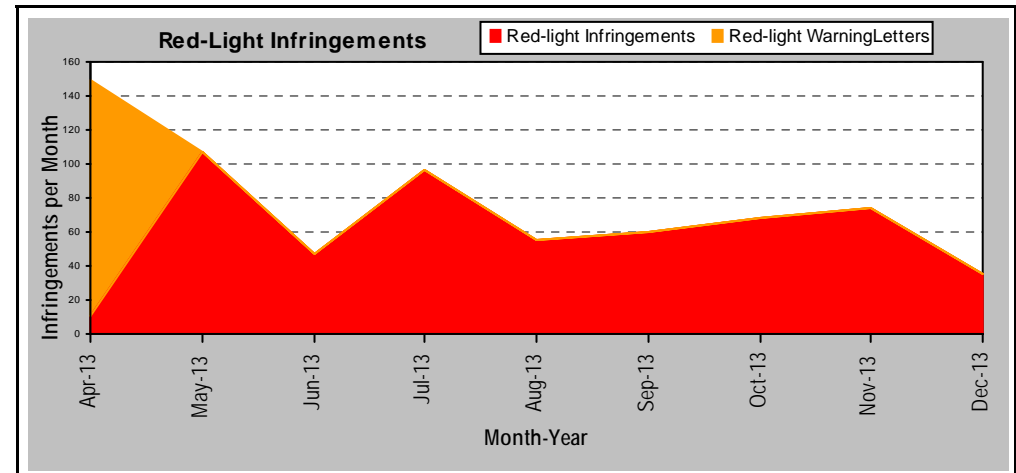
	5 years before installation ¹	278 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	25	5	+31%
<i>Pedestrian Casualties</i>	2	2	+557%
Crashes	32	5	+3%
<i>Adjacent Crashes</i>	6	1	+9%
<i>Right Through Crashes</i>	7	1	6%
<i>Rear End Crashes</i>	12	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Windang - Windang Road at Boronia Avenue

- 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

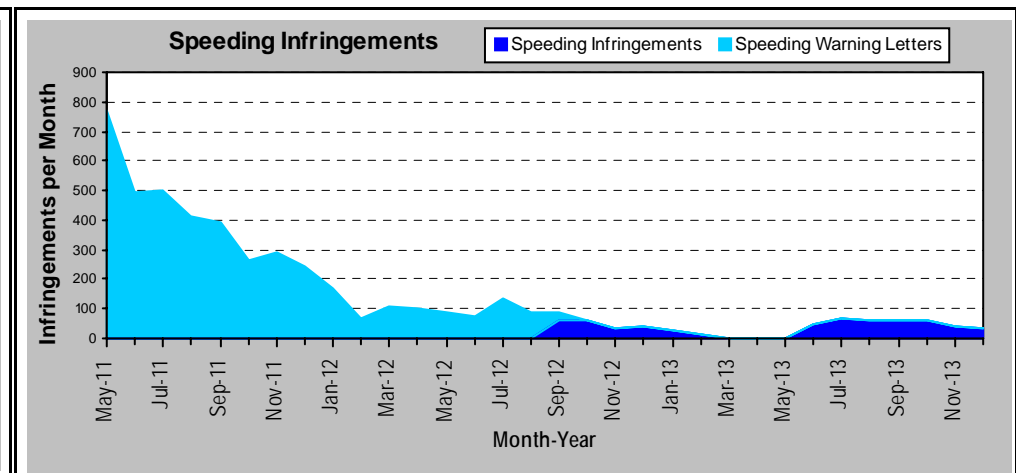
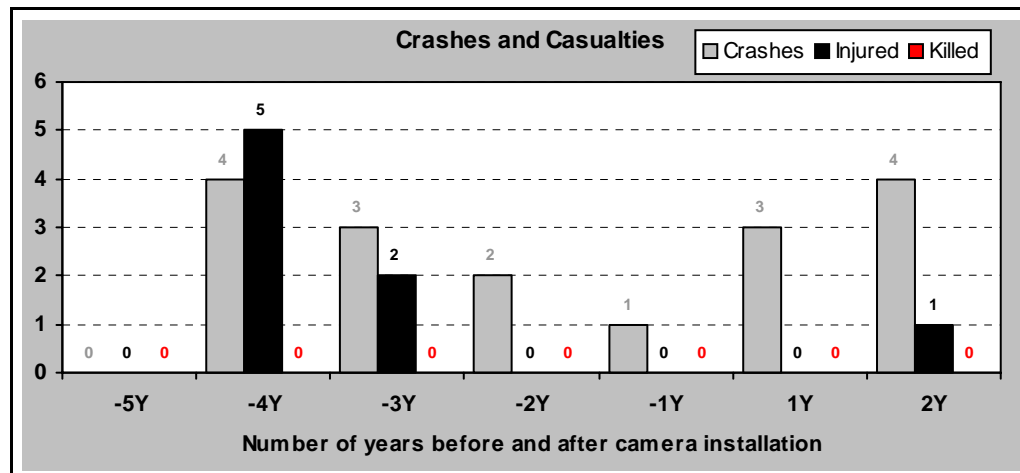
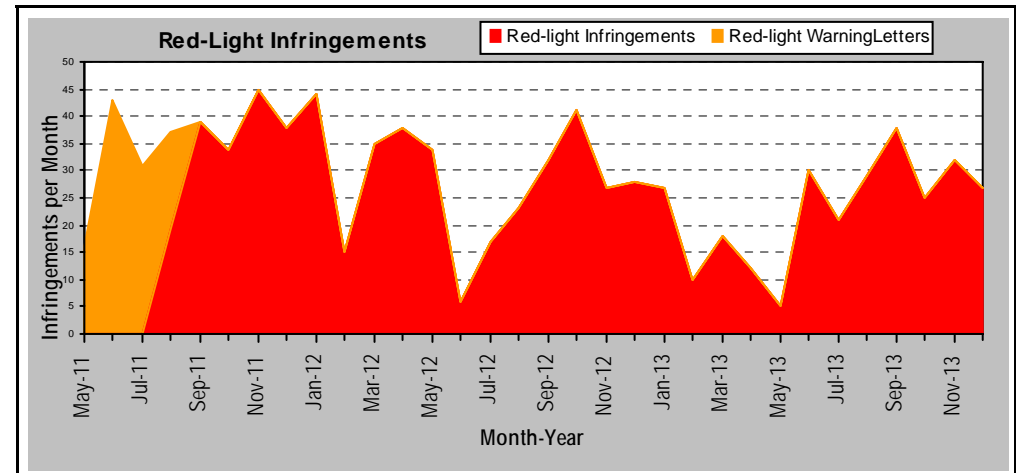
	5 years before installation ¹	2 years and 220 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	7	2	45%
<i>Pedestrian Casualties</i>	3	0	100%
Crashes	10	10	+92%
<i>Adjacent Crashes</i>	0	1	-
<i>Right Through Crashes</i>	4	0	100%
<i>Rear End Crashes</i>	2	6	+477%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Wollongong - Corrimal Street at Burelli Street

- 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 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

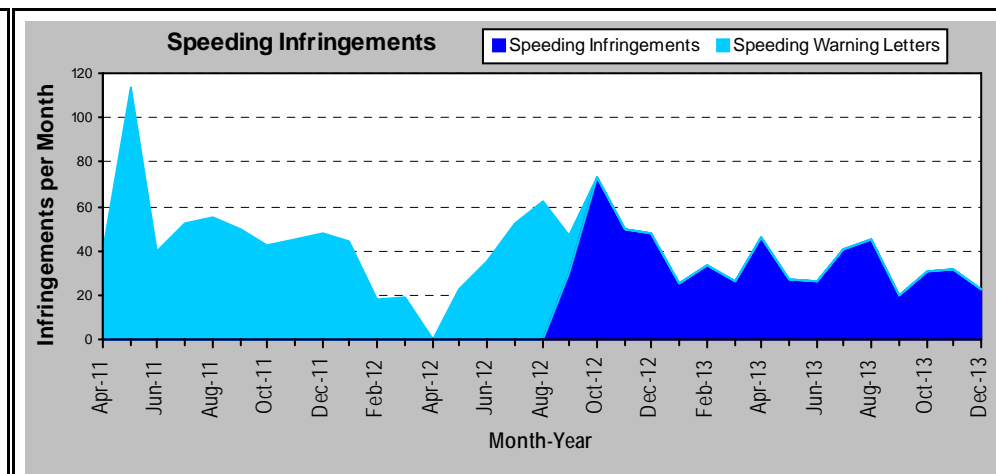
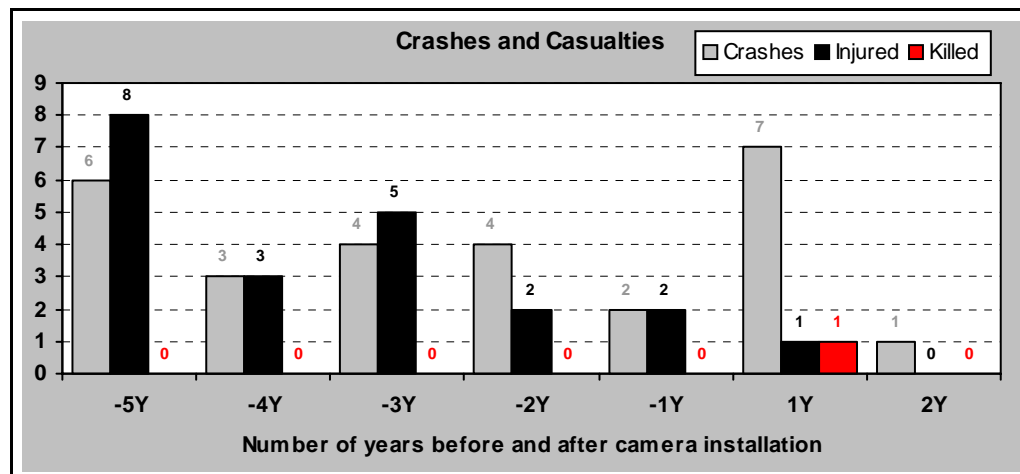
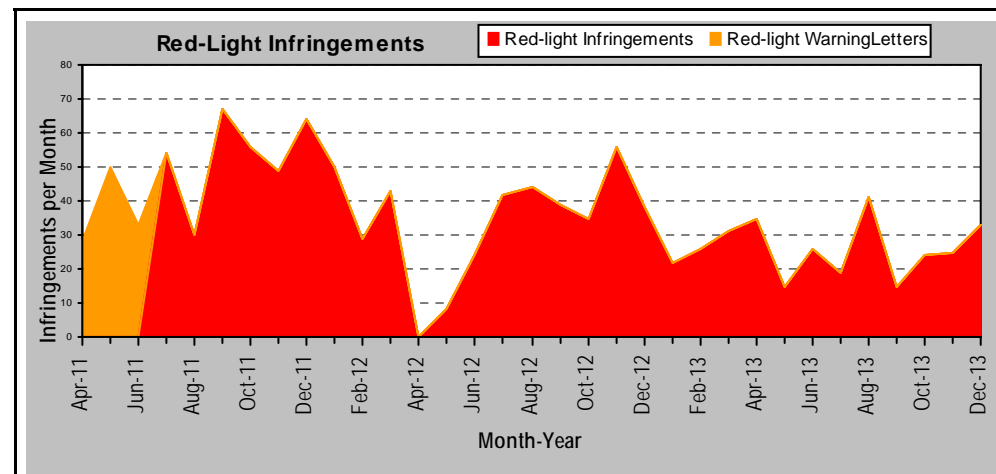
	5 years before installation ¹	2 years and 258 days after installation ²	Percentage reduction ³
Fatalities	0	1	Increase
Injuries	20	1	91%
<i>Pedestrian Casualties</i>	2	1	8%
Crashes	19	9	12%
<i>Adjacent Crashes</i>	4	4	+85%
<i>Right Through Crashes</i>	11	3	50%
<i>Rear End Crashes</i>	1	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Wollongong - Gladstone Avenue at Princes Highway

- 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 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

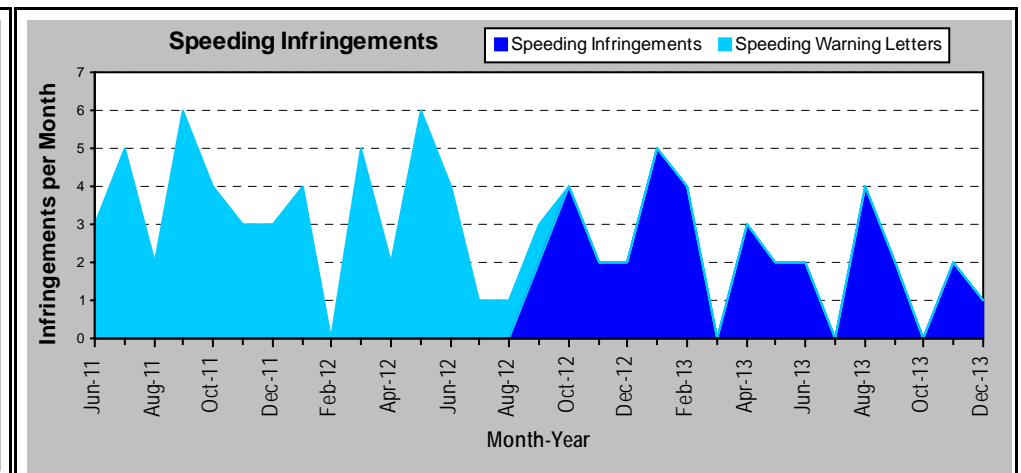
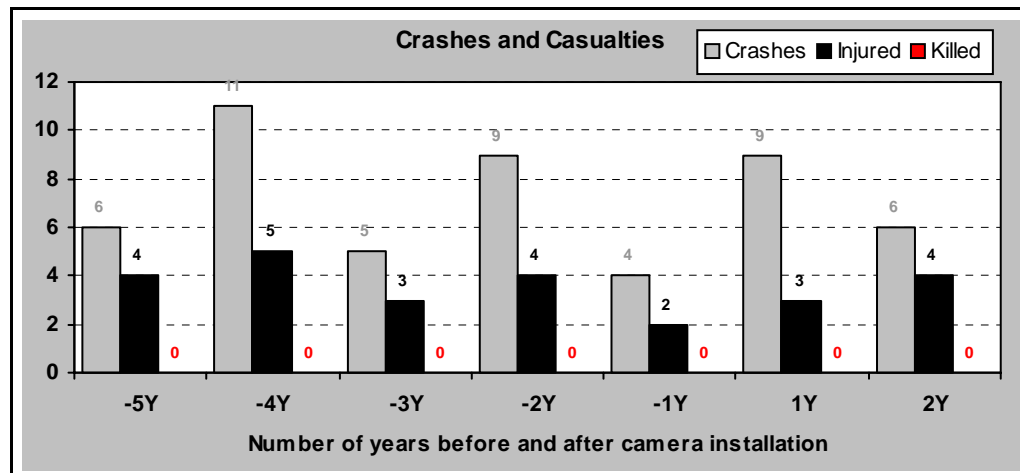
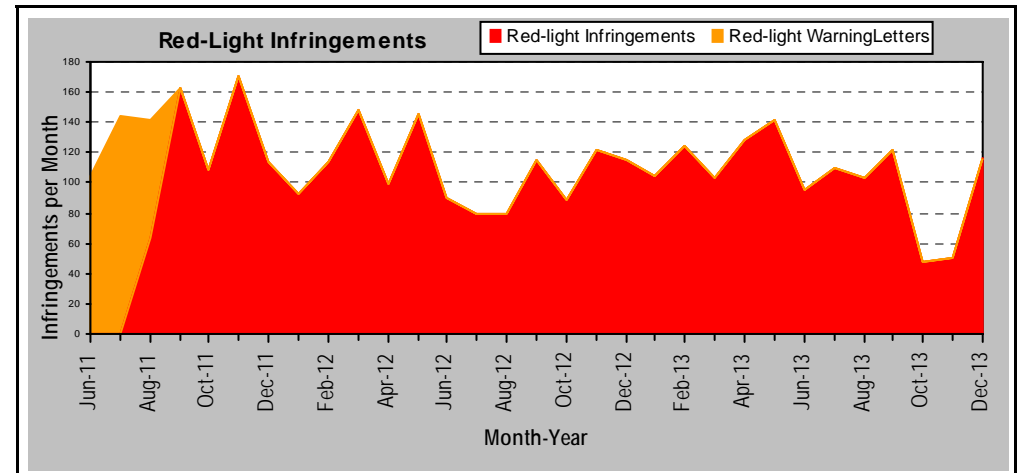
	5 years before installation ¹	2 years and 202 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	18	9	2%
<i>Pedestrian Casualties</i>	3	0	100%
Crashes	35	17	5%
<i>Adjacent Crashes</i>	4	4	+96%
<i>Right Through Crashes</i>	23	10	15%
<i>Rear End Crashes</i>	2	2	+96%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Woollahra - Queen Street at Ocean Street

- There is one camera at this intersection.
- The camera at the intersection of Queen Street and Ocean Street commenced issuing warning letters in October 2013.
- A longer period of time is required to assess 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

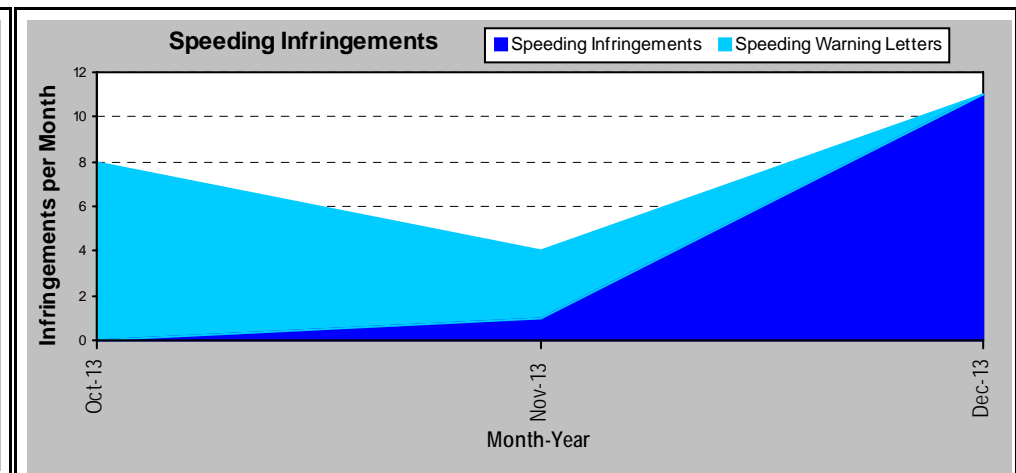
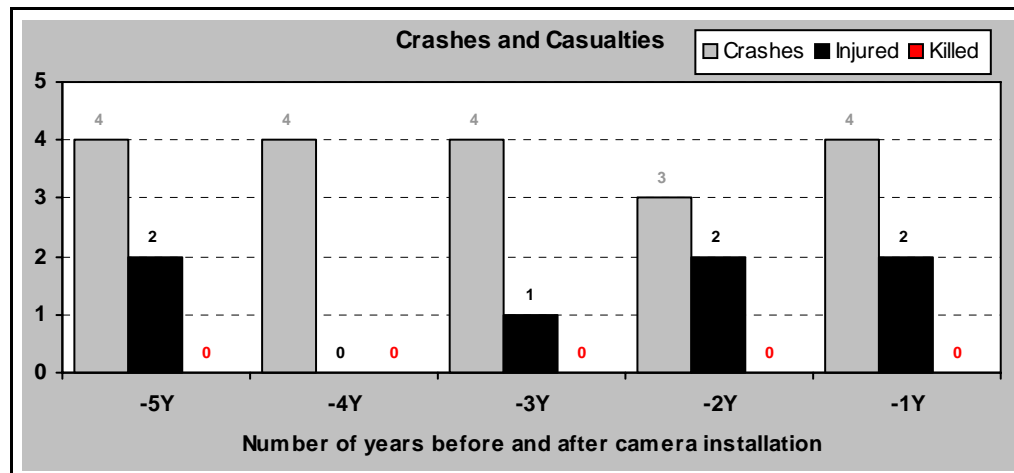
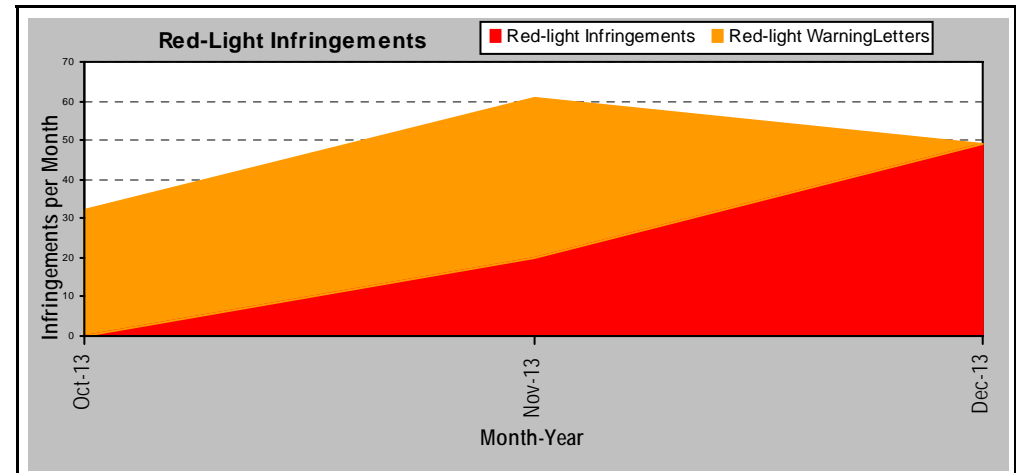
	5 years before installation ¹	75 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	7	0	100%
<i>Pedestrian Casualties</i>	0	0	-
Crashes	19	0	100%
<i>Adjacent Crashes</i>	13	0	100%
<i>Right Through Crashes</i>	3	0	100%
<i>Rear End Crashes</i>	2	0	100%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Zetland - Bourke Street at Botany Road

- There is one camera at this intersection. This was previously a wet-film red-light camera location.
- The camera at the intersection of Bourke Street and Botany Road 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

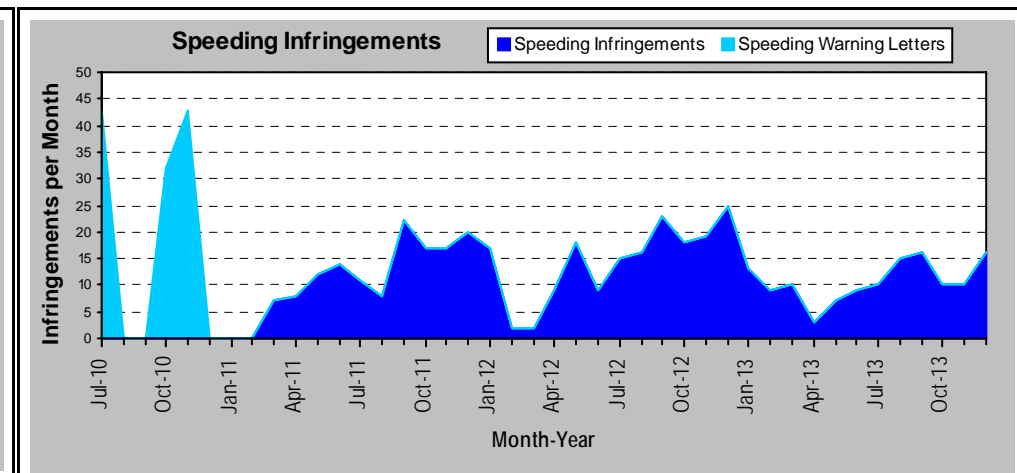
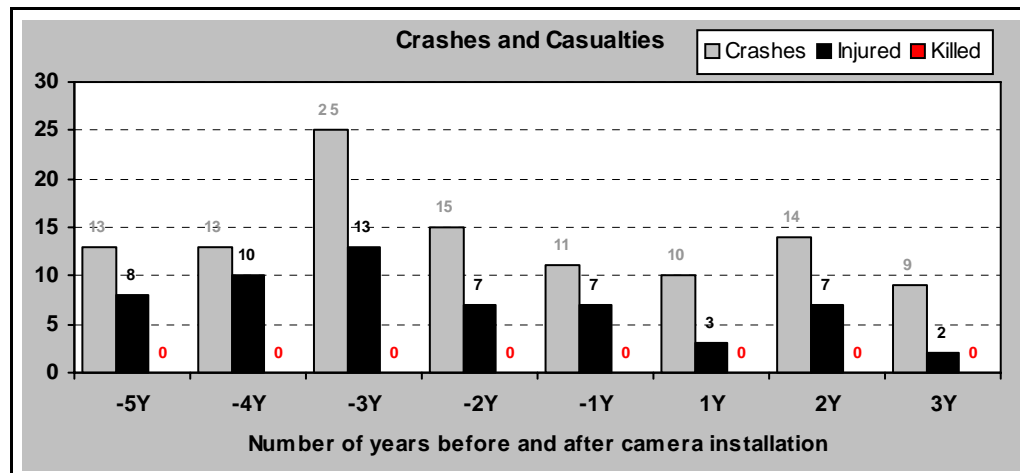
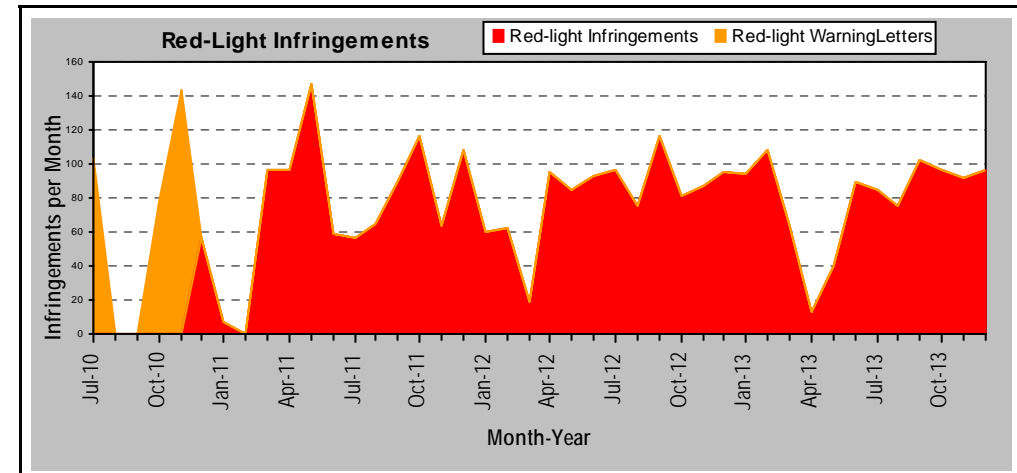
	5 years before installation ¹	3 years and 186 days after installation ²	Percentage reduction ³
Fatalities	0	0	-
Injuries	45	15	52%
<i>Pedestrian Casualties</i>	3	0	100%
Crashes	77	36	33%
<i>Adjacent Crashes</i>	12	7	17%
<i>Right Through Crashes</i>	28	10	49%
<i>Rear End Crashes</i>	14	6	39%

¹ Ending 91 days before the start of the warning letter period.

² Ending end of December 2013

³ 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 enforced intersection



Red-light speed camera locations with the most infringements

In April 2013, NRMA Motoring & Services called for an assessment of all high infringing speed camera locations across the state to determine whether the cameras were appropriately placed and clearly signposted.

The NSW Centre for Road Safety (CRS) has identified the 10 red-light speed camera locations with the highest number of infringements detected in 2013, detailed in the table below. High infringing fixed speed cameras are detailed separately in Appendix C. As the red-light speed camera program has not been in operation for five years, it is too early to assess the effectiveness of these cameras.

Most of the 10 red-light speed camera locations are on main roads with high traffic volumes. Where cameras have been operating for longer than two years, the infringement data indicates that infringements have mostly decreased when comparing 2013 infringements to 2012. This trend is to be expected, as the fixed speed camera program has shown that high infringement rates decrease over time.

Across the red-light speed camera program, around 60 per cent of infringements at red-light speed camera locations are attributed to running a red-light. Based on the 10 highest infringement locations, the division between the two types of infringements is generally even, with 46 per cent of infringements attributed to running a red-light and 54 per cent attributed to speeding.

All camera locations had high compliance rates with more than 99 per cent of drivers passing the cameras without being infringed for red-light running and/or speeding. This demonstrates that most drivers are aware of the cameras and stop on a red signal and do not exceed the speed limit, with less than one per cent of drivers penalised. It is this high level of compliance that provides road safety benefits. Compliance data compares the number of vehicles that pass a camera with the number of infringements issued by the camera.

Road signs at all enforced intersections were improved in late 2012. As is the case currently, Roads and Maritime Services (RMS) may increase the warning letter period and/or use Variable Message Signs to increase driver awareness of speed camera locations, where the trend in warning letters or number of infringements issued deems this appropriate. Ongoing site maintenance is also conducted by RMS to ensure that signage is effectively placed and not obscured by roadside objects, such as trees. While these cameras will not be considered for removal, CRS will review these locations to identify, and where appropriate address, any road safety issues contributing to the high number of infringements.

Red-light speed camera locations with the most infringements

Location	No. of cameras at location	Total infringements issued in 2012	Total infringements issued in 2013	% comprising red light and speed infringement of 2013 total	Compliance rate in 2013 (%)
1. Parramatta Road at Sloane Street, Haberfield (June 2011)	1	5,814	7,846	10% red-light 90% speed	99.91%
2. Victoria Road at Evans Street, Rozelle (October 2010)	1	1,325 [^]	7,299	9% red-light 91% speed	99.89%
3. Craigend Street at McLachlan Avenue, Darlinghurst (August 2010)	1	11,990	7,262	14% red-light 86% speed	99.98%
4. George Street at Pitt Street/Quay Street, Haymarket (June 2013)	2	-	6,981	95% red-light 5% speed	99.75%~
5. Woodville Road at M4 On Ramp, Granville (September 2010)	1	7,861	6,832	88% red-light 12% speed	99.92%
6. Henry Lawson Drive/Woodville Road at Hume Highway, Lansdowne / Villawood (August 2010)	2	6,083	6,826	69% red-light 31% speed	99.92%
7. Parramatta Road at Burwood Road, Burwood/Concord (September 2010)	2	7,702	5,909	40% red-light 60% speed	99.98%
8. Stacey Street at Hume Highway, Bankstown (April 2013)	1	-	5,626	98% red-light 2% speed	99.85%~
9. Dobroyd Parade at Mortley Avenue, Haberfield (June 2011)	1	2,282 [*]	5,498	25% red-light 75% speed	99.93%
10. King Georges Road at Moorefields Road, Roselands (October 2010)	1	8,532	5,315	24% red-light 76% speed	99.95%

[^] The speed camera at Victoria Road, Rozelle was not in operation from December 2010 to November 2012. Speeding warning letters at this location peaked at approximately 2000 letters per month when the camera commenced issuing warning letters in October 2010, indicating that there has been a reduction in speeding behaviour at this location over time.

^{*} Red-light infringements at Dobroyd Parade, Haberfield commenced in October 2011, while speeding infringements commenced in August 2012 at this location.

~ The compliance rate for George Street at Pitt Street/Quay Street, Haymarket is based on an average of six months of 2013 travel volume data from this location. The compliance rate for Stacey Street at Hume Highway, Bankstown is based on an average of eight months of 2013 travel volume data from this 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	M1 Pacific Motorway (formerly the F3 Freeway), between Jolls Bridge and Mt White Exit
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 Parade
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 (NB)*	M1 Princes Motorway, between Northern Distributor Overpass and Gipps Road Overpass
39	Gwynneville (SB)*	M1 Princes Motorway, between University Avenue Overpass and Mount Ousley Road
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	Macksville	Pacific Highway, between Florence Wilmont Drive and Watt Creek
54	Maroubra	Malabar Road, between Mons Avenue and Duncan Street
55	Mayfield West	Pacific Highway, between Werribie Street and Tourle Street
56	Merrylands	Merrylands Road, between Chetwynd Road and Davies Street
57	Miranda	Kingsway, between Sylva Avenue and University Road
58	Moore Park	Cleveland Street, between Anzac Parade and South Dowling Street
59	Mosman	Macpherson Street, between Ourimbah Road and Montague Road
60	Narrabeen	Pittwater Road, between Ocean Street and Devitt Street
61	New Italy	Pacific Highway, between New Italy Road and Turners Road
62	Nords Wharf	Pacific Highway, between Nords Wharf Road and Flowers Drive
63	North Curl Curl	Harbord Road, between Abbott Road and Brighton Street
64	North Narrabeen	Pittwater Road, between Garden Street and Namona Street
65	North Parramatta	Pennant Hills Road, between Castle Street and Bellevue Street
66	North Parramatta / Oatlands	Pennant Hills Road, between Masons Drive and Suttor Avenue
67	North Wollongong	Princes Highway, between Ajax Avenue and Exeter Avenue

68	Old Guilford	Woodville Road, between Orchardleigh Street and Middleton Road
69	Ourimbah	M1 Pacific Motorway (formerly the F3 Freeway), between Dogtrap Road Overpass and
70	Ourimbah	Pacific Highway, between Yates Road and Dog Trap Road
71	Padstow	Gibson Avenue, between Turvey Street and Bryant Street
72	Peakhurst	Henry Lawson Drive, between Belmore Road and Ogilvy Street
73	Penshurst	Forest Road, between Penshurst Street and St Georges Street
74	Picnic Point	Henry Lawson Drive, between Carinya Road and The River Road
75	Queanbeyan	Lanyon Drive, between Tomsitt Drive and Hoover Road
76	Randwick	Avoca Street, between Howard Street and Barker Road
77	Rankin Park	McCaffrey Drive, between Duval Street and Orara Street
78	Rosebery/Alexandria	Botany Road, between Gardeners Road and Gillespie Street
79	Rydalmere	Victoria Road, between Park Road and John Street
80	Ryde	Blaxland Road, between Reservoir Lane and North Road
81	Ryde	Victoria Road, between Margaret Street and Cressy Road
82	Sandgate	Pacific Highway, between Wallsend Road and Ironbark Creek
83	South Windsor	George Street, between Rickaby Street and Yarrowonga Street
84	Strathfield	The Boulevarde, between Torrington Parade and Russell Street
85	Sydney	Sydney Harbour Tunnel, between Cahill Expressway and Warringah Freeway
86	Tenterfield	New England Highway, between Duncan Street and George Street
87	Terrigal	Terrigal Drive, between Brunswick Road and Bellbird Avenue
88	Toongabbie	Fitzwilliam Road, between Reynolds Street and Binalong Road
89	Valla Beach	Pacific Highway, between Valla Beach Road and Oyster Creek
90	Valley Heights	Great Western Highway, between The Valley Road and Sun Valley Road
91	Wahroonga	Pacific Highway, between Gilda Avenue and Woodville Avenue
92	Wardell	Pacific Highway, between Riverside Drive and Carlisle Street
93	Warrawong	Northcliffe Drive, between Griffin Street and Kully Street
94	West Pennant Hills	Castle Hill Road, between Pennant Hills Road and Coonara Avenue
95	Wollongbar	Bruxner Highway, between Convernys Lane and McLeans Ridges Road
96	Wollongong	Princes Highway, between Mount Keira Road and Highway Avenue
97	Woodburn	Pacific Highway, between Wagner Street and Norman Street
98	Woolloomooloo / East Sydney	Cross City Tunnel, between McLachlan Avenue and Harbour Street
99	Wyoming	Henry Parry Drive, between Glennie Street and Dwyer Street
100	Yagoona	Hume Highway, between Smith Street and Brennan Avenue

* M1 Princes Motorway (formerly the F6, 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: **Retained based on 2013 comprehensive review**

Current camera performance

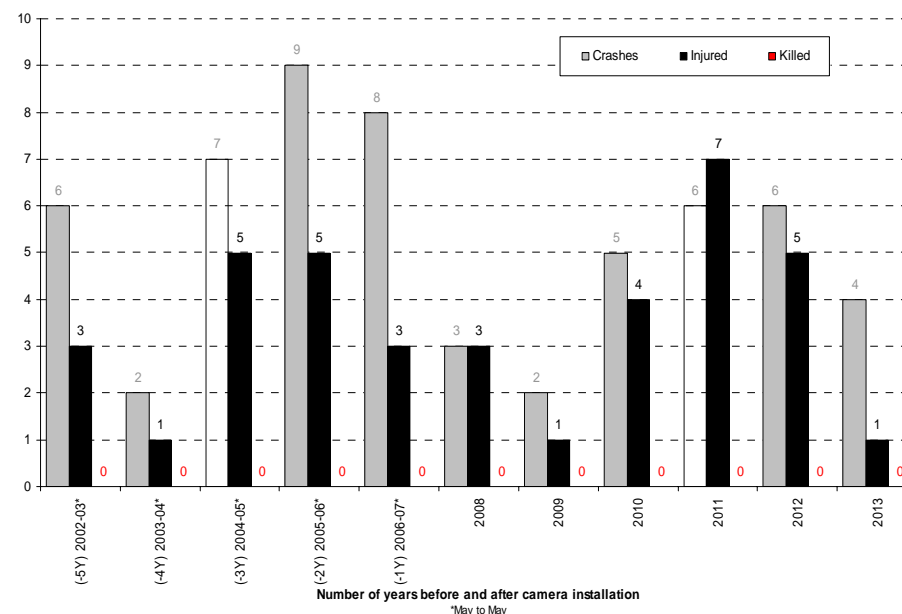
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	17	18	+6%
Casualties	17	18	+6%
Crashes	32	23	28%
Casualty Cost	\$1.96M	\$2.07M	+6%

* May 2002 to May 2007

- This location was reviewed in 2013 due to concerns about the increase in casualties in recent years. The 2013 review found crashes had reduced at this location. The review also found that since the camera was installed the number of injury crashes per year decreased. Speeding infringements were also found to have generally reduced following the introduction of the speed camera, therefore based on this information, the speed camera is considered to be providing road safety benefits and it is recommended that the speed camera be retained. Crashes continue to decrease 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, however there has been a 6 per cent increase 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 reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

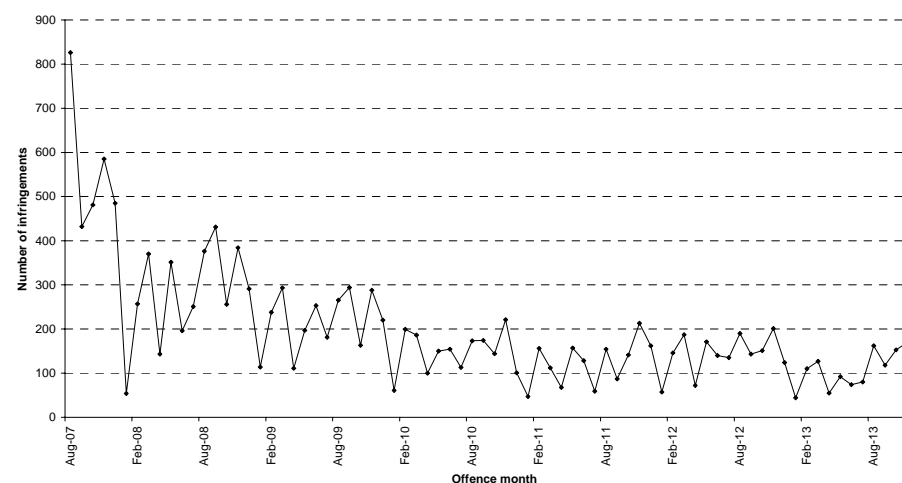
Trend in road safety performance at camera location

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

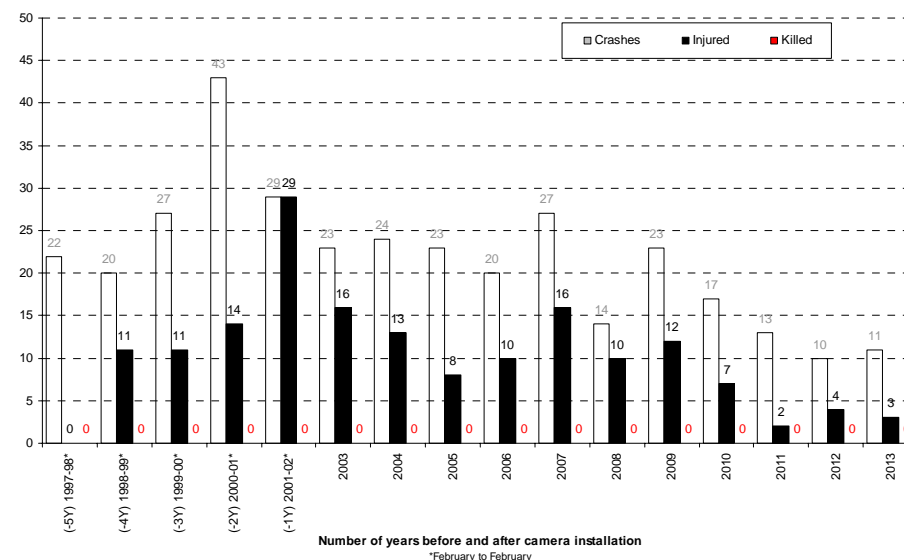
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	79	28	65%
Casualties	79	28	65%
Crashes	141	74	48%
Casualty Cost	\$9.09M	\$3.22M	65%

*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 48 per cent reduction in the annual average number of crashes and a 65 per cent reduction in the annual average number of casualties.
- This has been a saving of \$5.87 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.

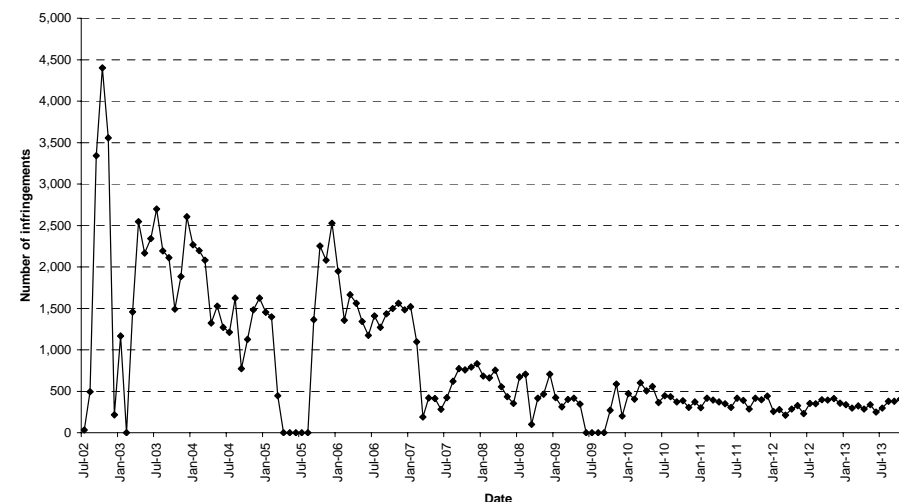
Trend in road safety performance at camera location

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: **Retained based on 2013 comprehensive review**

Current camera performance

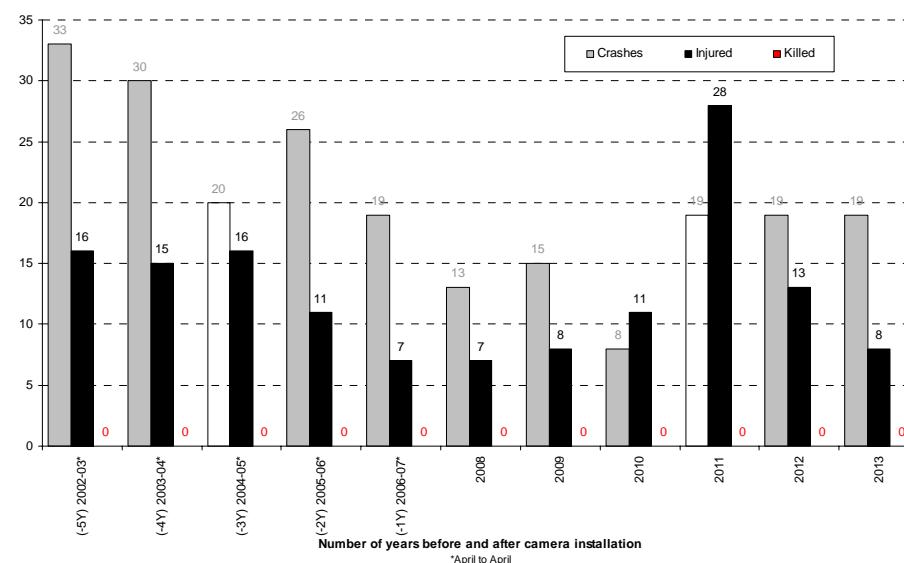
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	65	68	+5%
Casualties	65	68	+5%
Crashes	128	80	38%
Casualty Cost	\$7.48M	\$7.82M	+5%

* April 2002 to April 2007

- This location was reviewed in 2013 due to concerns about the increase in casualties in recent years. The 2013 review found significant crash reductions at this location. In addition, since the camera was installed the number of injury crashes per year decreased. The review found that during 2011, 19 crashes occurred resulting in 28 casualties. This significant increase in the number of casualties was due to one crash involving a bus, resulting in 11 casualties. As this crash involving multiple casualties was a one-off incident, the number of crashes resulting in casualties reduced significantly in the following years. Speeding infringements were also found to have significantly reduced following the introduction of the speed cameras, therefore based on this information, the speed cameras are considered to be providing road safety benefits and it is recommended that the speed cameras be retained.
- 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 however there has been a slight increase 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 reduction in speeding behaviour at this location over time. Roadworks and camera maintenance may influence the number of infringements issued.

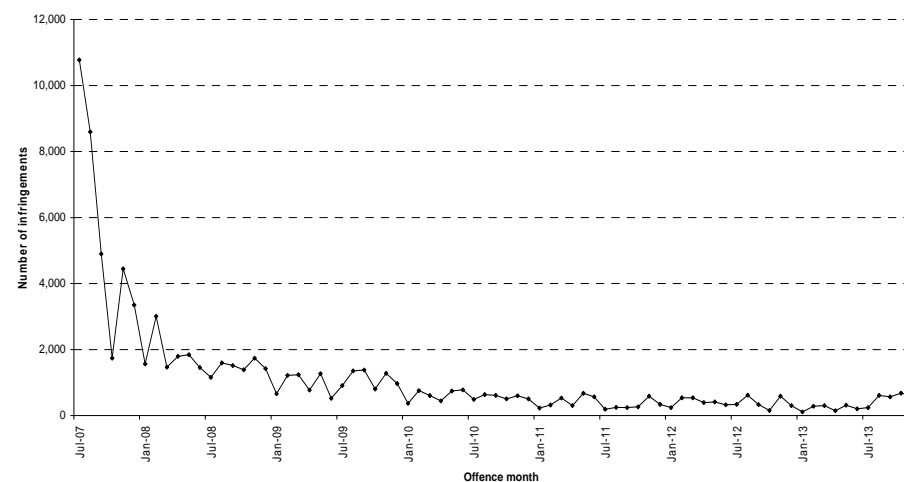
Trend in road safety performance at camera location

Crashes and casualties



Infringements

HUME HIGHWAY BANKSTOWN



M1 Pacific Motorway (formerly the F3 Freeway), Bar Point

Location: M1 Motorway, 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: **Retained following 2014 preliminary review**

Current camera performance

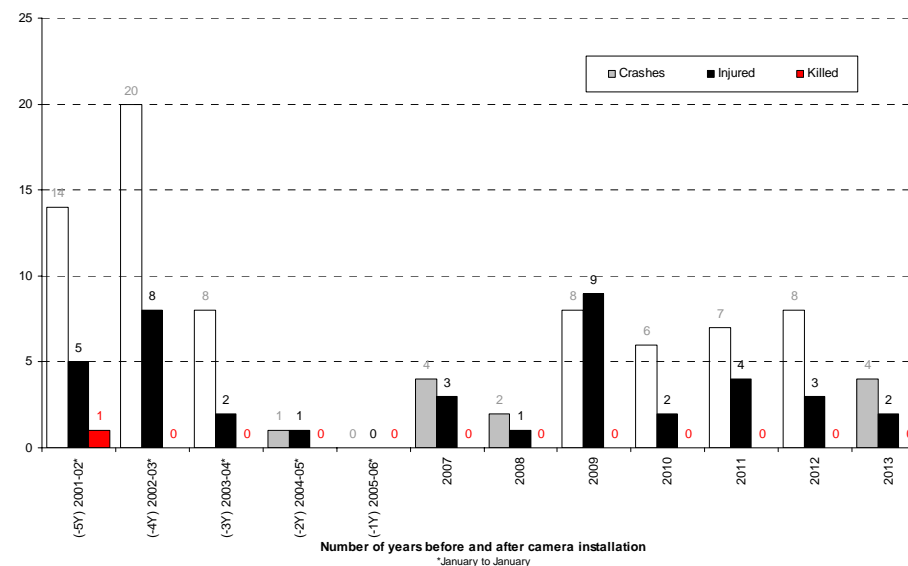
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	16	20	+25%
Casualties	17	20	+18%
Crashes	43	33	23%
Casualty Cost	\$8.3M	\$2.3M	72%

* 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 23 per cent reduction in the annual average number of crashes.
- There has been an 18 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 \$6 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, though appears to be reducing at the end of 2013. Roadworks and camera maintenance may influence the number of infringements issued.

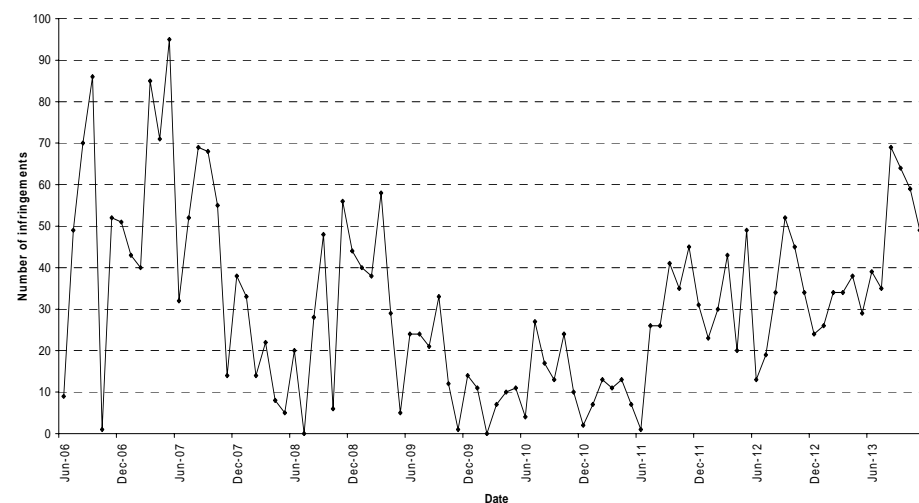
Trend in road safety performance at camera location

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

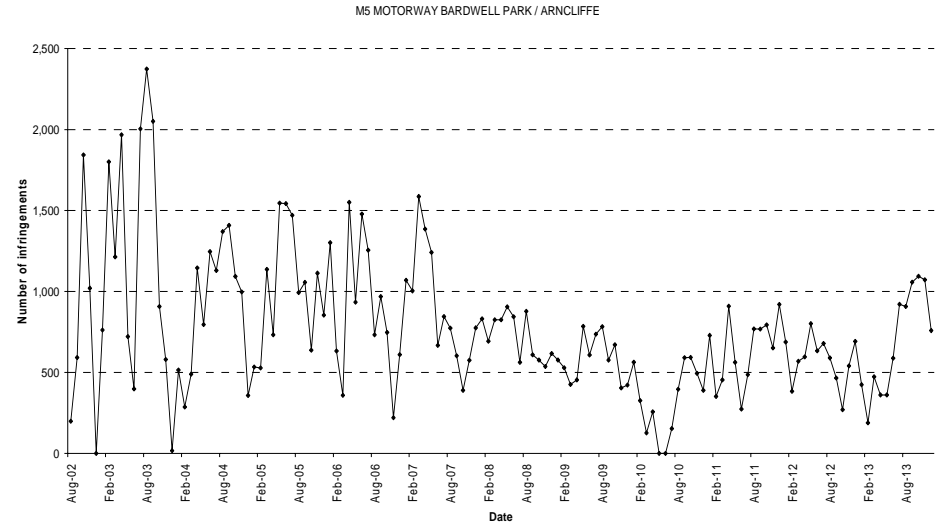
Started infringing: 01/08/2002

Crash and casualty data – January 2013 to December 2013

	Eastbound	Westbound
Fatalities	0	0
Injuries	5	0
Casualties	5	0
Crashes	12	1

- 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

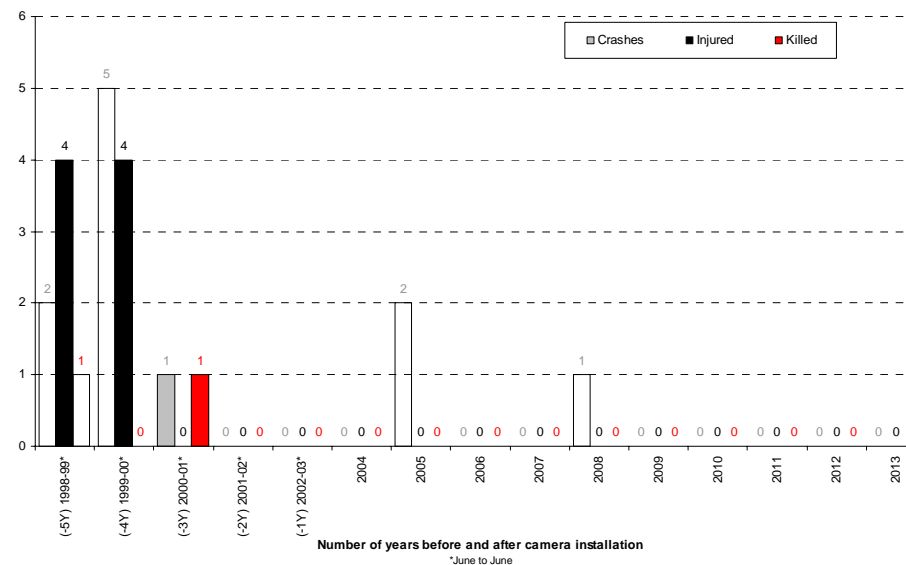
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	8	0	100%
Casualties	10	0	100%
Crashes	8	0	100%
Casualty Cost	\$13.85M	\$0M	100%

*June 1998 to June 2003

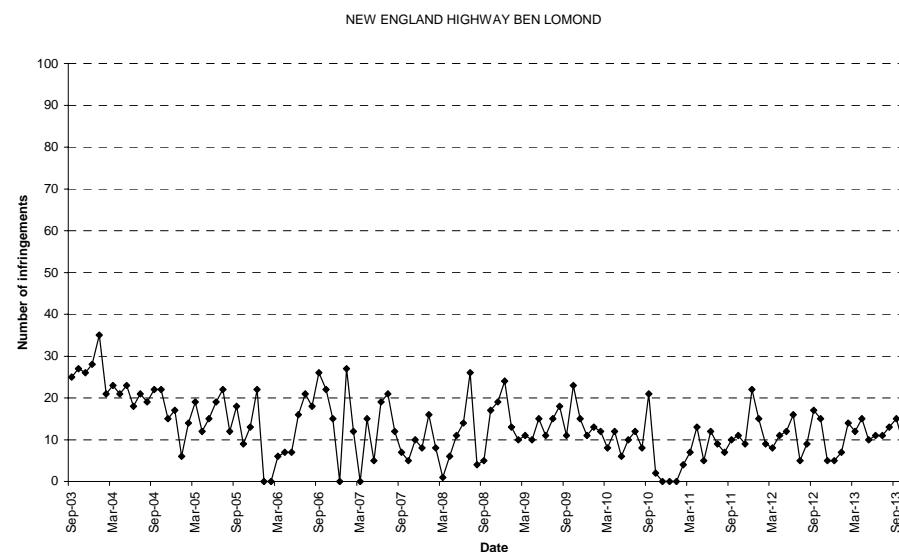
- The current pre and post installation analysis shows that crashes have reduced at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 100 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$13.85 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



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: **Review**

Current camera performance

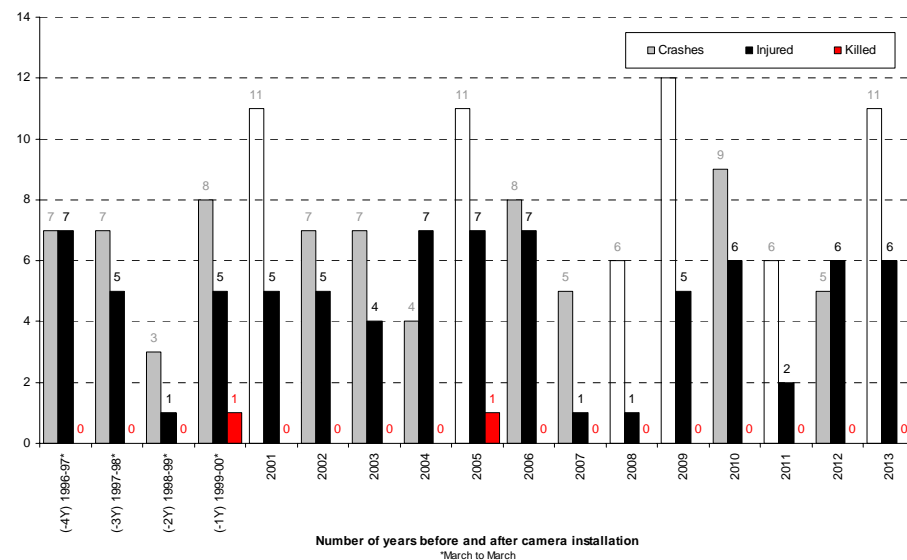
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	1	1.25	0	100%
Injuries	18	22.5	25	+11%
Casualties	19	23.75	25	+5%
Crashes	25	31.25	43	+38%
Casualty Cost	\$8.56M	\$10.67M	\$2.88M	73%

*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.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 38 per cent increase in the annual average number of crashes and a 5 per cent increase in the annual average number of casualties. However, there has been a reduction in fatalities from one to zero.
- This has been a saving of \$7.79 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.

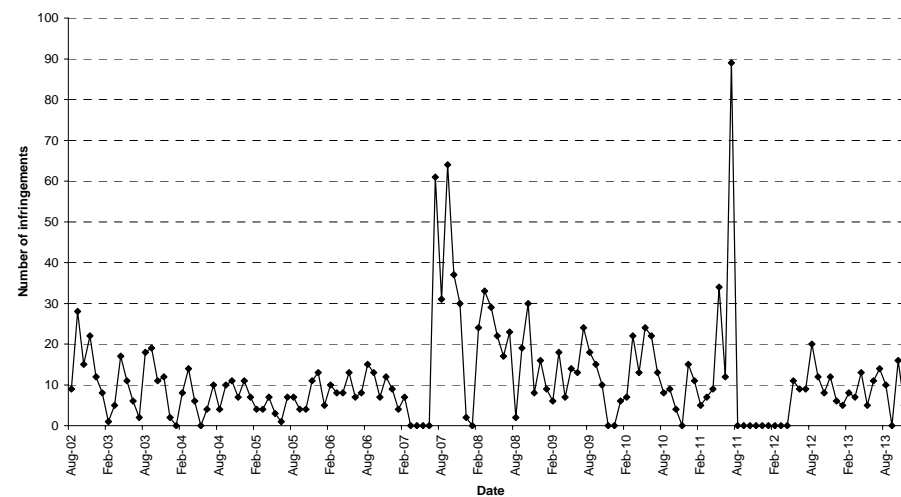
Trend in road safety performance at camera location

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**

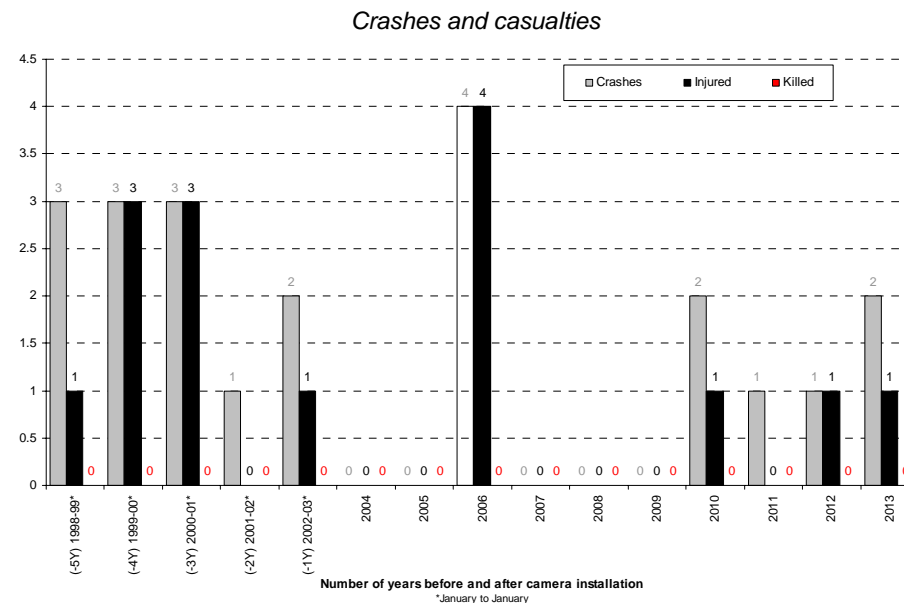
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	8	3	63%
Casualties	8	3	63%
Crashes	12	6	50%
Casualty Cost	\$0.92M	\$0.35M	63%

* January 1998 to January 2003

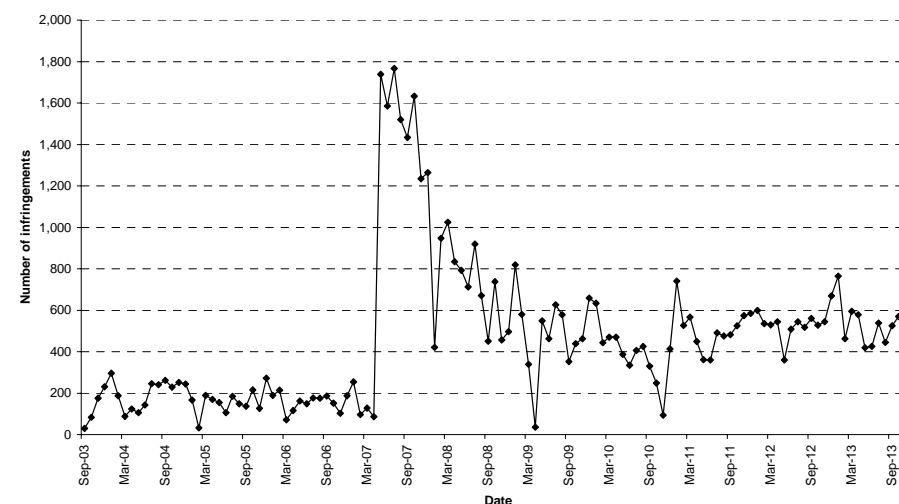
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 50 per cent reduction in the annual average number of crashes and a 63 per cent reduction in the annual average number of casualties.
- This has been a saving of \$570,000 in costs to the community.
- This location has been identified as one of the highest infringing sites in 2013. 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



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**

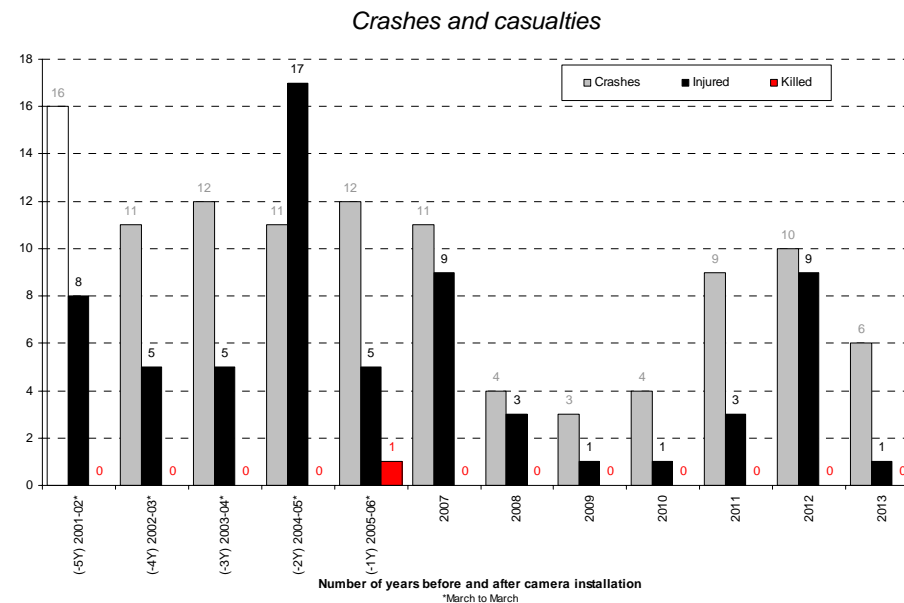
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	40	15	63%
Casualties	41	15	63%
Crashes	62	32	48%
Casualty Cost	\$11.07M	\$1.73M	84%

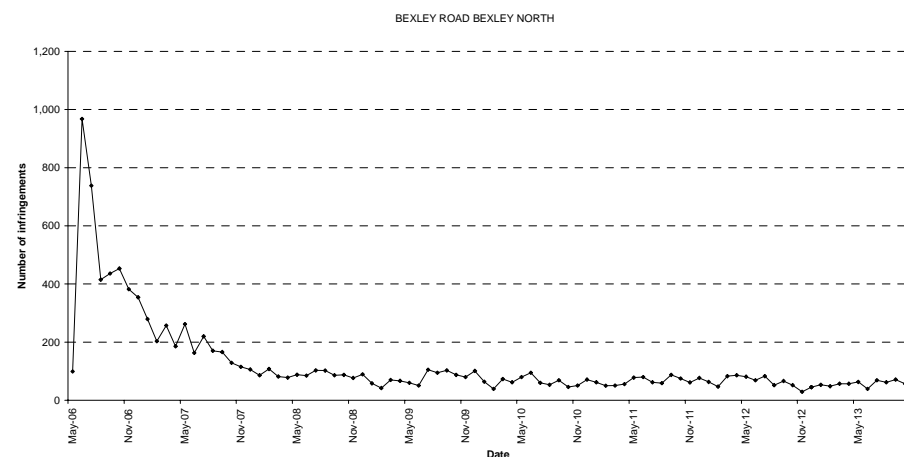
* March 2001 to March 2006

- 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 48 per cent reduction in the annual average number of crashes and a 63 per cent reduction in the annual average number of casualties.
- This has been a saving of \$9.34 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The graph 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



Infringements



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

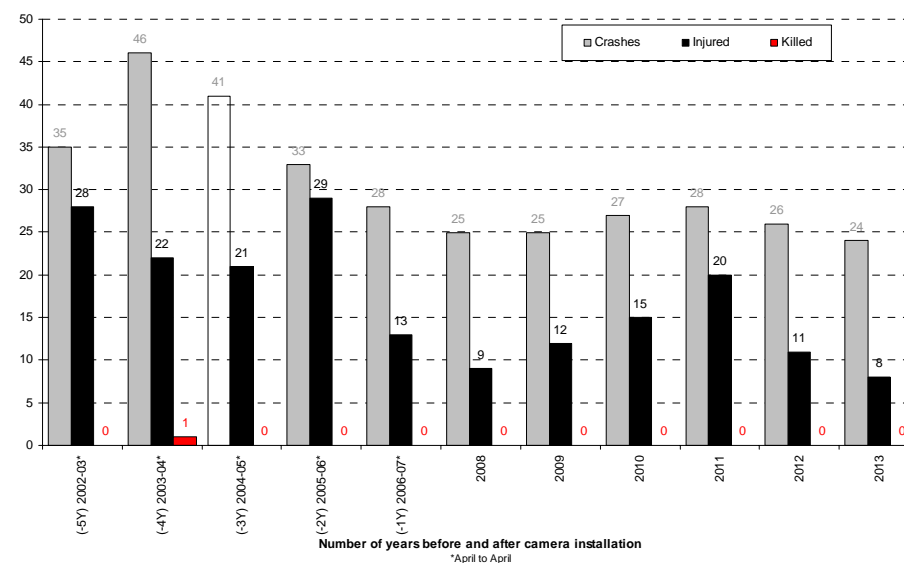
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	113	66	42%
Casualties	114	66	42%
Crashes	183	130	29%
Casualty Cost	\$19.46M	\$7.59M	61%

* April 2002 to April 2007

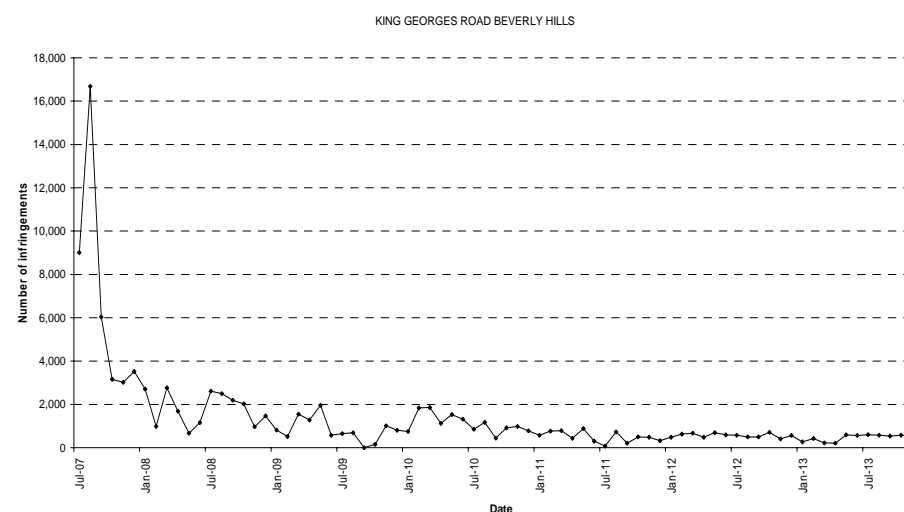
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 29 per cent reduction in the annual average number of crashes and a 42 per cent reduction in the annual average number of casualties.
- This has been a saving of \$11.87 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



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

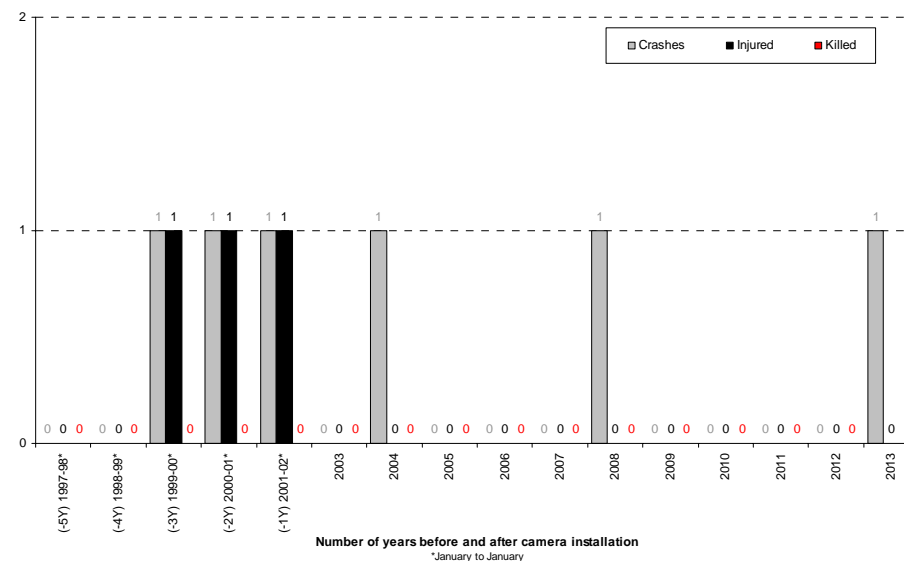
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	3	0	100%
Casualties	3	0	100%
Crashes	3	1	67%
Casualty Cost	\$0.35M	\$0M	100%

*January 1997 to January 2002

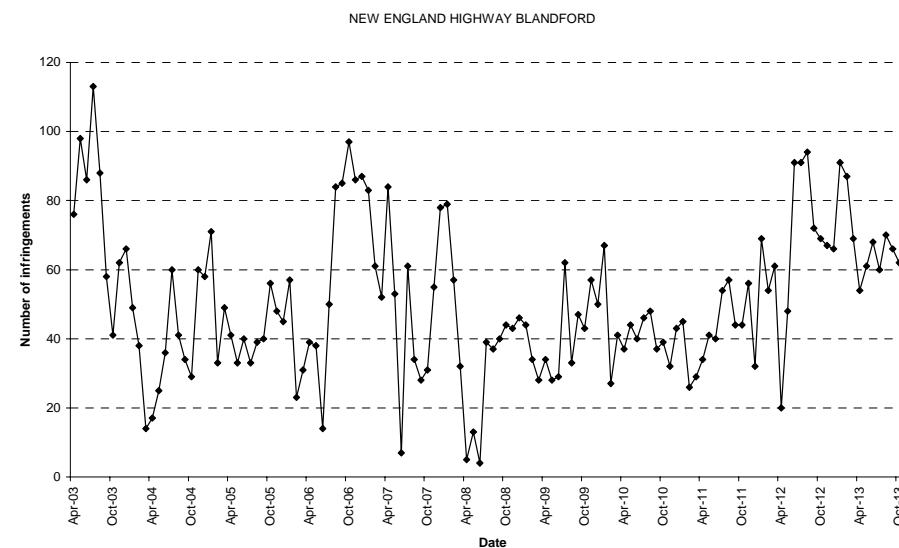
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 67 per cent reduction in the annual average number of crashes and a 100 per cent reduction in the annual average number of casualties.
- This has been a saving of \$350,000 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



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: **Retained following 2014 preliminary review**

Current camera performance

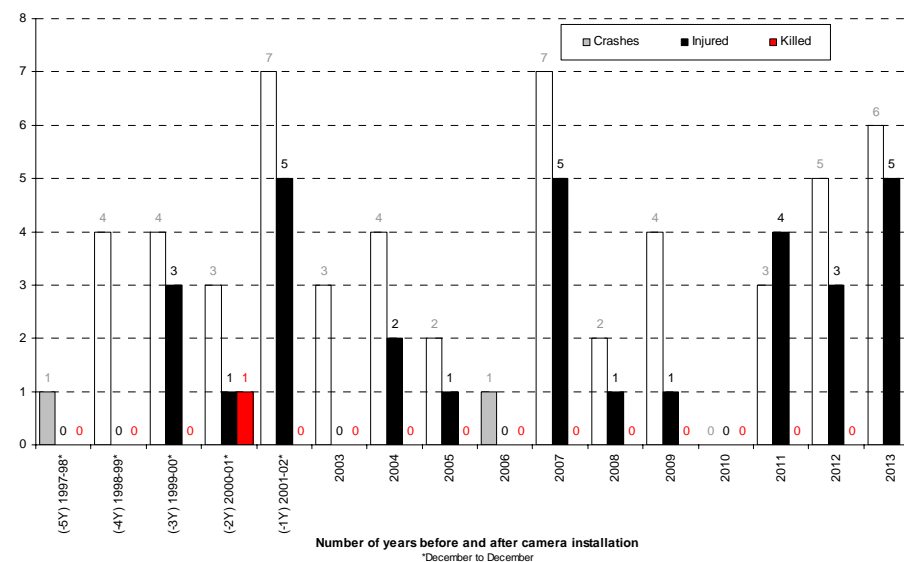
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	9	13	+44%
Casualties	10	13	+30%
Crashes	19	18	5%
Casualty Cost	\$7.56M	\$1.22M	80%

* 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 5 per cent reduction in the annual average number of crashes and a 30 per cent increase in the annual average number of casualties. However, there has been 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 \$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.

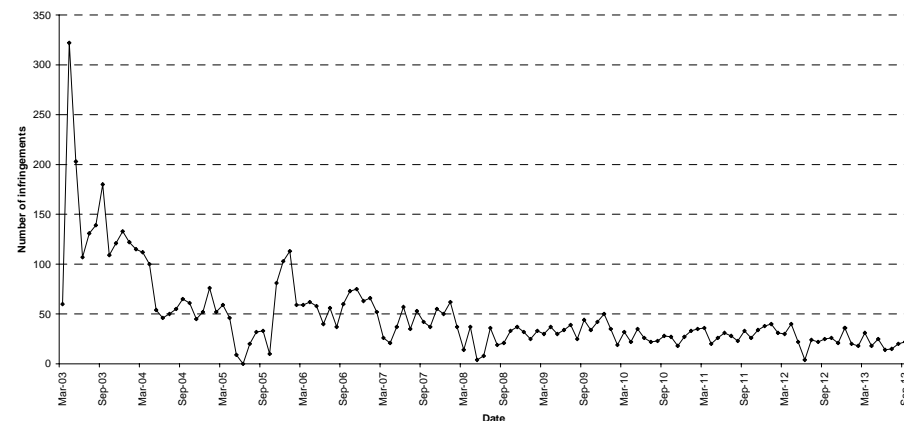
Trend in road safety performance at camera location

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

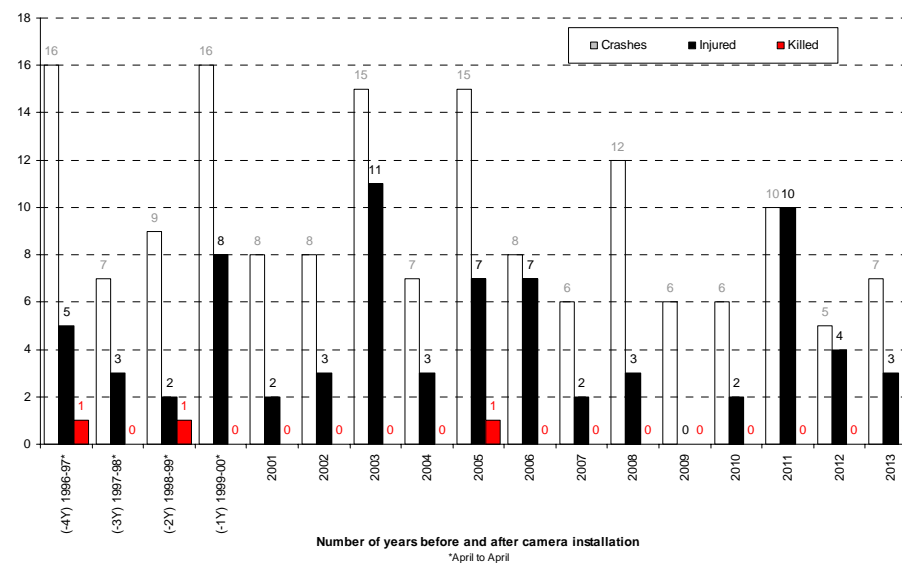
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	2	2.50	0	100%
Injuries	18	22.5	19	16%
Casualties	20	25	19	24%
Crashes	48	60	34	43%
Casualty Cost	\$15M	\$18.75M	\$2.19M	88%

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

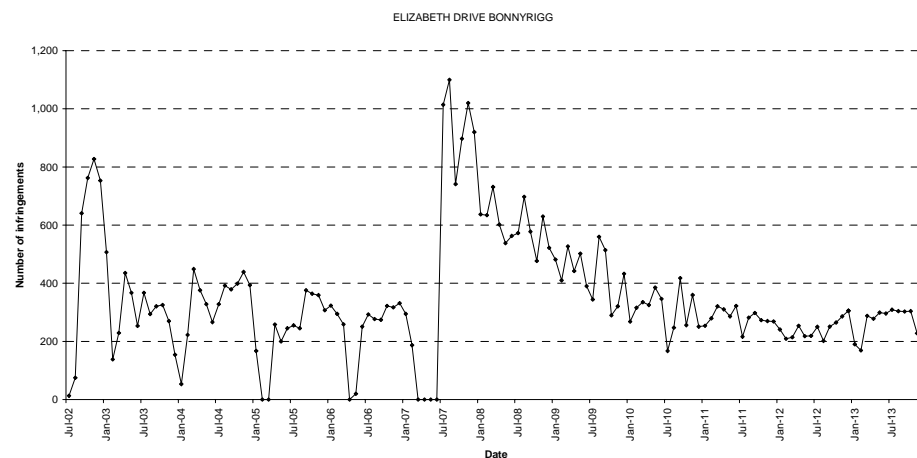
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 43 per cent reduction in the annual average number of crashes and a 24 per cent reduction in the annual average number of casualties.
- This has been a saving of \$16.56 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



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**

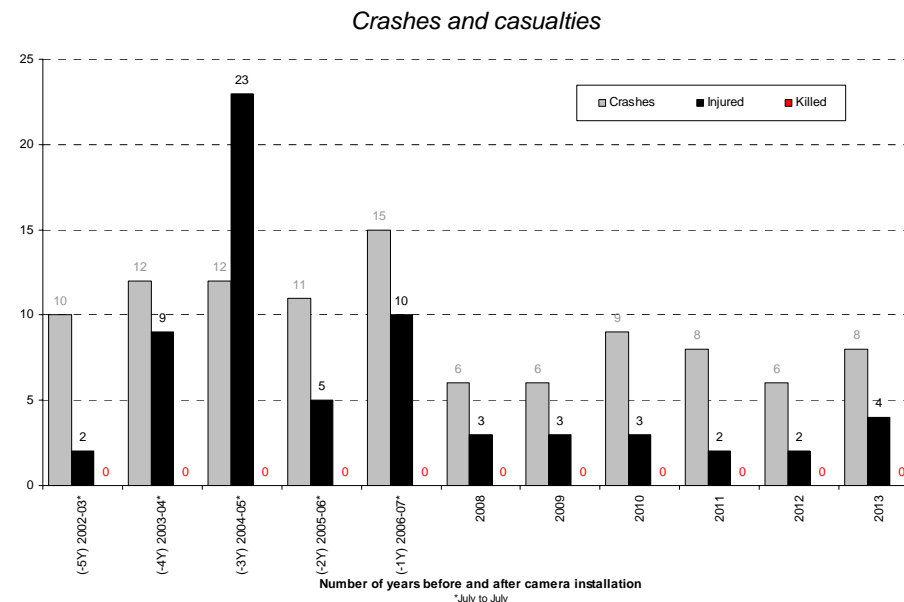
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	49	14	71%
Casualties	49	14	71%
Crashes	60	37	38%
Casualty Cost	\$5.63M	\$1.61M	71%

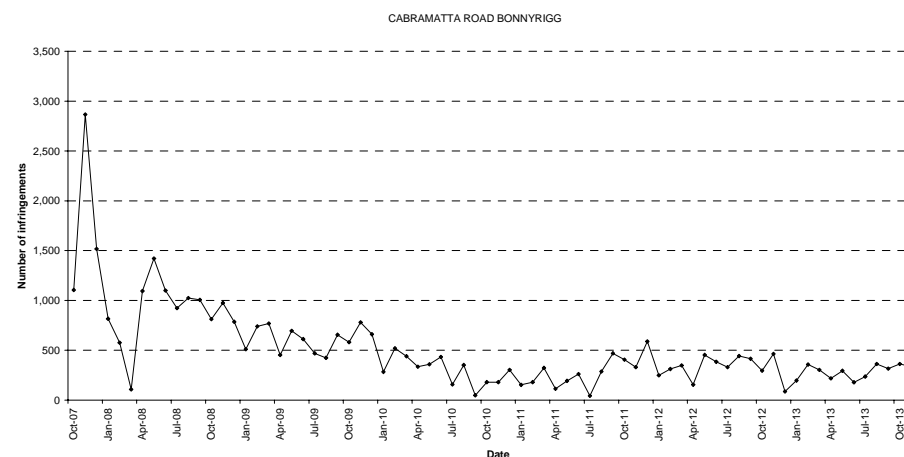
* August 2002 to August 2007

- 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 38 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 \$4.02 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



Infringements



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

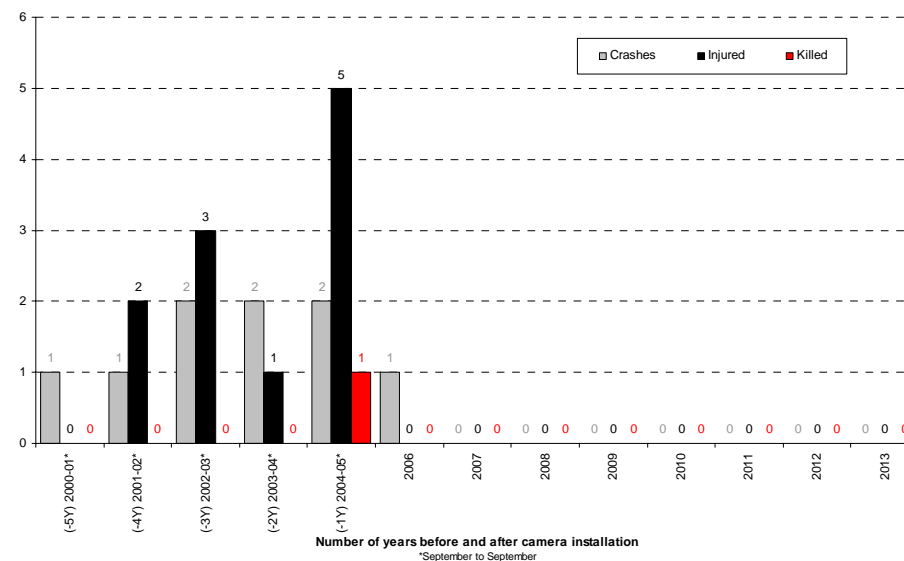
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	11	0	100%
Casualties	12	0	100%
Crashes	8	0	100%
Casualty Cost	\$7.73M	\$0M	100%

*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 \$7.73 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.

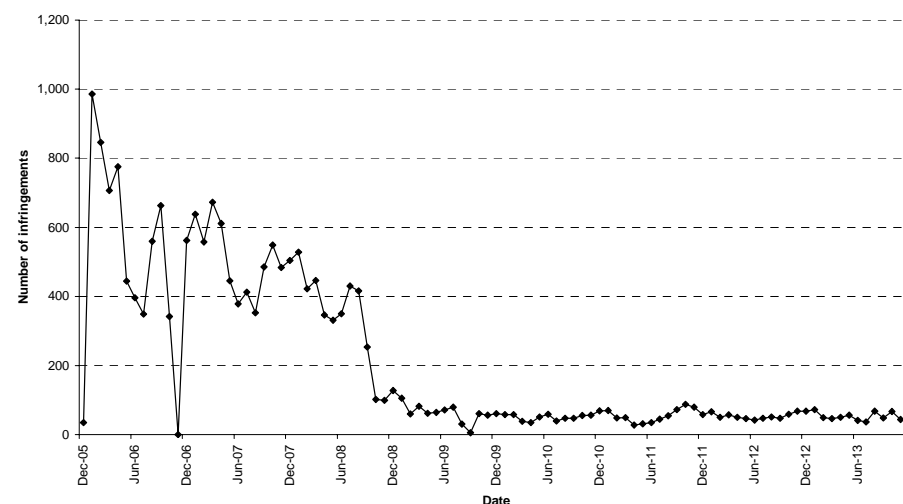
Trend in road safety performance at camera location

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**

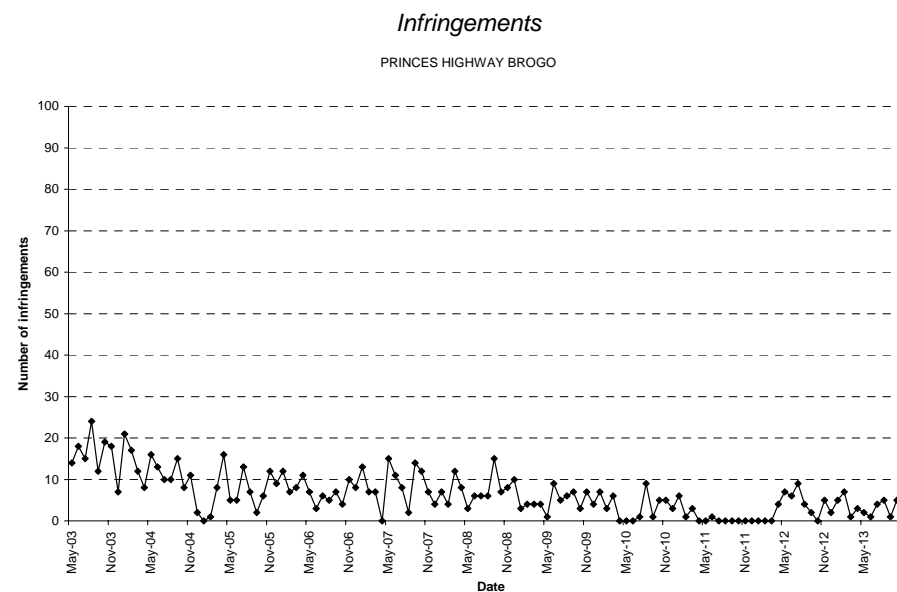
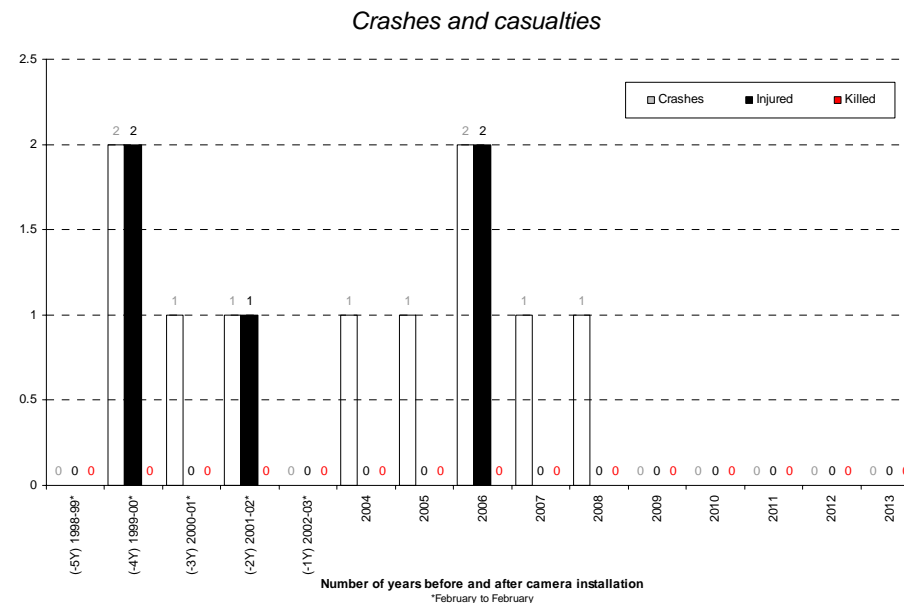
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	3	0	100%
Casualties	3	0	100%
Crashes	4	0	100%
Casualty Cost	\$0.35M	\$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 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 \$350,000 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



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

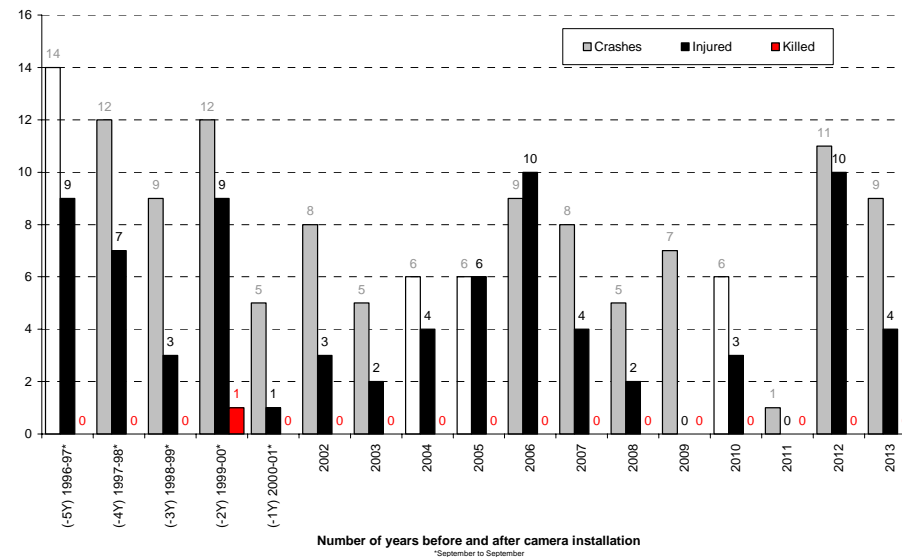
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	29	17	41%
Casualties	30	17	43%
Crashes	52	34	35%
Casualty Cost	\$9.8M	\$1.95M	80%

* 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 35 per cent reduction in the annual average number of crashes and a 43 per cent reduction in the annual average number of casualties.
- This has been a saving of \$7.85 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.

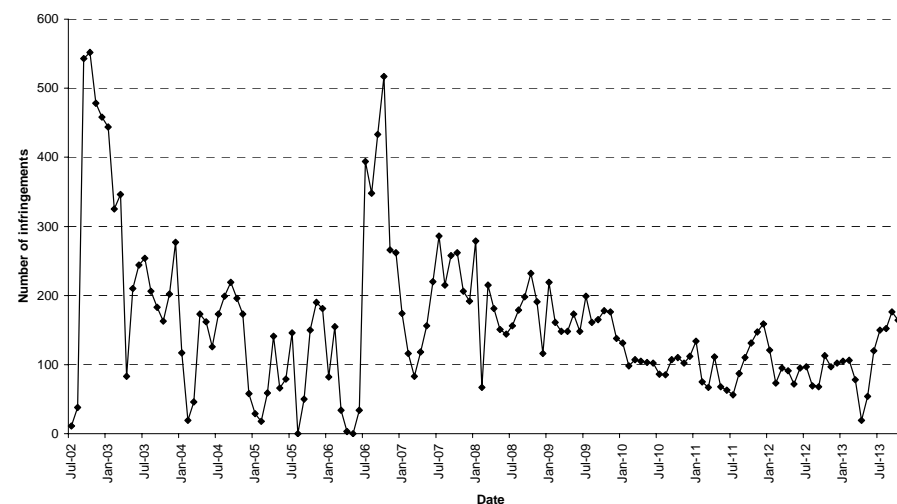
Trend in road safety performance at camera location

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

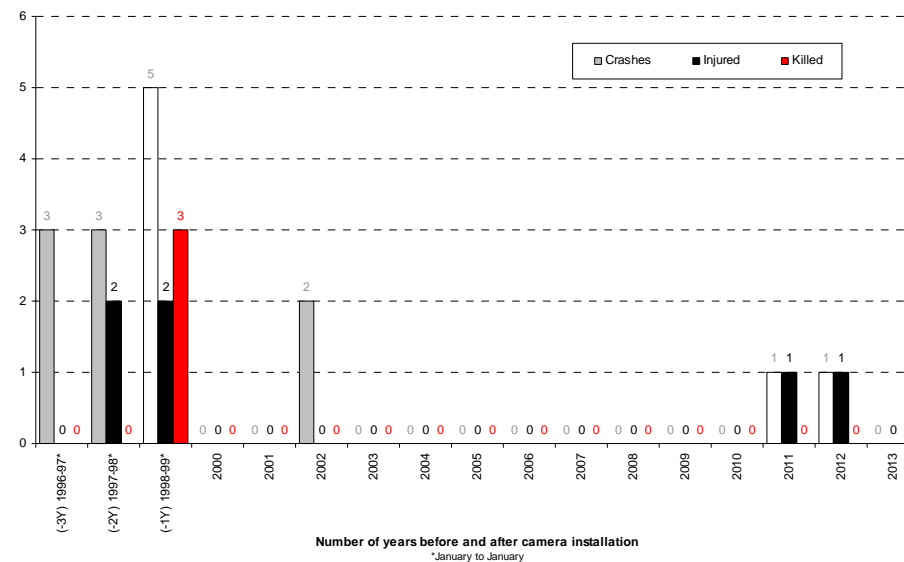
	Three years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	3	5	0	100%
Injuries	4	6.67	2	70%
Casualties	7	11.67	2	83%
Crashes	11	18.33	2	89%
Casualty Cost	\$19.86M	\$33.09M	\$0.23M	99%

* 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 an 89 per cent reduction in the annual average number of crashes and an 83 per cent reduction in the annual average number of casualties.
- This has been a saving of \$32.86 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.

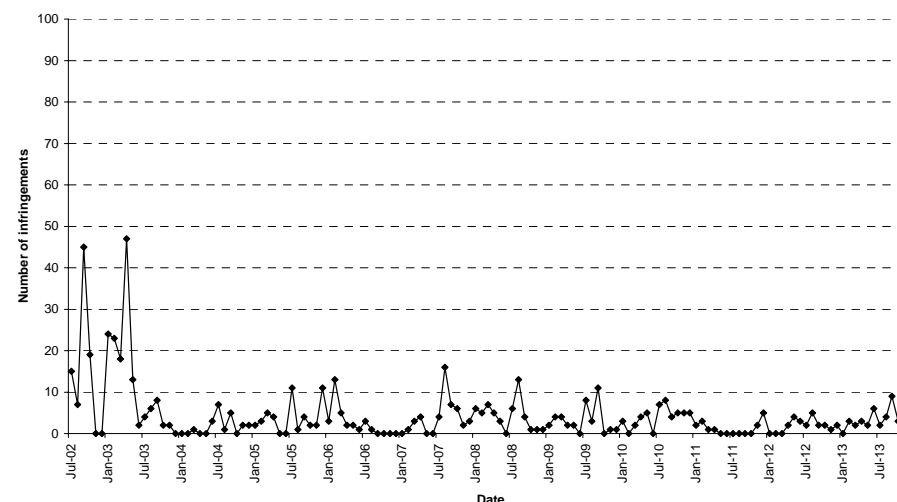
Trend in road safety performance at camera location

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

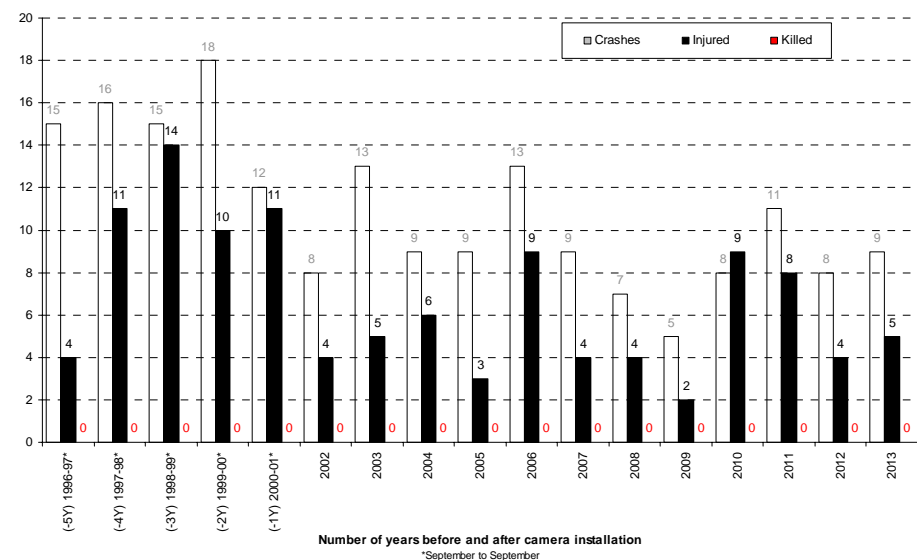
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	50	28	44%
Casualties	50	28	44%
Crashes	76	41	46%
Casualty Cost	\$5.75M	\$3.22M	44%

* September 1996 to September 2001

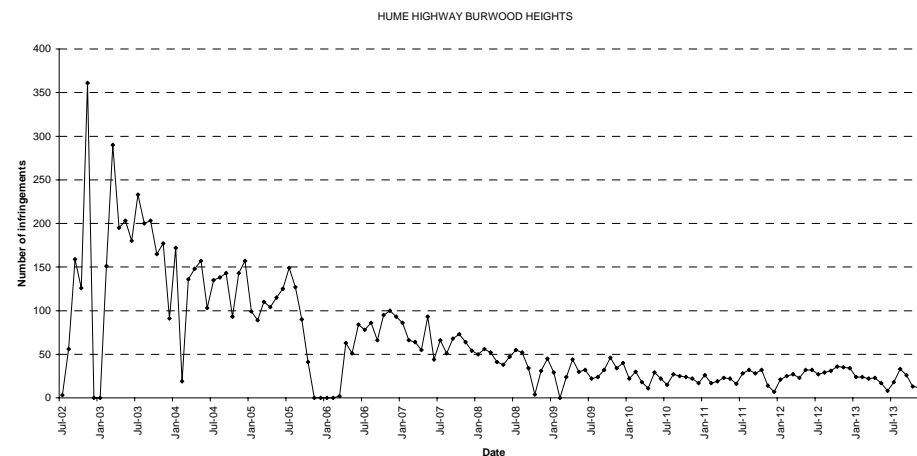
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 46 per cent reduction in the annual average number of crashes and a 44 per cent reduction in the annual average number of casualties.
- This has been a saving of \$2.53 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



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**

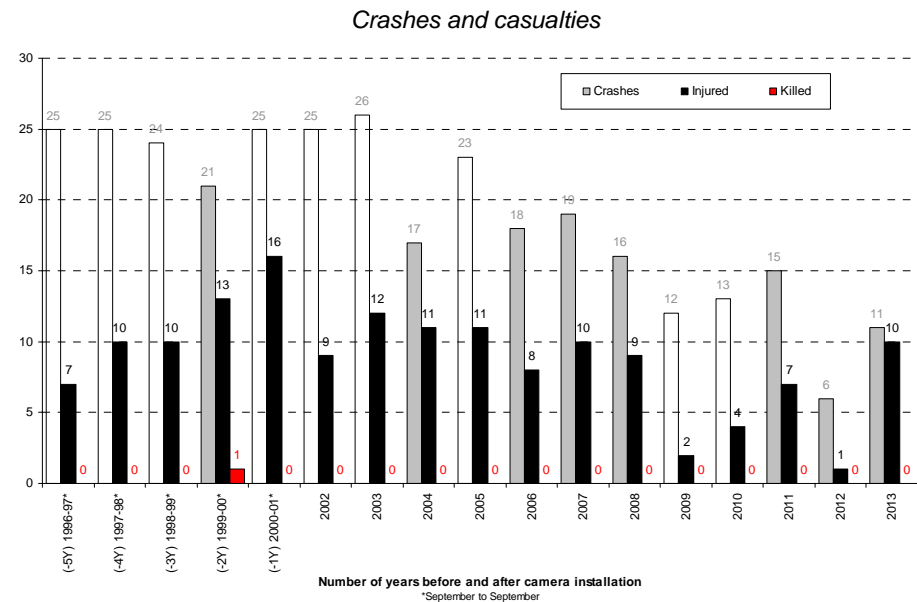
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	56	24	57%
Casualties	57	24	58%
Crashes	120	57	53%
Casualty Cost	\$12.91M	\$2.76M	79%

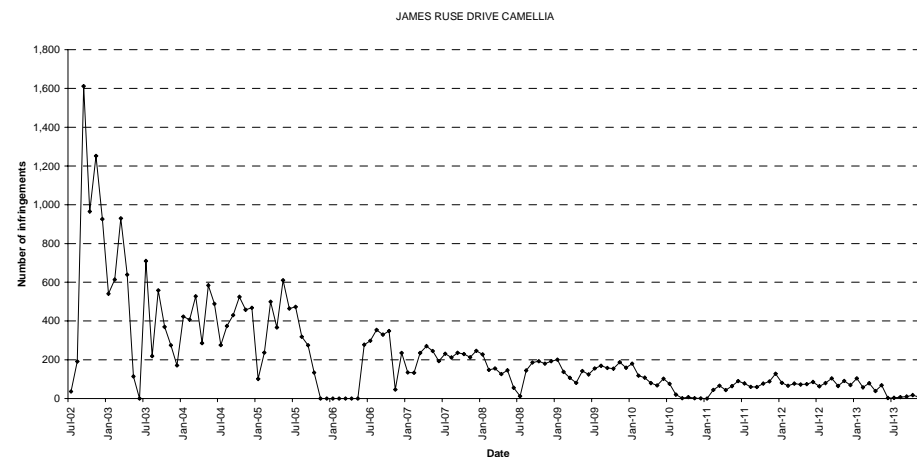
* September 1996 to September 2001

- 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 a 53 per cent reduction in the annual average number of crashes and a 58 per cent reduction in the annual average number of casualties.
- This has been a saving of \$10.15 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



Infringements



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

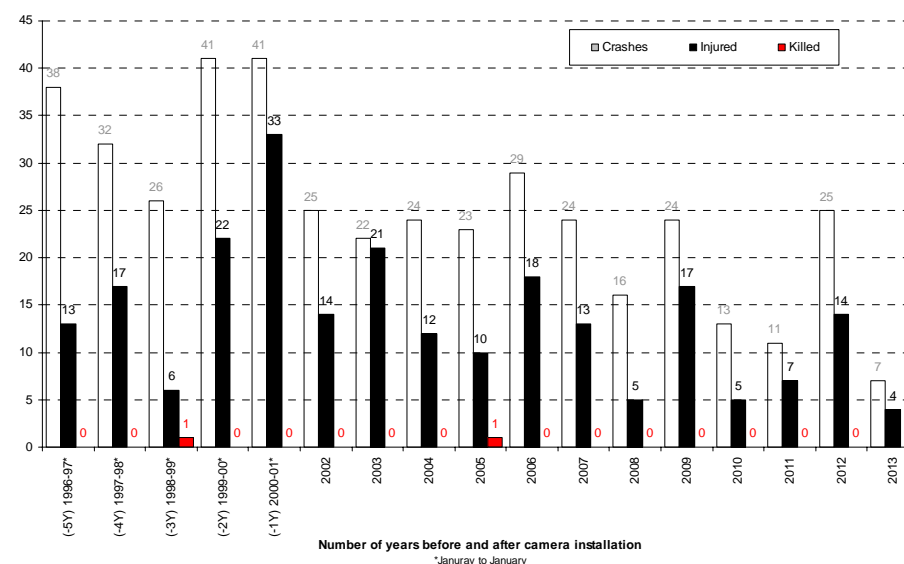
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	91	47	48%
Casualties	92	47	49%
Crashes	178	80	55%
Casualty Cost	\$16.93M	\$5.40M	68%

* 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 55 per cent reduction in the annual average number of crashes and a 49 per cent reduction in the annual average number of casualties.
- This has been a saving of \$11.53 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.

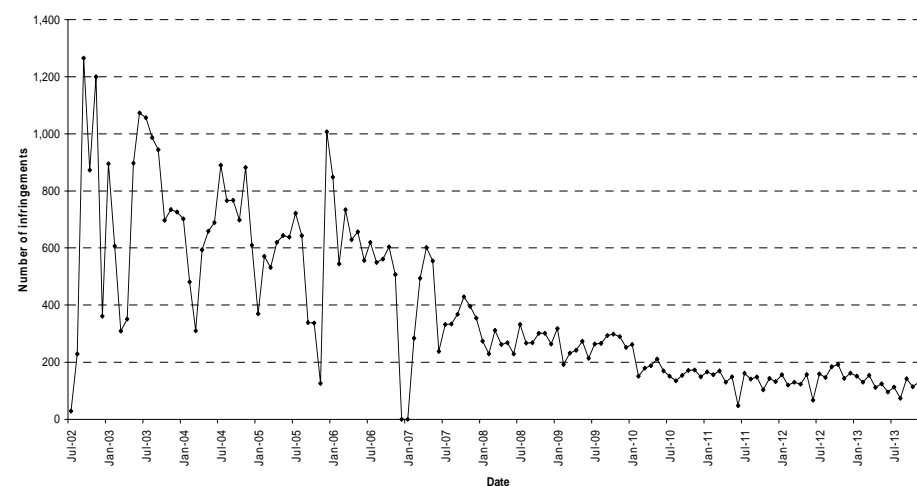
Trend in road safety performance at camera location

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

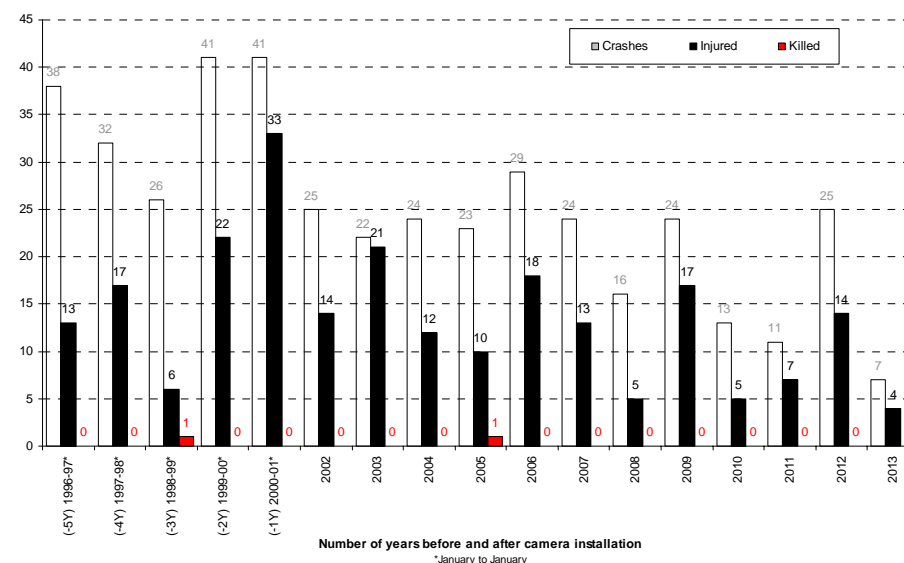
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	22	7	68%
Casualties	23	7	70%
Crashes	39	17	56%
Casualty Cost	\$9M	\$0.81M	91%

* January 1996 to January 2001

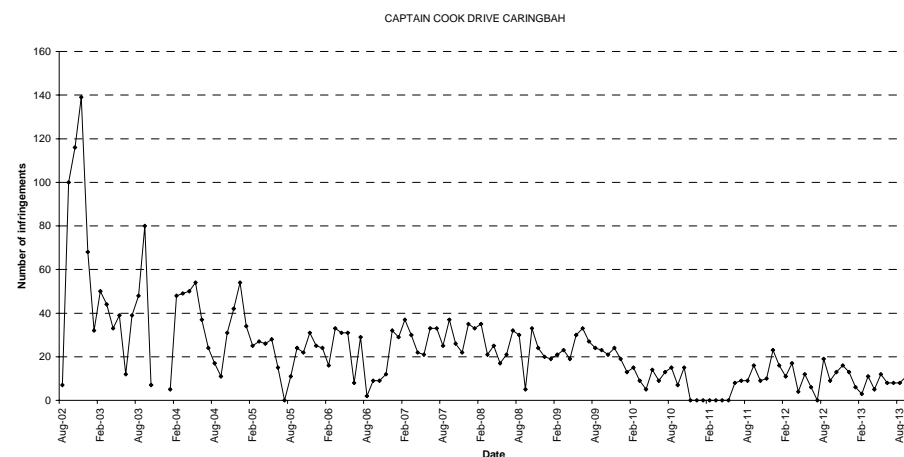
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 56 per cent reduction in the annual average number of crashes and a 70 per cent reduction in the annual average number of casualties.
- This has been a saving of \$8.19 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



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

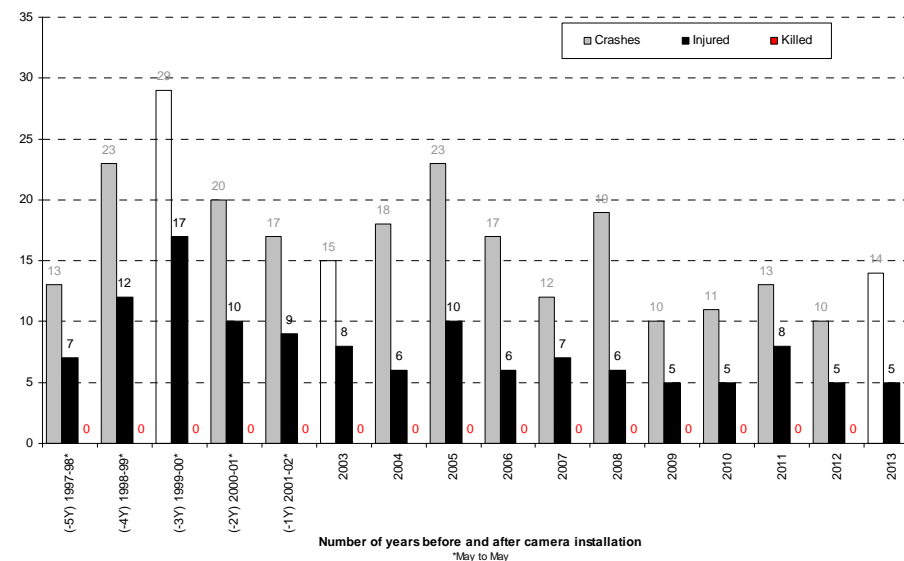
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	55	28	49%
Casualties	55	28	49%
Crashes	102	58	43%
Casualty Cost	\$6.33M	\$3.22M	49%

* 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 43 per cent reduction in the annual average number of crashes and a 49 per cent reduction in the annual average number of casualties.
- This has been a saving of \$3.11 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.

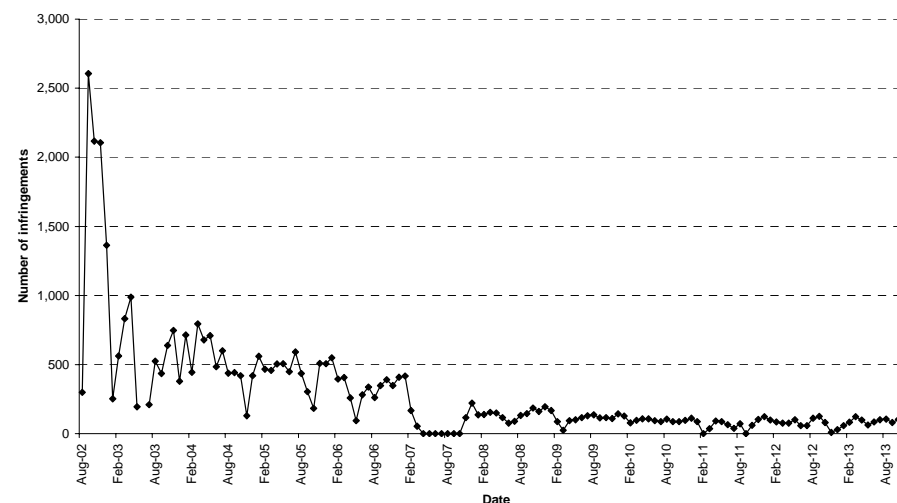
Trend in road safety performance at camera location

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

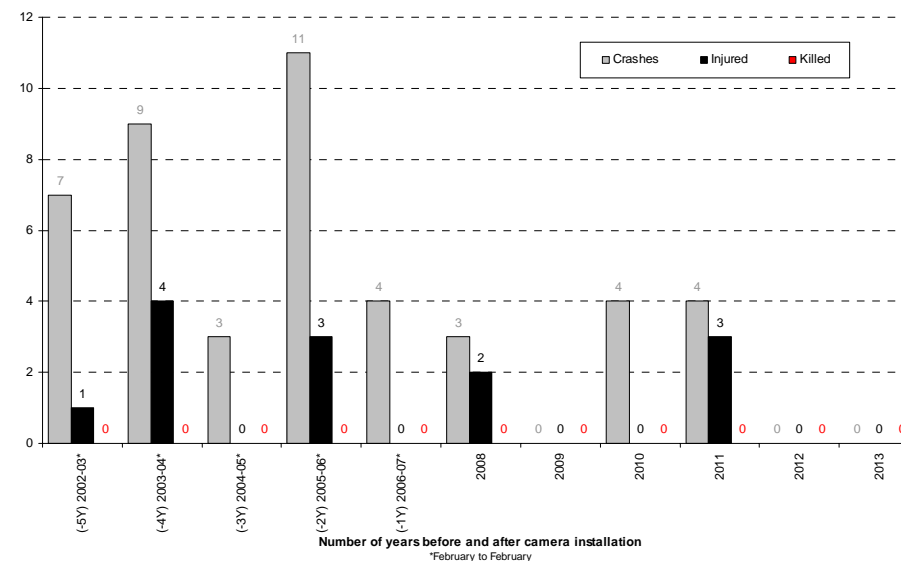
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	8	3	63%
Casualties	8	3	63%
Crashes	34	8	76%
Casualty Cost	\$0.92M	\$0.35M	63%

*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 76 per cent reduction in the annual average number of crashes and a 63 per cent reduction in the annual average number of casualties.
- This has been a saving of \$570,000 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.

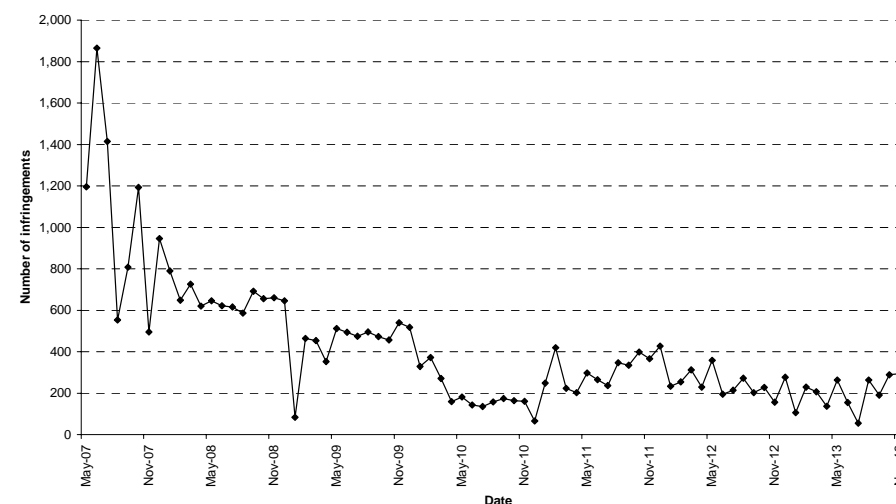
Trend in road safety performance at camera location

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

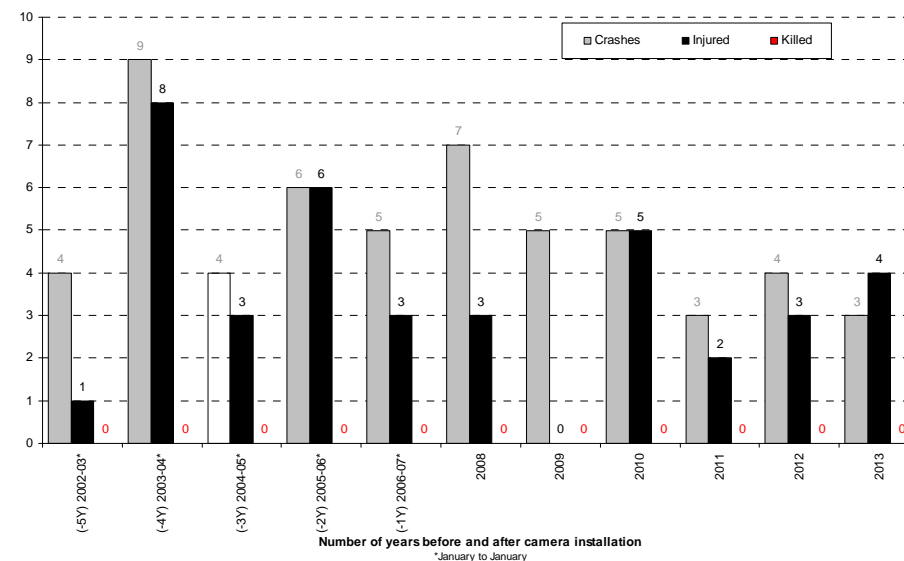
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	21	14	33%
Casualties	21	14	33%
Crashes	28	20	29%
Casualty Cost	\$2.42M	\$1.61M	33%

* 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 29 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 \$810,000 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.

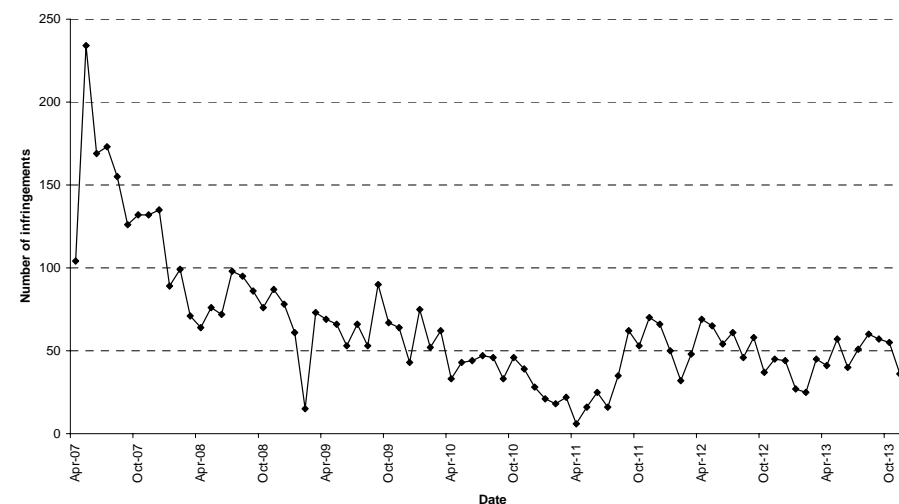
Trend in road safety performance at camera location

Crashes and casualties



Infringements

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

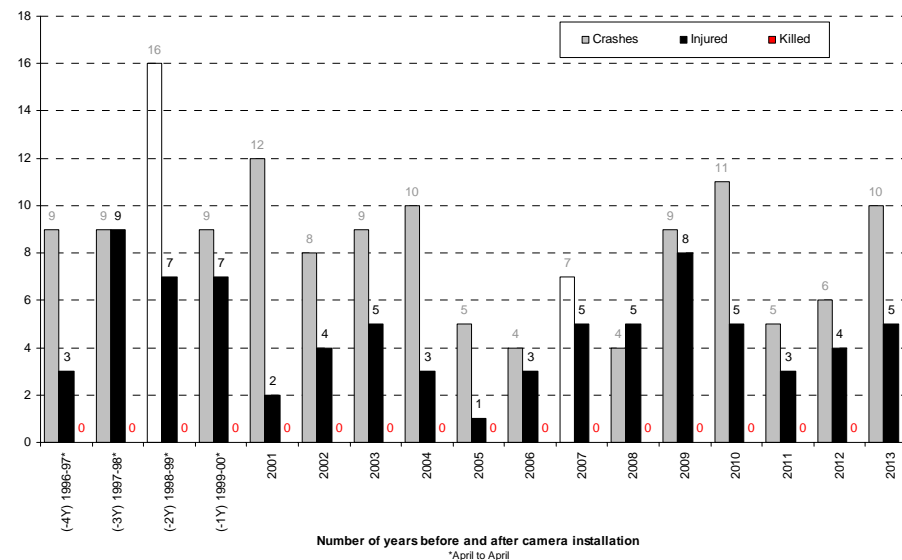
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	0	0	0	-
Injuries	26	32.5	25	23%
Casualties	26	32.5	25	23%
Crashes	43	53.75	41	24%
Casualty Cost	\$2.99M	\$3.74M	\$2.88M	23%

* 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 24 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 \$860,000 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.

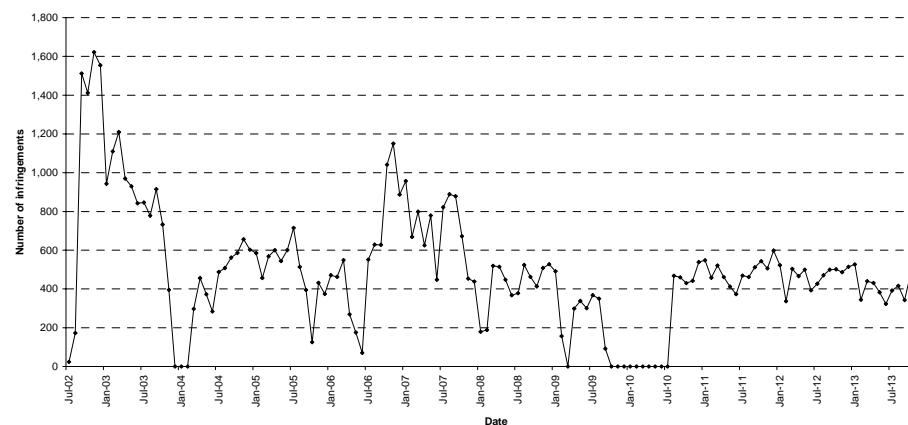
Trend in road safety performance at camera location

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

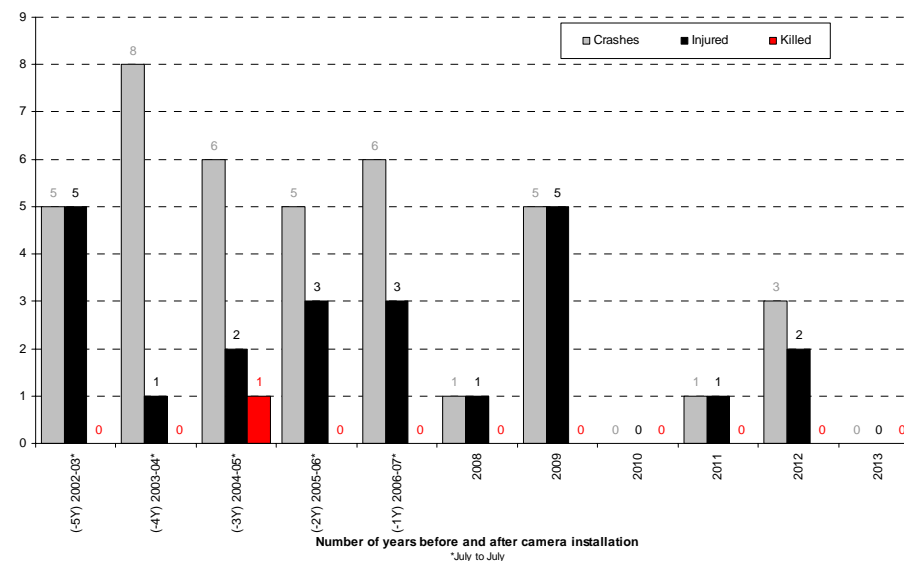
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	14	8	43%
Casualties	15	8	47%
Crashes	30	9	70%
Casualty Cost	\$8.08M	\$0.92M	89%

* July 2002 to July 2007

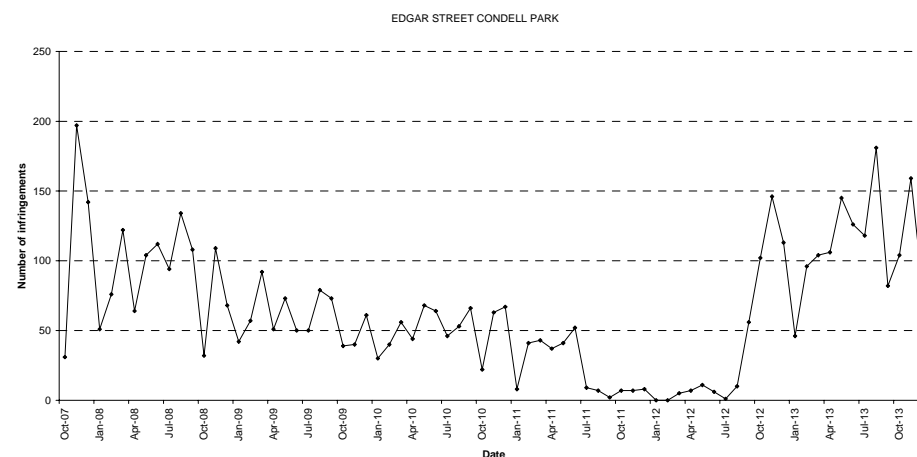
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 70 per cent reduction in the annual average number of crashes and a 47 per cent reduction in the annual average number of casualties.
- This has been a saving of \$7.16 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



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

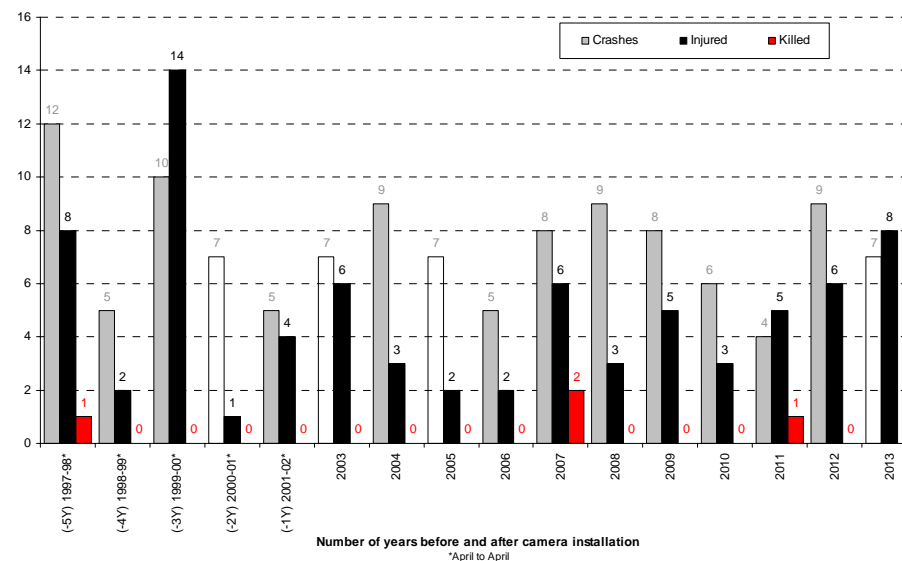
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	1	0%
Injuries	29	27	7%
Casualties	30	28	7%
Crashes	39	34	13%
Casualty Cost	\$9.8M	\$9.57M	2%

* July 2002 to July 2007

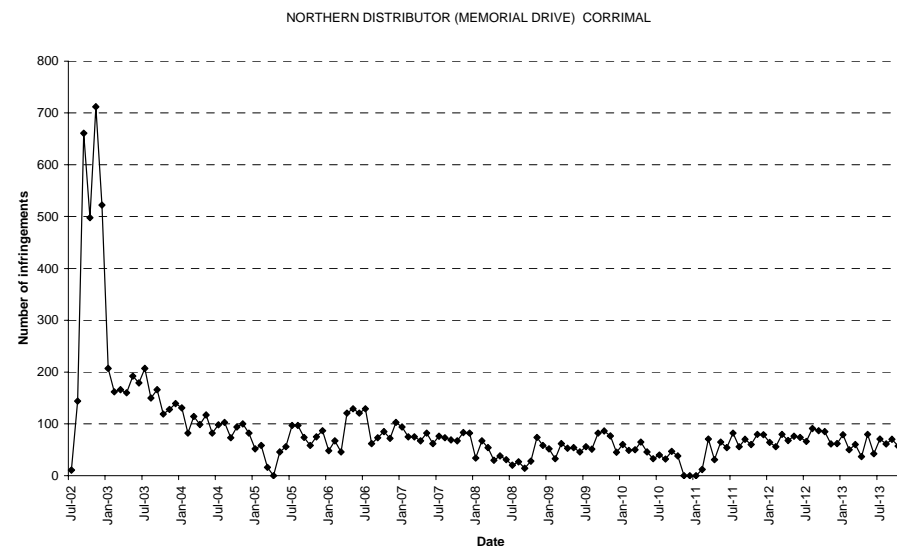
- The current pre and post installation analysis shows that crashes have decreased at this location. This location was reviewed in 2012 due to concerns about the increase in fatalities in recent years. The review found no evidence that the recent fatality, which occurred at an adjacent intersection, 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. Casualties continue to decrease at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 13 per cent reduction in the annual average number of crashes and a 7 per cent reduction in the annual average number of casualties.
- This has been a saving of \$230,000 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



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:

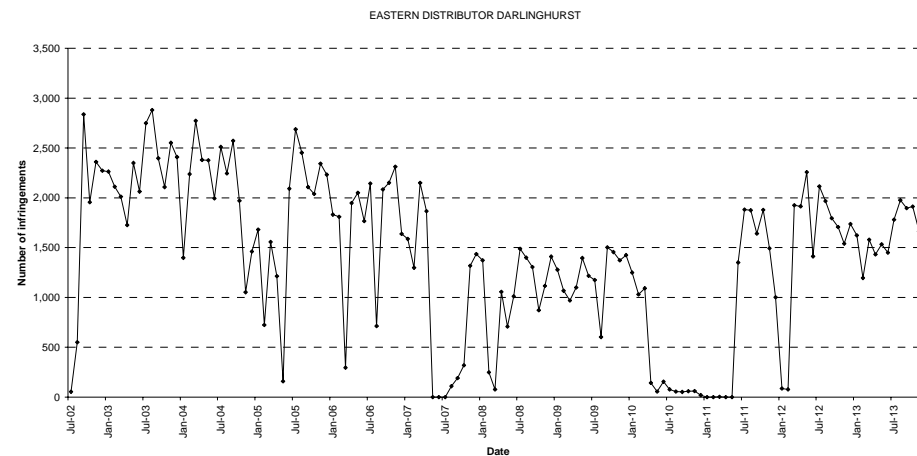
- Camera 1 (southbound) 06/06/2000
- Camera 2 (northbound) 30/11/2000

Crash and casualty data – January 2013 to December 2013

	Southbound	Northbound
Fatalities	0	0
Injuries	4	4
Casualties	4	4
Crashes	6	4

- 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



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

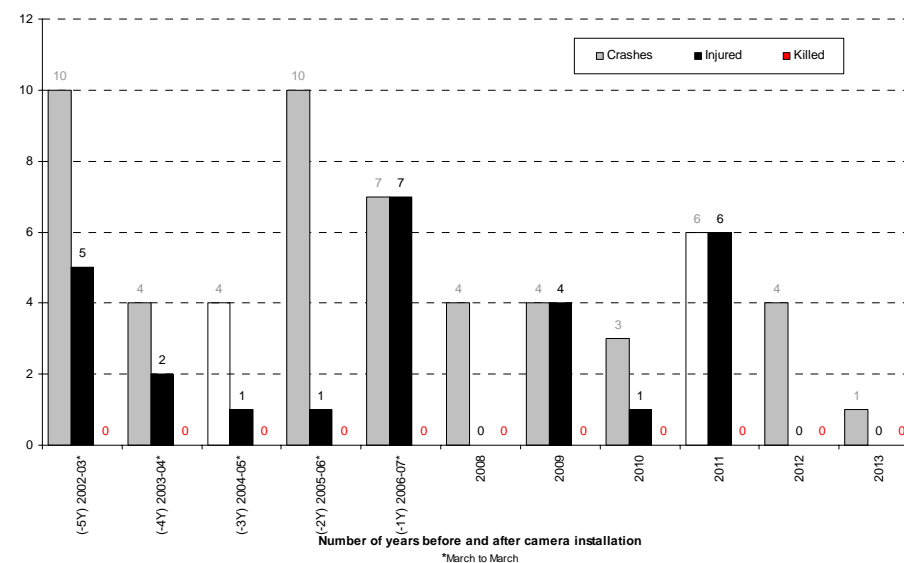
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	16	11	31%
Casualties	16	11	31%
Crashes	35	18	49%
Casualty Cost	\$1.84M	\$1.27M	31%

* 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 49 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 \$570,000 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.

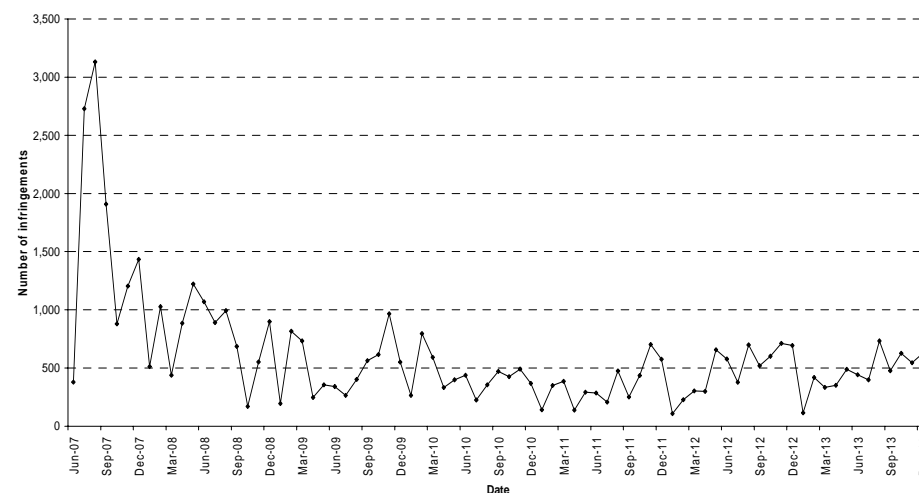
Trend in road safety performance at camera location

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: **Effective**

Current camera performance

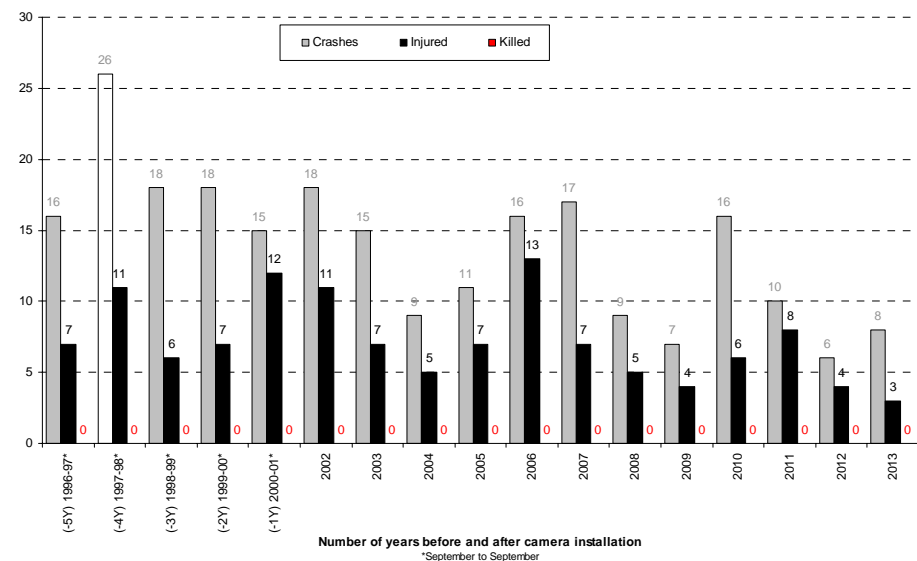
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	43	41	42%
Casualties	43	41	42%
Crashes	93	68	49%
Casualty Cost	\$4.95M	\$2.88M	42%

*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 49 per cent reduction in the annual average number of crashes and a 42 per cent reduction in the annual average number of casualties.
- This has been a saving of \$2.07 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.

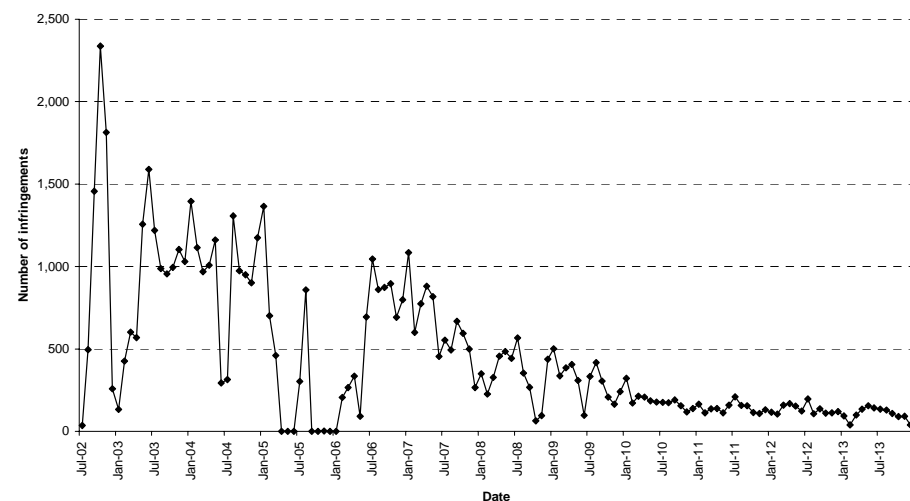
Trend in road safety performance at camera location

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

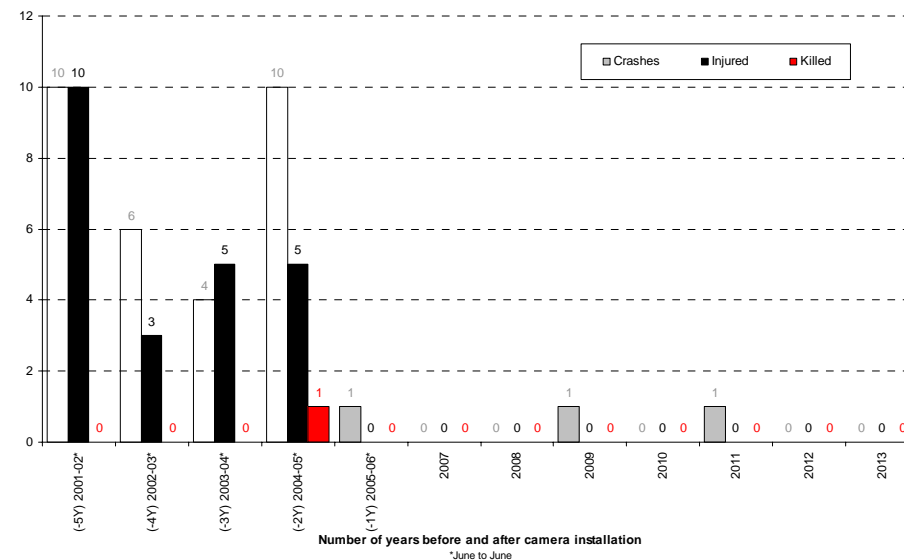
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	23	0	100%
Casualties	24	0	100%
Crashes	31	2	94%
Casualty Cost	\$9.11M	\$0M	100%

*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 \$9.11 million in costs to the community.
- This location has been identified as one of the highest infringing sites in 2013. The infringement graph details the trend in infringements at the location since the camera began operation. The graph indicates there was a sharp reduction in the number of infringements issued following camera's installation. A consistent level of speeding has since 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: **Retained based on 2013 comprehensive review**

Current camera performance

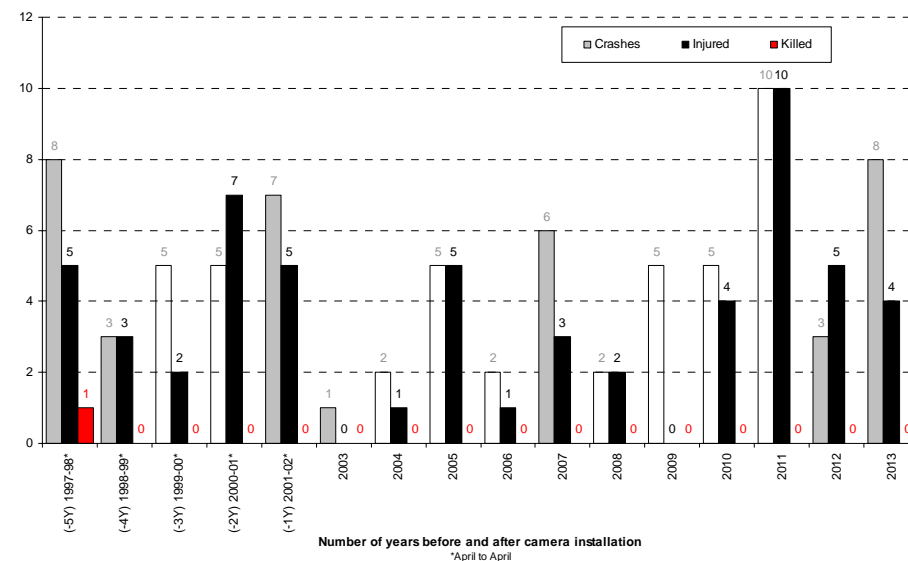
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	22	23	+5%
Casualties	23	23	0%
Crashes	28	31	+11%
Casualty Cost	\$9M	\$2.65M	71%

*April 1997 to April 2002

- This location was reviewed in 2013 due to concerns about the increase in crashes and casualties in recent years. The 2013 review found that since the speed camera was installed, the number of crashes per year has decreased. The review also found that the number of injury crashes per year decreased. While there was one fatal crash with one fatality prior to the installation of the speed camera, there have been no fatalities since the camera has been in operation. Therefore based on this information, the speed camera is considered to be providing road safety benefits and it is recommended that the speed camera be retained.
- When comparing the pre installation period to the most recent five year period, there has been an 11 per cent increase in the annual average number of crashes and no reduction in the annual average number of casualties. However, there has been a reduction in fatalities from one to zero.
- This has been a saving of \$6.35 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.

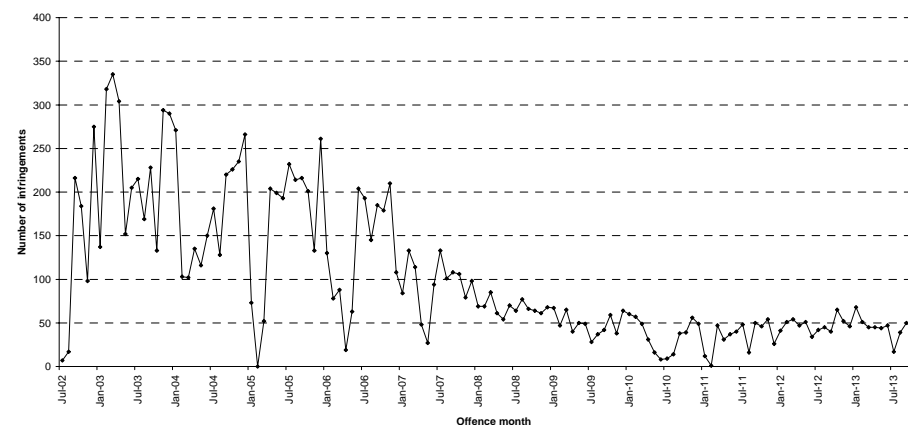
Trend in road safety performance at camera location

Crashes and casualties



Infringements

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

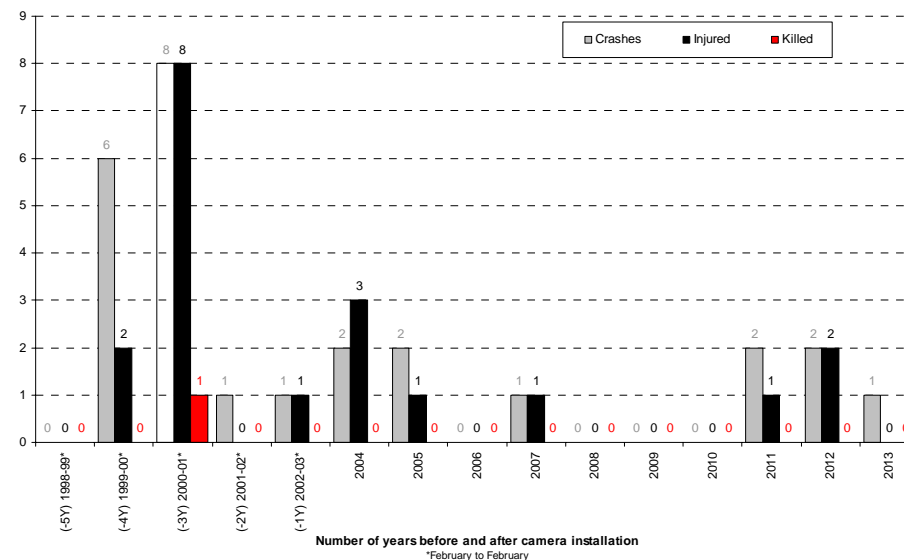
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	11	3	73%
Casualties	12	3	75%
Crashes	16	5	69%
Casualty Cost	\$7.73M	\$0.35M	96%

*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 69 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 \$7.38 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.

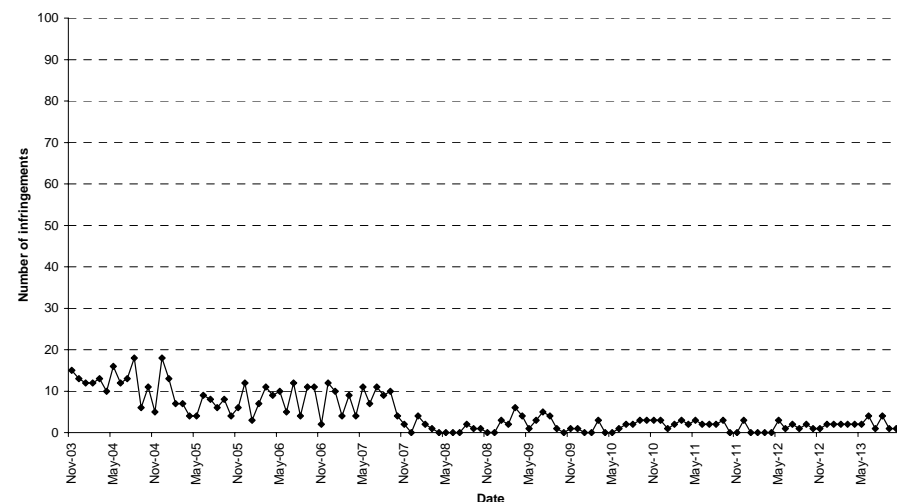
Trend in road safety performance at camera location

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

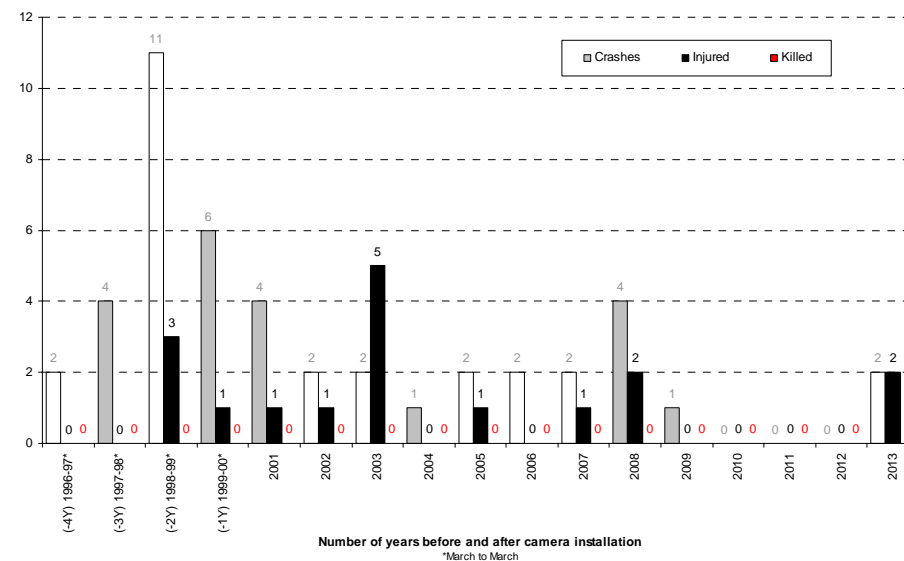
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	0	0	0	-
Injuries	4	5	2	60%
Casualties	4	5	2	60%
Crashes	23	28.75	3	90%
Casualty Cost	\$0.46M	\$0.58M	\$0.23M	60%

*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 a 90 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 \$350,000 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.

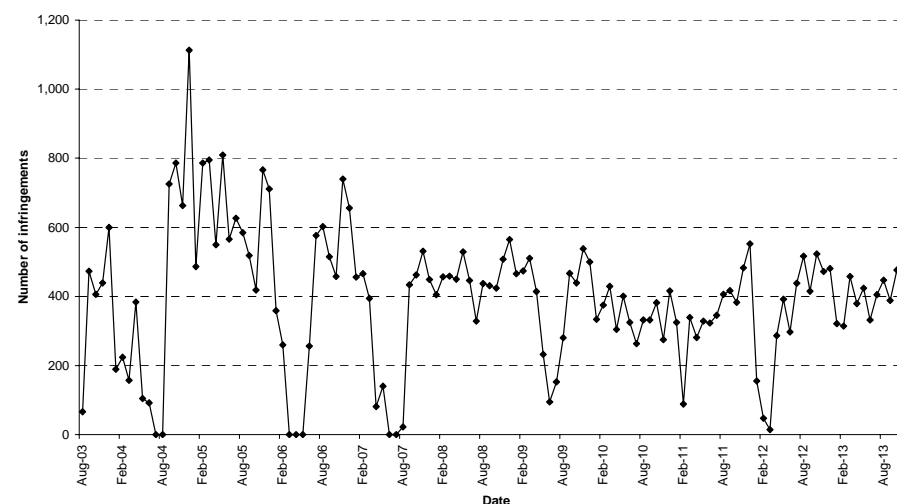
Trend in road safety performance at camera location

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

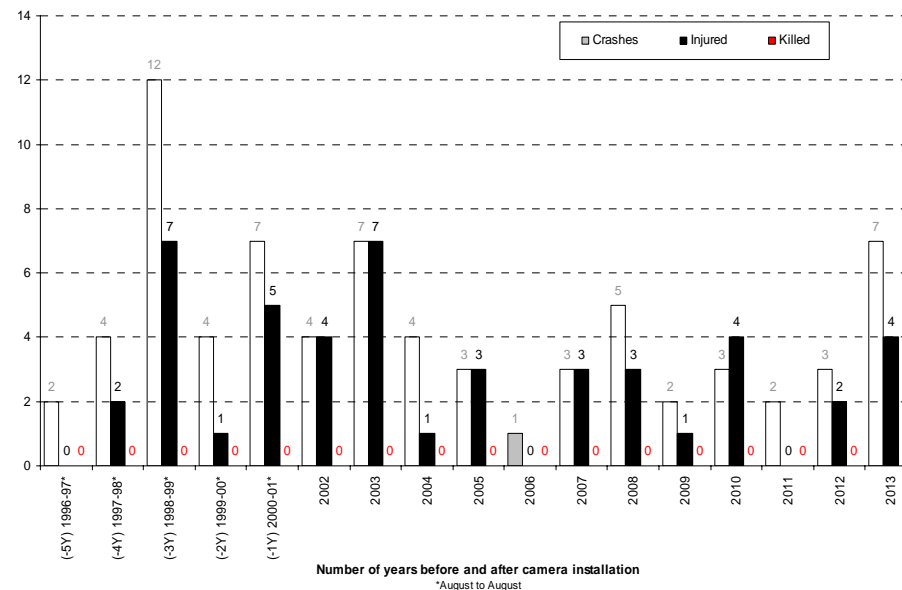
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	15	11	27%
Casualties	15	11	27%
Crashes	29	17	41%
Casualty Cost	\$1.72M	\$1.27M	27%

*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 27 per cent reduction in the annual average number of casualties.
- This has been a saving of \$450,000 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.

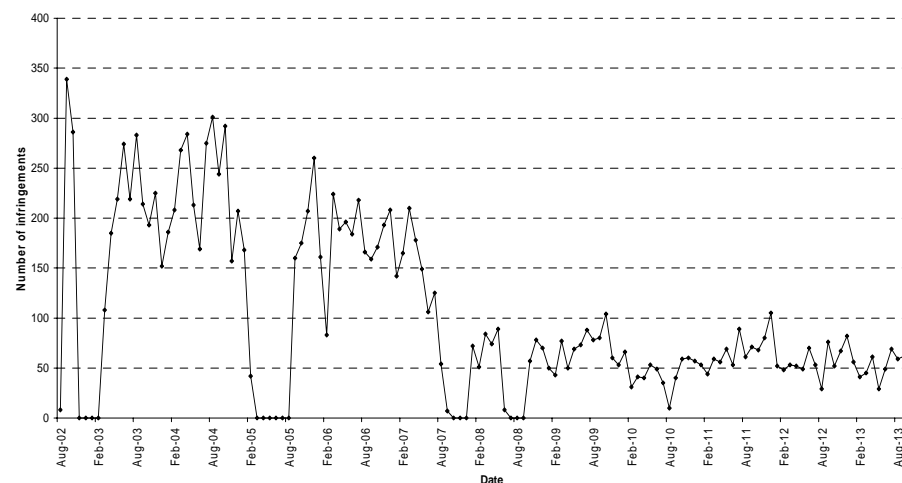
Trend in road safety performance at camera location

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

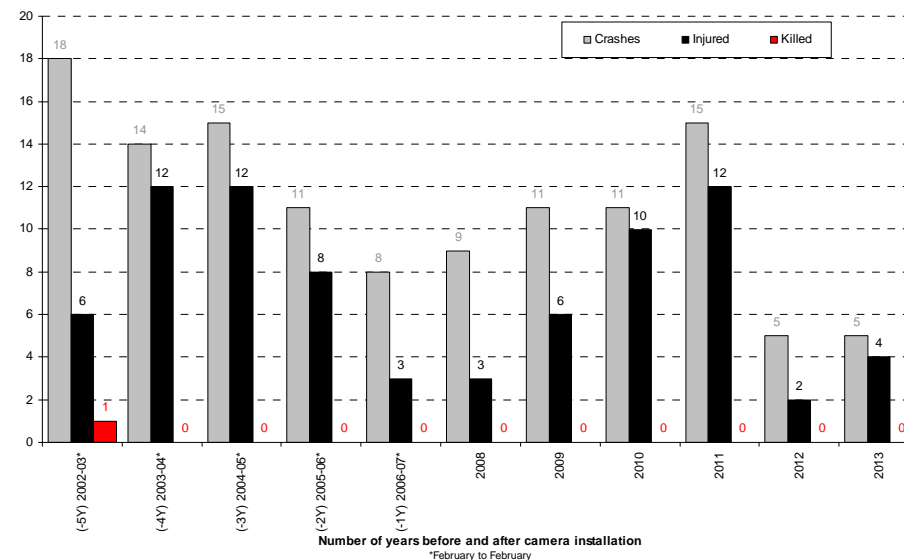
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	41	34	17%
Casualties	42	34	19%
Crashes	66	48	27%
Casualty Cost	\$11.18M	\$3.91M	65%

*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 27 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 \$7.27 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.

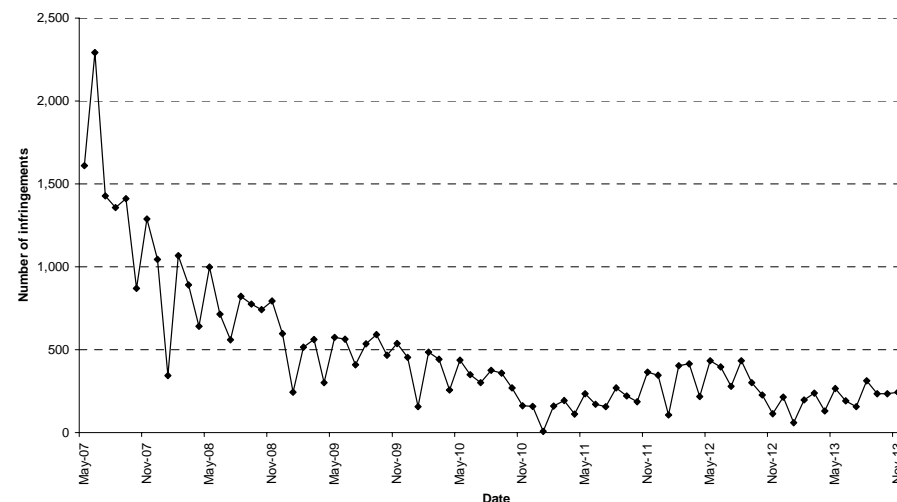
Trend in road safety performance at camera location

Crashes and casualties



Infringements

WOODVILLE ROAD GUILFORD



M1 Princes Motorway (formerly the F6, Southern Freeway), Gwynneville (northbound)

Location: M1 Princes Motorway, 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

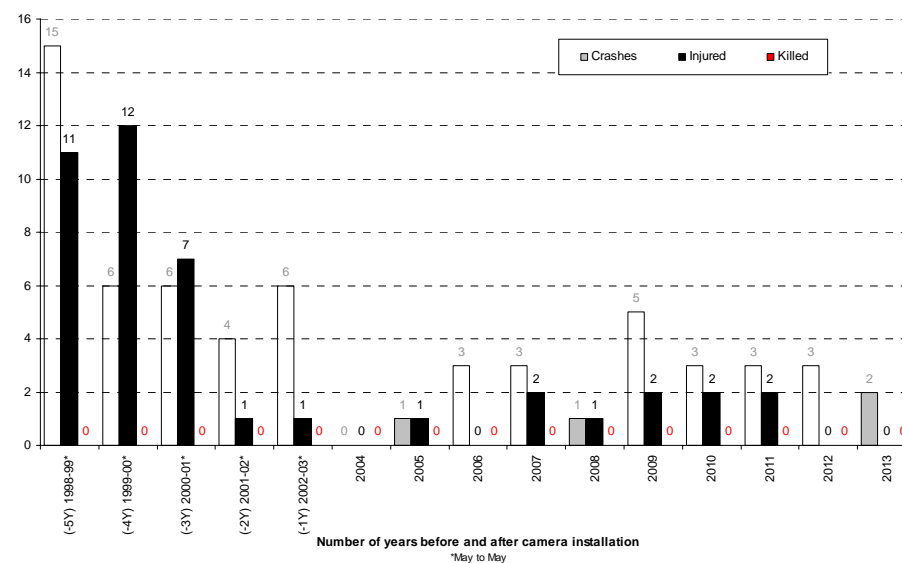
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	32	6	81%
Casualties	32	6	81%
Crashes	37	16	57%
Casualty Cost	\$3.68M	\$0.69M	81%

*May 1998 to May 2003

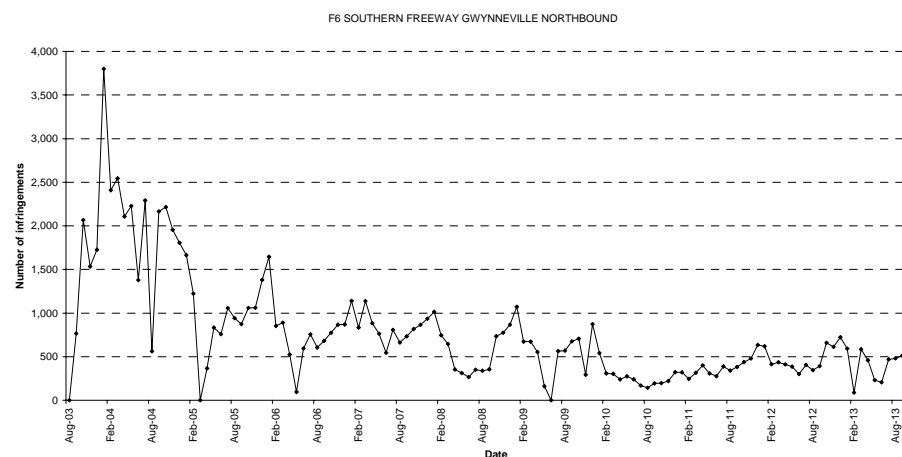
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 57 per cent reduction in the annual average number of crashes and an 81 per cent reduction in the annual average number of casualties.
- This has been a saving of \$2.99 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



M1 Princes Motorway (formerly the F6, Southern Freeway), Gwynneville (southbound)

Location: M1 Princes Motorway, 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 **Retained following 2014 preliminary review**

Current camera performance

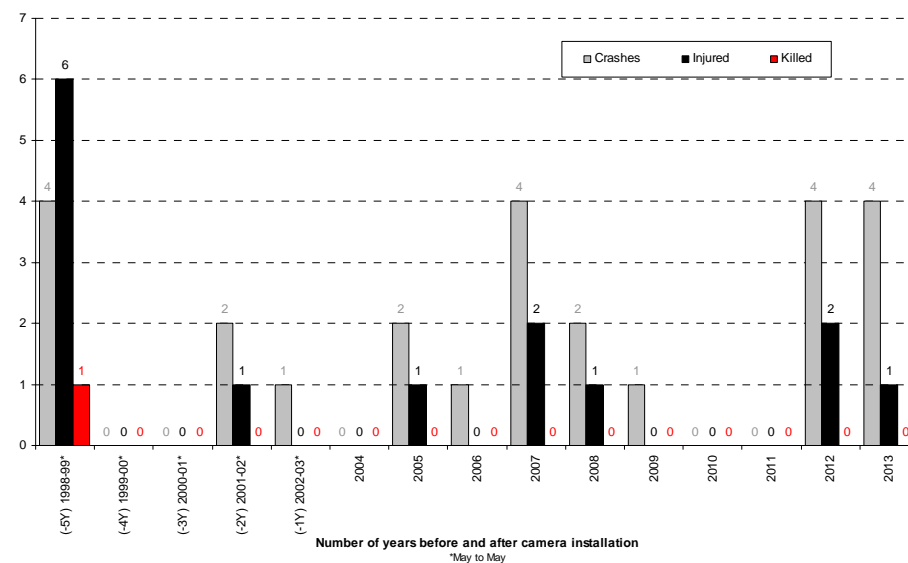
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	7	3	57%
Casualties	8	3	63%
Crashes	7	9	+29%
Casualty Cost	\$7.27M	\$0.35M	95%

*May 1998 to May 2003

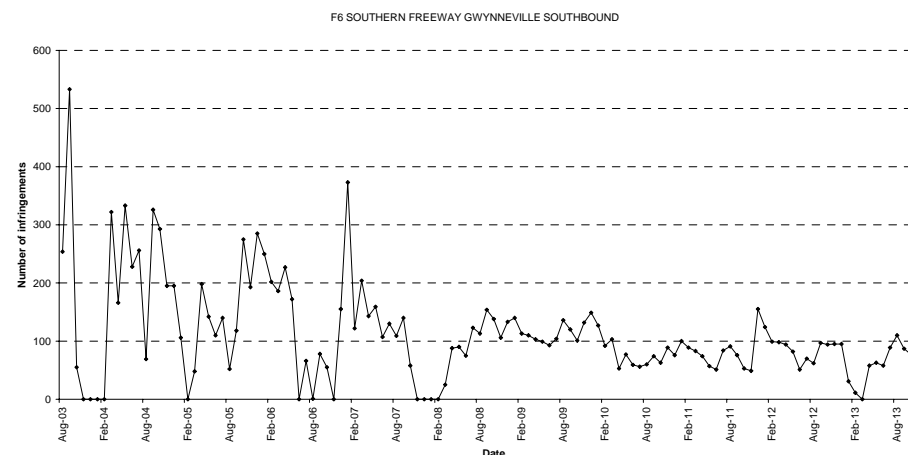
- The current pre and post installation analysis shows that crashes have increased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 29 per cent increase in the annual average number of crashes and a 63 per cent reduction in the annual average number of casualties. However, there has been 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 \$6.92 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



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: **Review**

Current camera performance

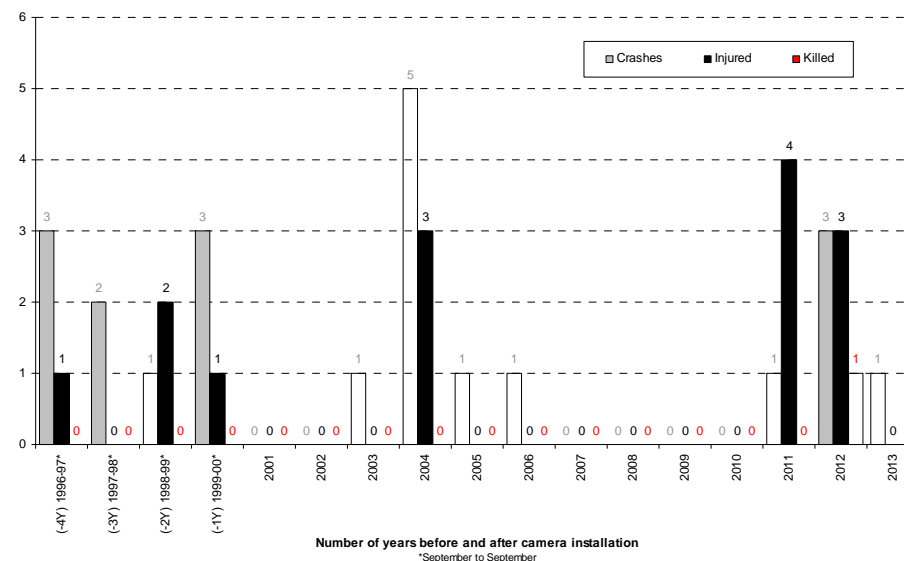
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	0	0	1	Increase from 0 to 1
Injuries	4	5	7	+40%
Casualties	4	5	8	+60%
Crashes	9	11.25	5	56%
Casualty Cost	\$0.46M	\$0.58M	\$7.27M	+1164%

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

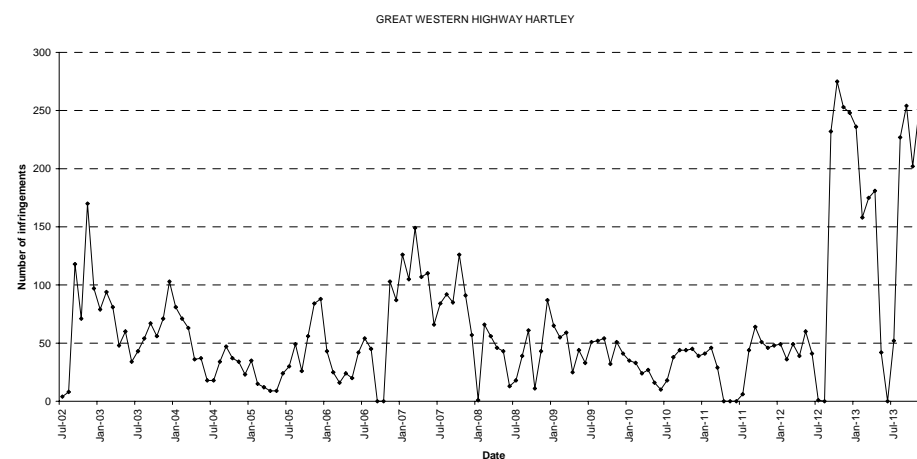
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 56 per cent reduction in the annual average number of crashes however there has been 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 road that will improve road safety for heavy vehicles. Therefore, the camera will be reviewed after this time to determine whether the camera should be retained.
- 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



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

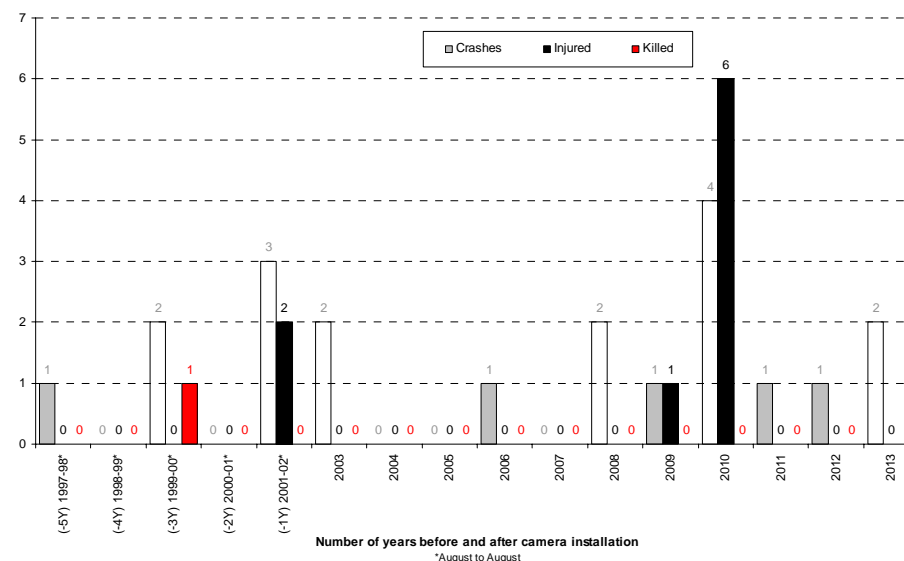
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	2	7	+250%
Casualties	3	7	+133%
Crashes	6	9	+50%
Casualty Cost	\$6.7M	\$0.81M	88%

*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. The crash and casualties graph shows that crashes have decreased since the safety improvements in 2010.
- 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.

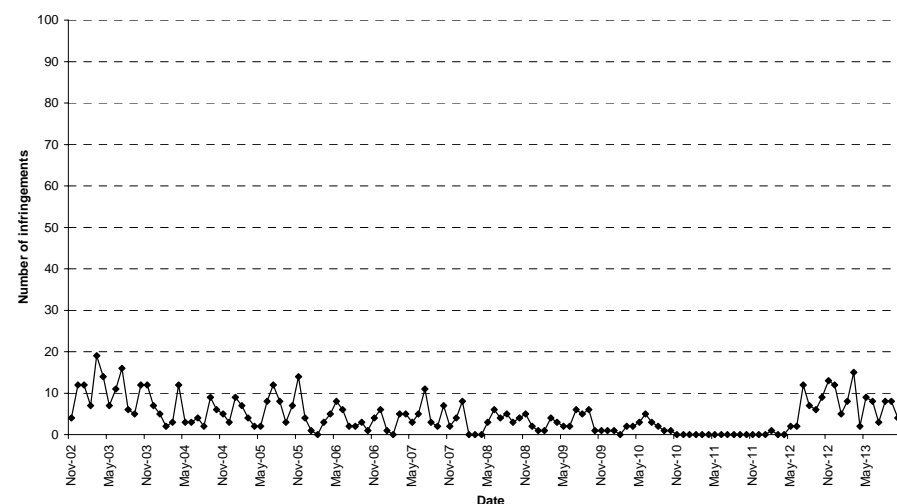
Trend in road safety performance at camera location

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

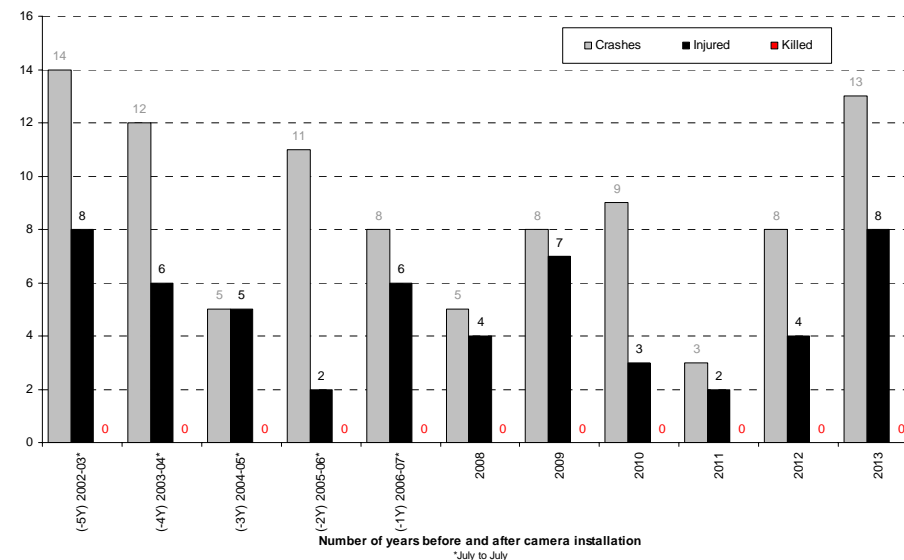
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	27	24	11%
Casualties	27	24	11%
Crashes	50	41	18%
Casualty Cost	\$3.11M	\$2.76M	11%

*July 2002 to July 2007

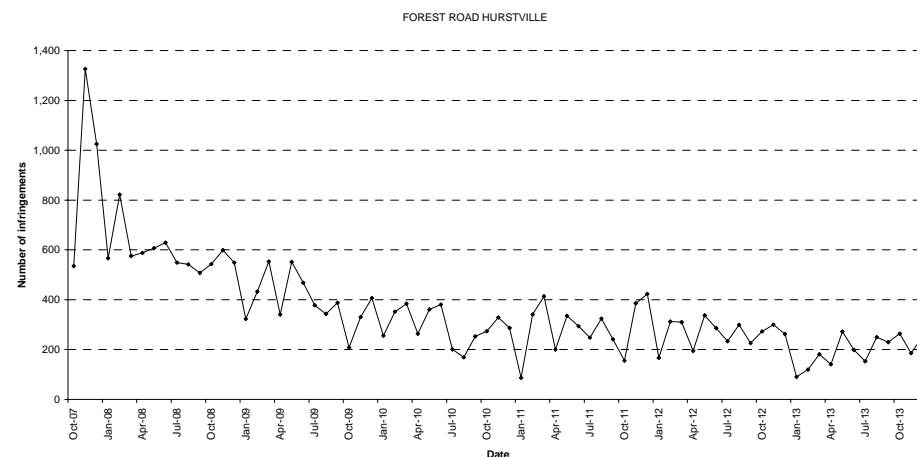
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been an 18 per cent reduction in the annual average number of crashes and an 11 per cent reduction in the annual average number of casualties.
- This has been a saving of \$350,000 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



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 four years and 338 day period	Percentage reduction**
Fatalities	0	0	-
Injuries	28	19	31%
Casualties	28	19	31%
Crashes	28	26	6%
Casualty Cost	\$3.22M	\$2.19M	31%

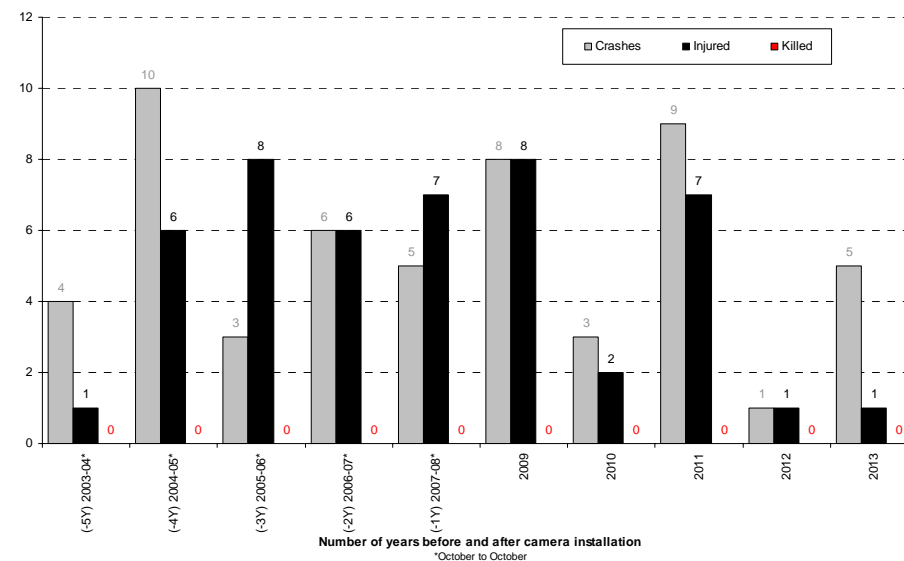
*October 2003 to October 2008

**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 decreased at this location.
- When comparing the pre installation period to the most recent four years and 338 day period, there has been a 6 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 \$1 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.

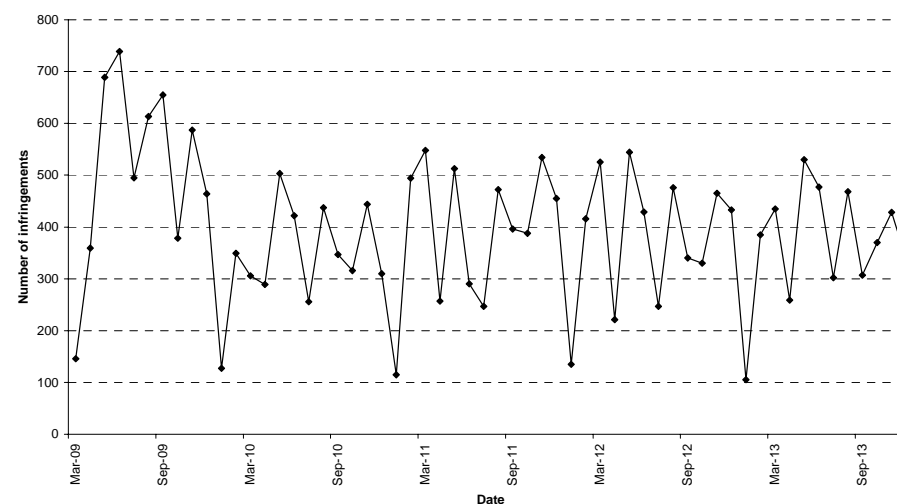
Trend in road safety performance at camera location

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**

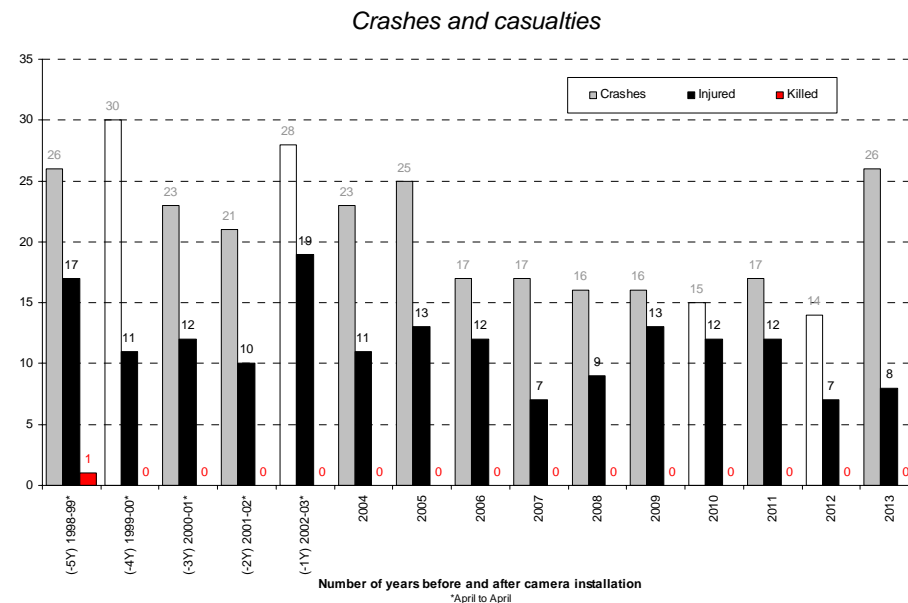
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	69	52	25%
Casualties	70	52	26%
Crashes	128	88	31%
Casualty Cost	\$14.4M	\$5.98M	58%

*April 1998 to April 2003

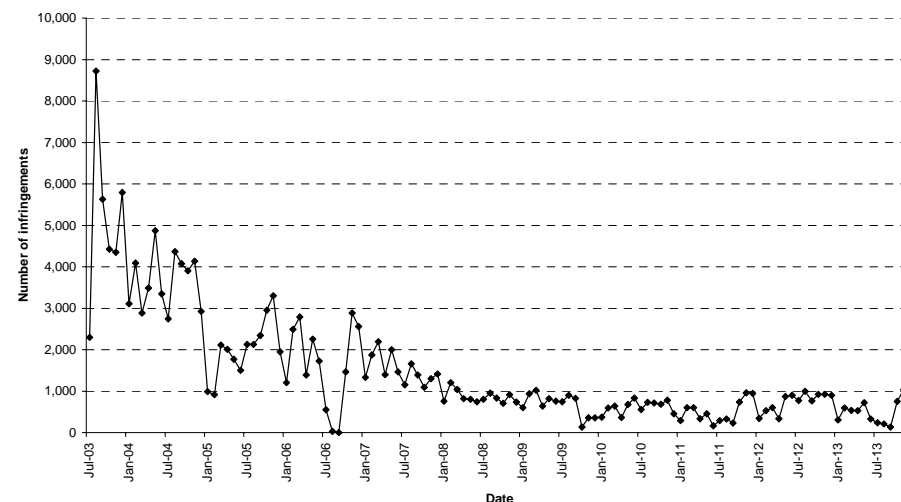
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 31 per cent reduction in the annual average number of crashes and a 26 per cent reduction in the annual average number of casualties. While there was one fatal crash with one fatality prior to the installation of the speed camera, there have been no fatalities since the camera has been in operation. Therefore based on this information, the speed camera is considered to be providing road safety benefits.
- This has been a saving of \$8.42 million in costs to the community.
- This location has been identified as one of the highest infringing sites in 2013. The infringement graph details the trend in infringements at this location since the cameras began operation. Despite the high numbers of infringements issued compared to other NSW locations, 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



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

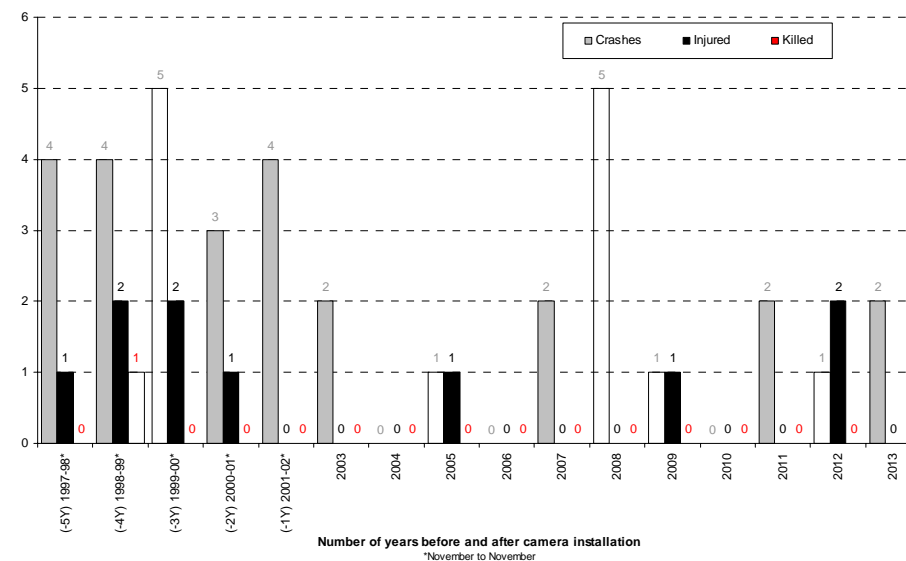
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	6	3	50%
Casualties	7	3	57%
Crashes	20	6	70%
Casualty Cost	\$7.16M	\$0.35M	95%

*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 70 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 \$6.81 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.

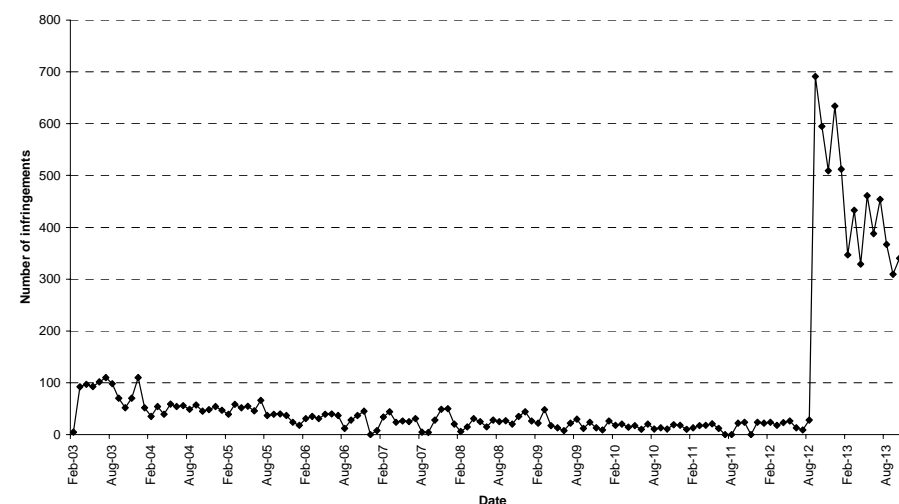
Trend in road safety performance at camera location

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

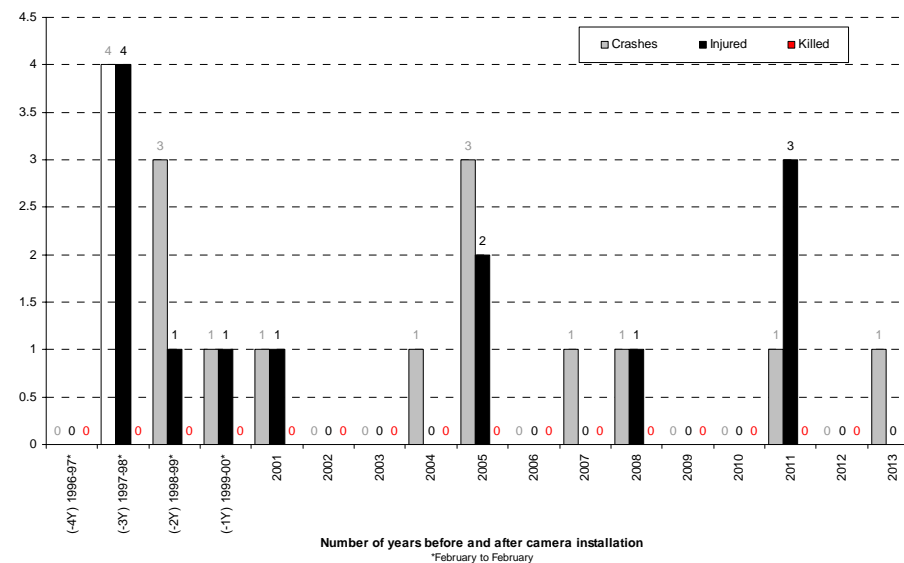
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	0	0	0	-
Injuries	6	7.5	3	60%
Casualties	6	7.5	3	60%
Crashes	8	10	2	80%
Casualty Cost	\$0.69M	\$0.86M	\$0.35M	60%

*February 1996 to February 2000. No data available for 1995.

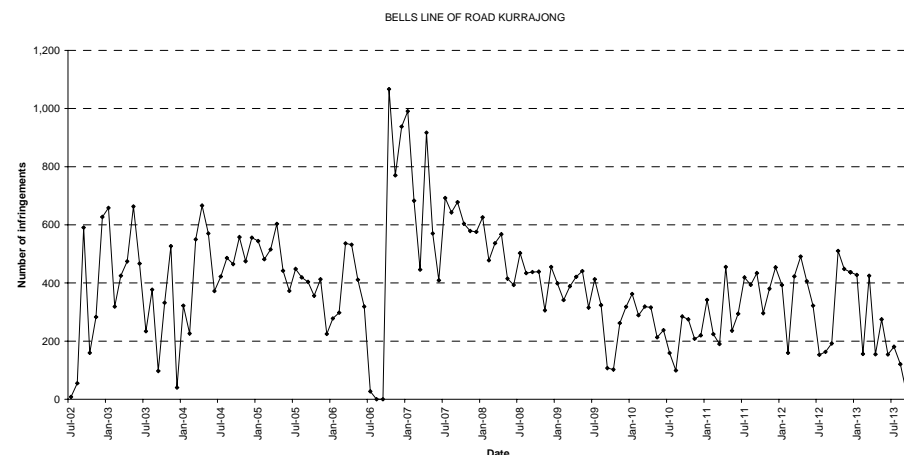
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been an 80 per cent reduction in the annual average number of crashes and a 60 per cent reduction in the annual average number of casualties.
- This has been a saving of \$510,000 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



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

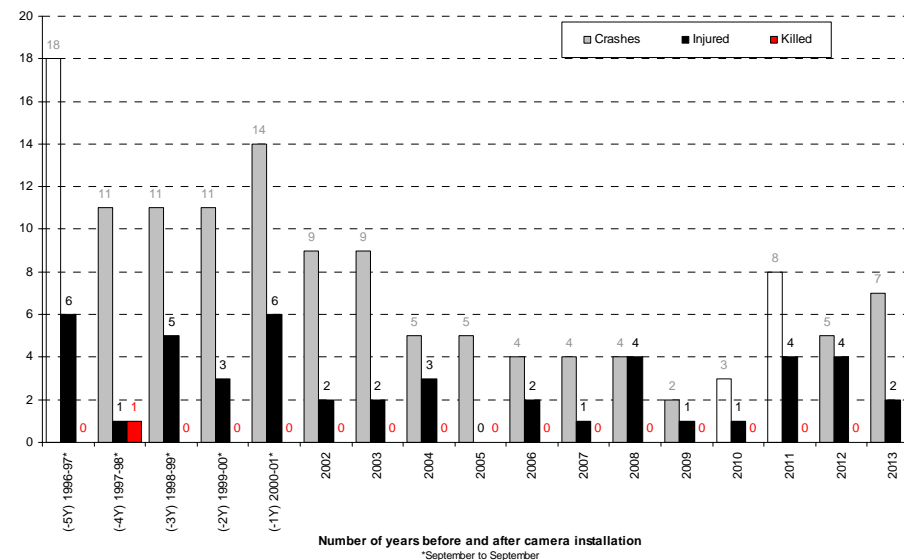
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	21	12	43%
Casualties	22	12	45%
Crashes	65	25	62%
Casualty Cost	\$8.88M	\$1.38M	84%

*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 62 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 \$7.5 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

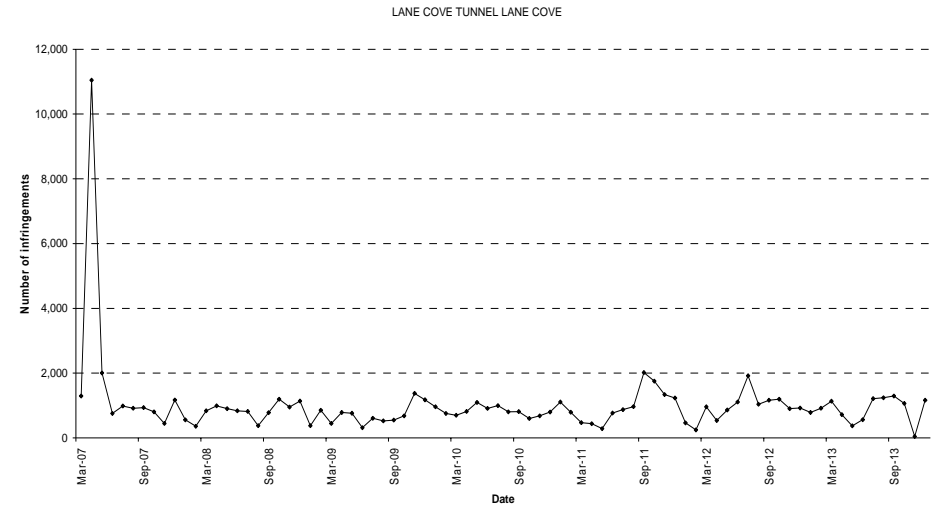
Started infringing: 25/03/2007

Crash and casualty data – January 2013 to December 2013

	Eastbound	Westbound
Fatalities	0	0
Injuries	0	0
Casualties	0	0
Crashes	0	1

- 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

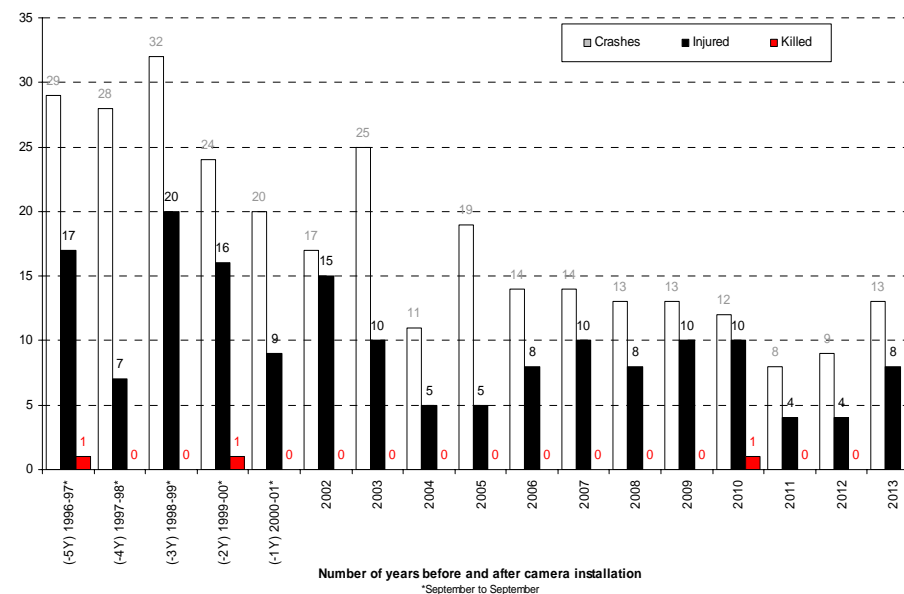
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	1	50%
Injuries	69	36	48%
Casualties	71	37	48%
Crashes	133	55	59%
Casualty Cost	\$20.87M	\$10.61M	49%

*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 59 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 \$10.26 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.

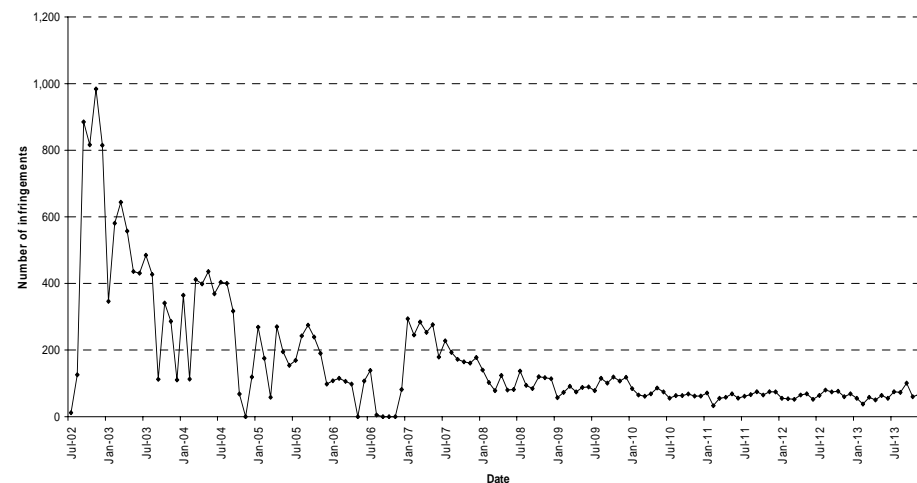
Trend in road safety performance at camera location

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

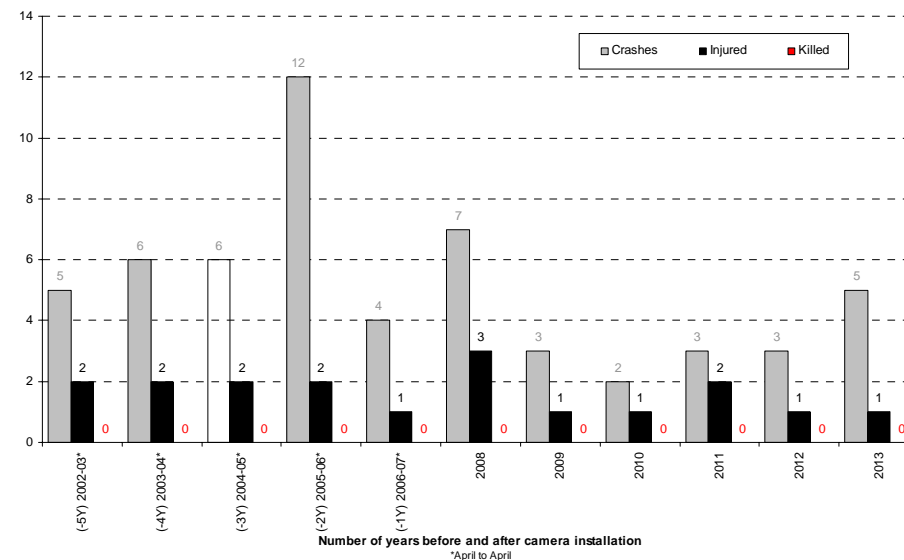
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	9	6	33%
Casualties	9	6	33%
Crashes	33	16	52%
Casualty Cost	\$1.04M	\$0.69M	33%

*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 52 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 \$350,000 in costs to the community.
- This location has been identified as one of the highest infringing sites in 2013. The infringement graph details the trend in infringements at this location since the cameras began operation. Despite the high number of infringements issued compared to other NSW locations, the graph shows there has been a reduction in speeding behaviour at this location over time. The camera was turned off at this location during 2012 due to road works at this location. Roadworks and camera maintenance may influence the number of infringements issued.

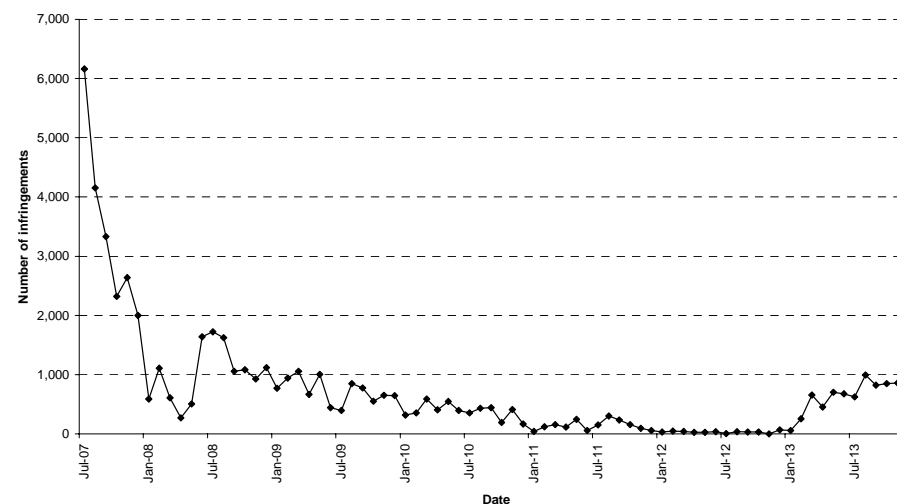
Trend in road safety performance at camera location

Crashes and casualties



Infringements

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**

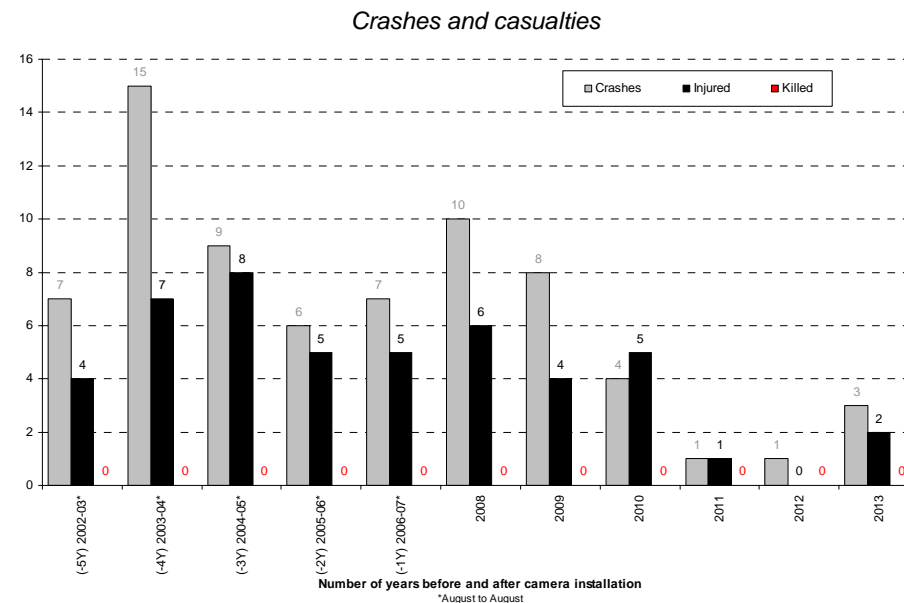
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	29	12	59%
Casualties	29	12	61%
Crashes	44	17	59%
Casualty Cost	\$3.34M	\$1.38M	59%

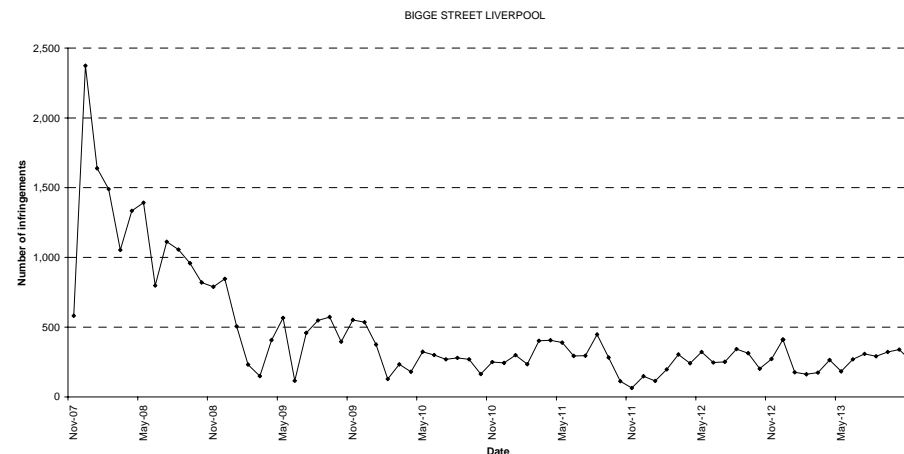
*August 2002 to August 2007

- 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 59 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 \$1.96 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



Infringements



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: **Effective**

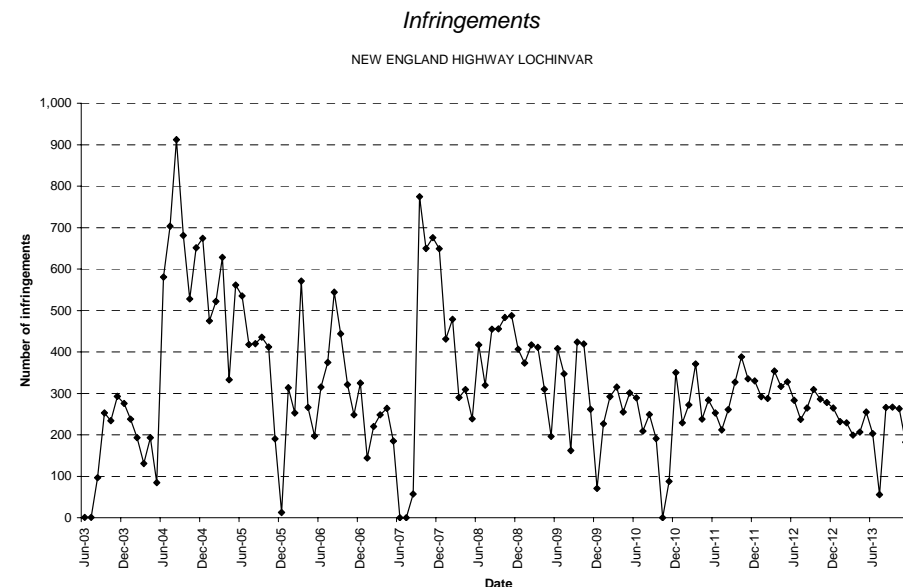
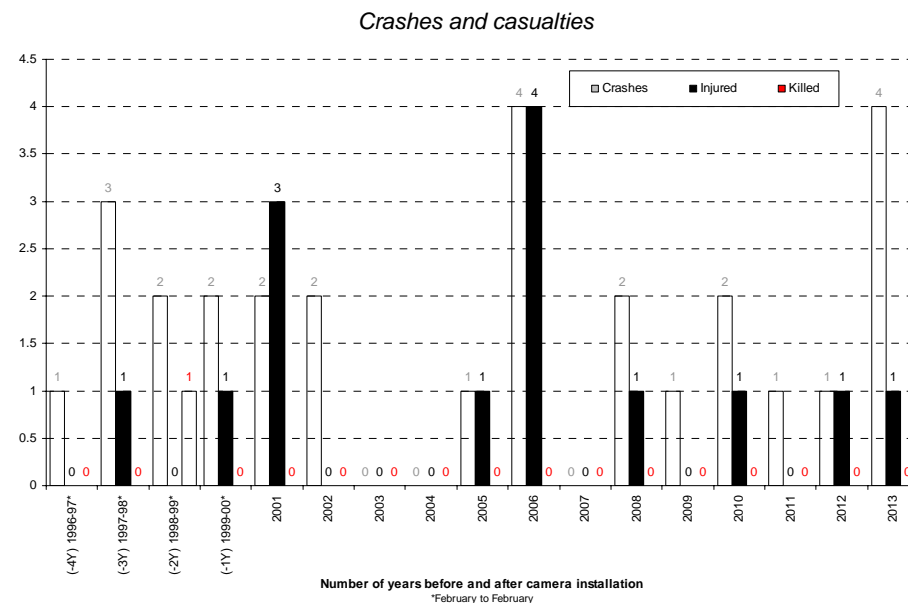
Current camera performance

	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	1	1.25	0	100%
Injuries	2	2.50	2	20%
Casualties	3	3.75	2	47%
Crashes	8	10	9	10%
Casualty Cost	\$6.70M	\$8.37M	\$0.23M	97%

*February 1996 to February 2000. No data available for 1995.

- The current adjusted five year pre installation and post installation analysis shows that crashes and casualties 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 \$8.14 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



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

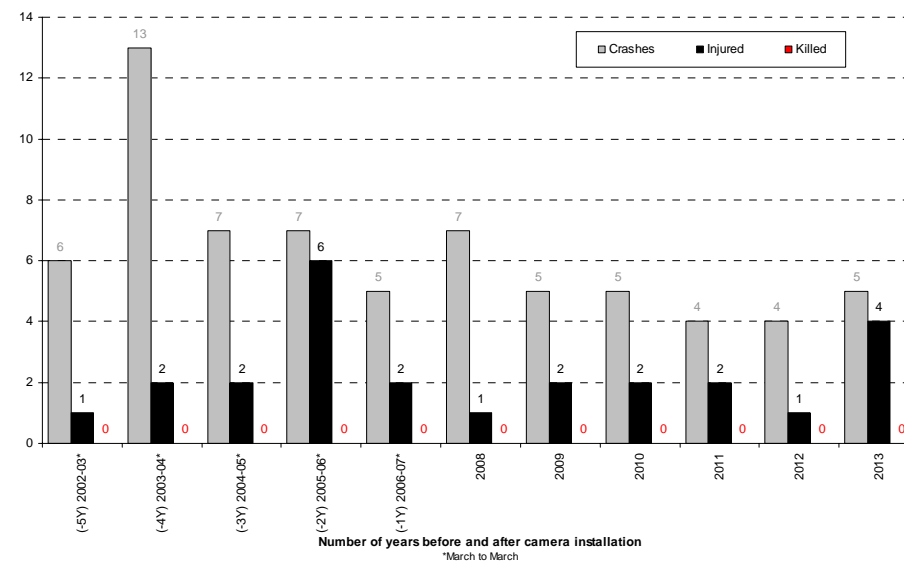
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	13	11	15%
Casualties	13	11	15%
Crashes	38	23	39%
Casualty Cost	\$1.50M	\$1.27M	15%

*March 2002 to March 2007

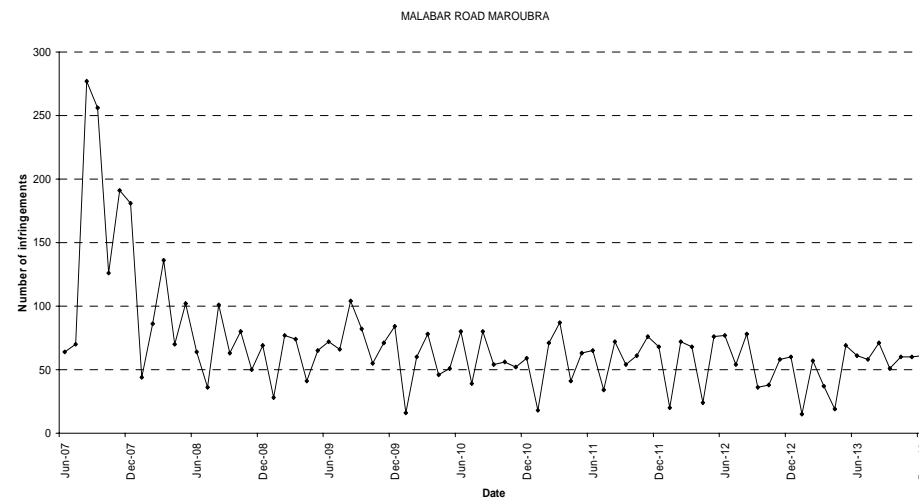
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 39 per cent reduction in the annual average number of crashes and a 15 per cent reduction in the annual average number of casualties.
- This has been a saving of \$230,000 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, 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

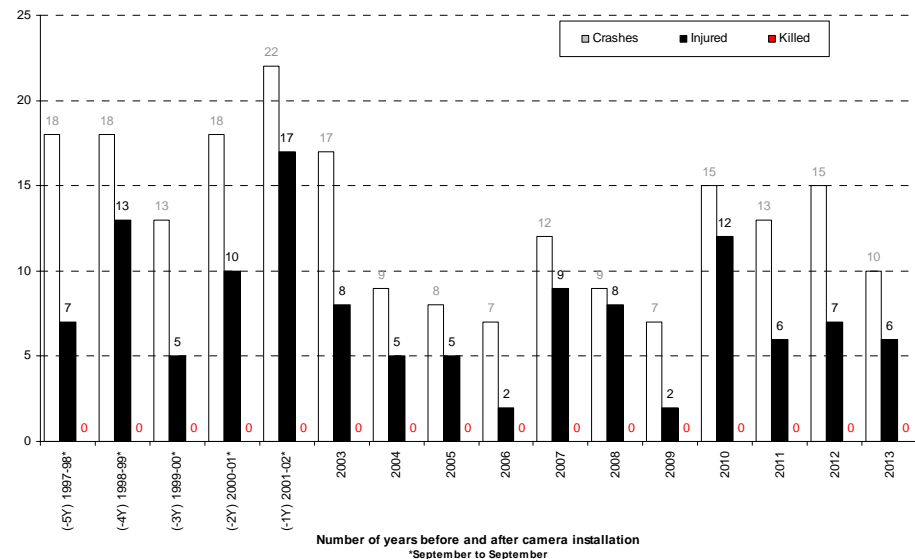
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	52	33	37%
Casualties	52	33	37%
Crashes	89	60	33%
Casualty Cost	\$5.98M	\$3.80M	37%

*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 33 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 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.

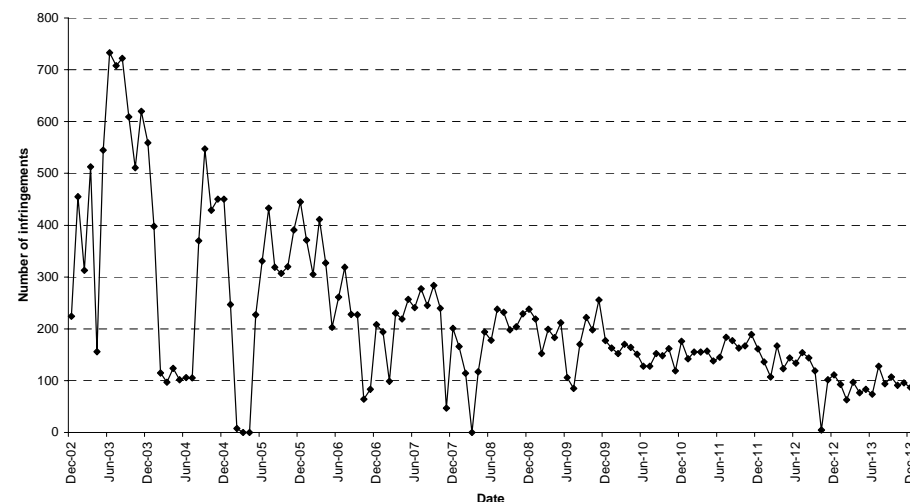
Trend in road safety performance at camera location

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

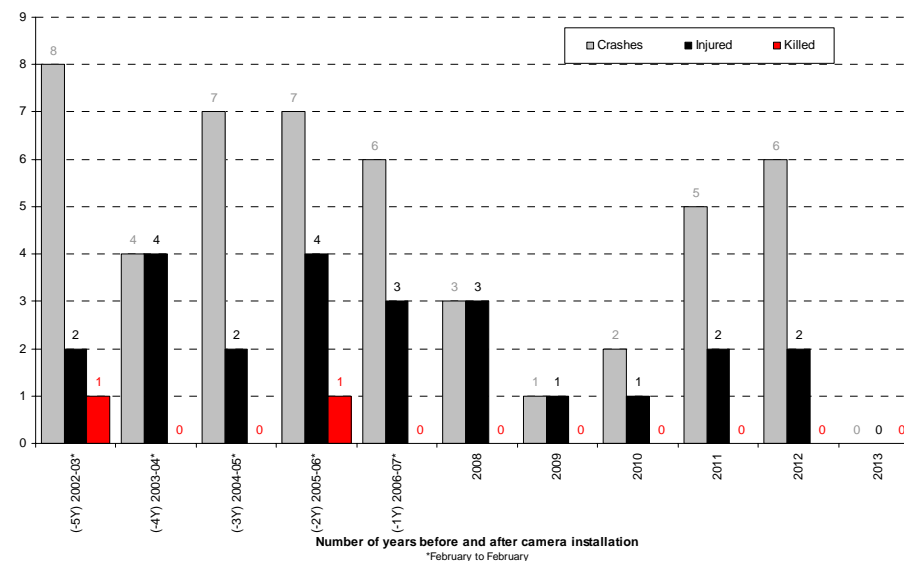
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	15	6	60%
Casualties	17	6	65%
Crashes	32	14	56%
Casualty Cost	\$14.66M	\$.69M	95%

*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 56 per cent reduction in the annual average number of crashes and a 65 per cent reduction in the annual average number of casualties.
- This has been a saving of \$13.97 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.

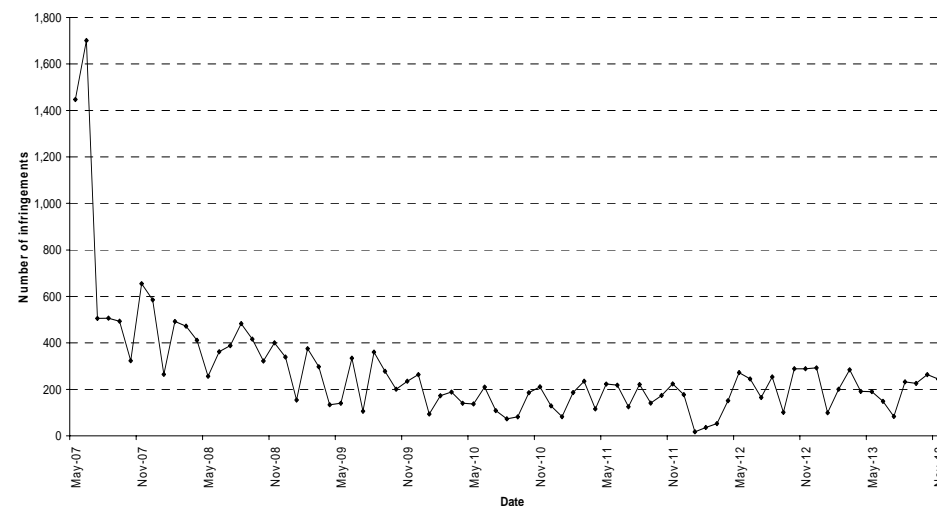
Trend in road safety performance at camera location

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

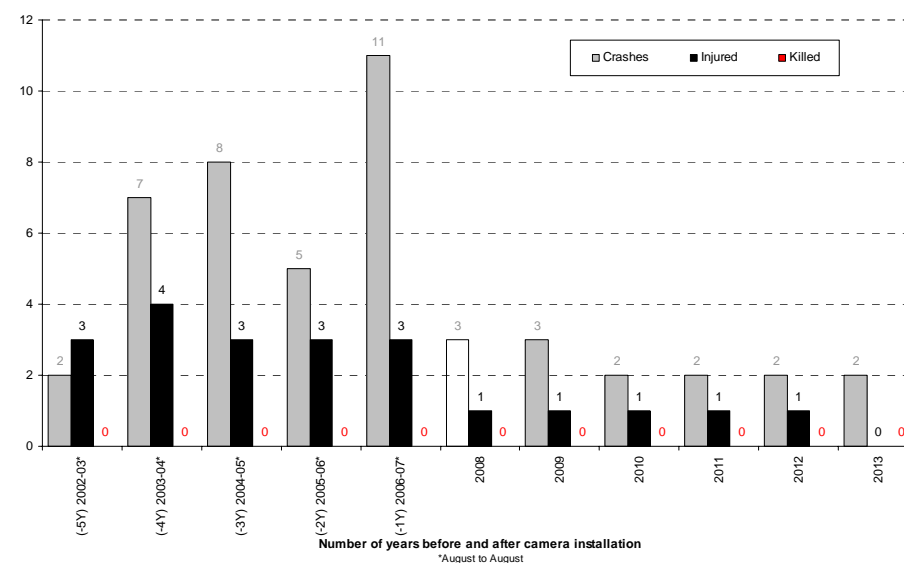
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	16	4	75%
Casualties	16	4	75%
Crashes	33	11	67%
Casualty Cost	\$1.84M	\$0.46M	75%

*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 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 \$1.38 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

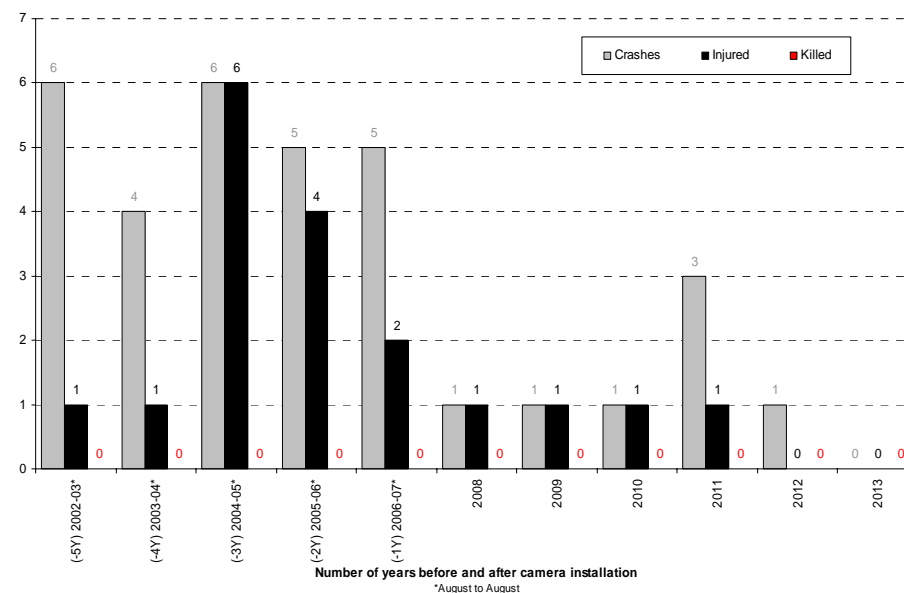
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	14	3	79%
Casualties	14	3	79%
Crashes	26	6	77%
Casualty Cost	\$1.61M	\$0.34M	79%

*August 2002 to August 2007

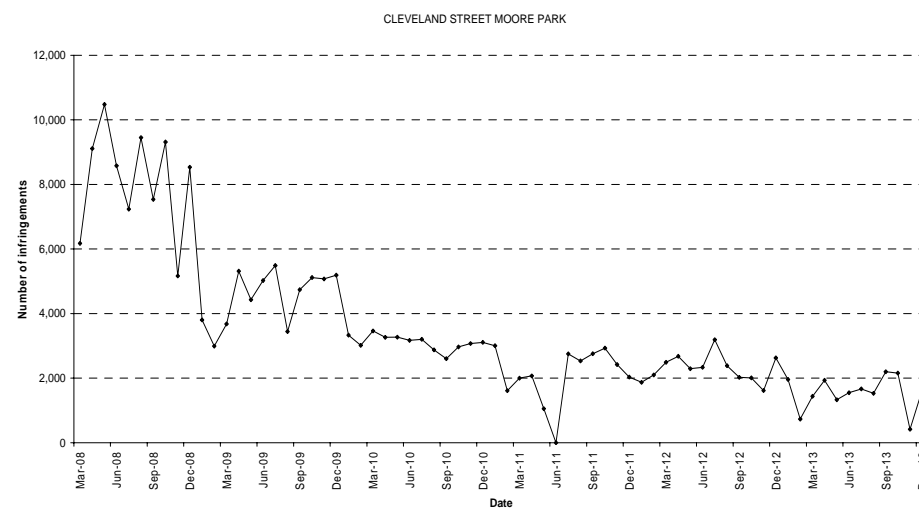
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 77 per cent reduction in the annual average number of crashes and a 79 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.27 million in costs to the community.
- This location has been identified as one of the highest infringing sites in 2013. The infringement graph details the trend in infringements at this location since March 2008. Infringement data before this date are not available. Despite the high number of infringements issued compared to other NSW locations, 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 (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

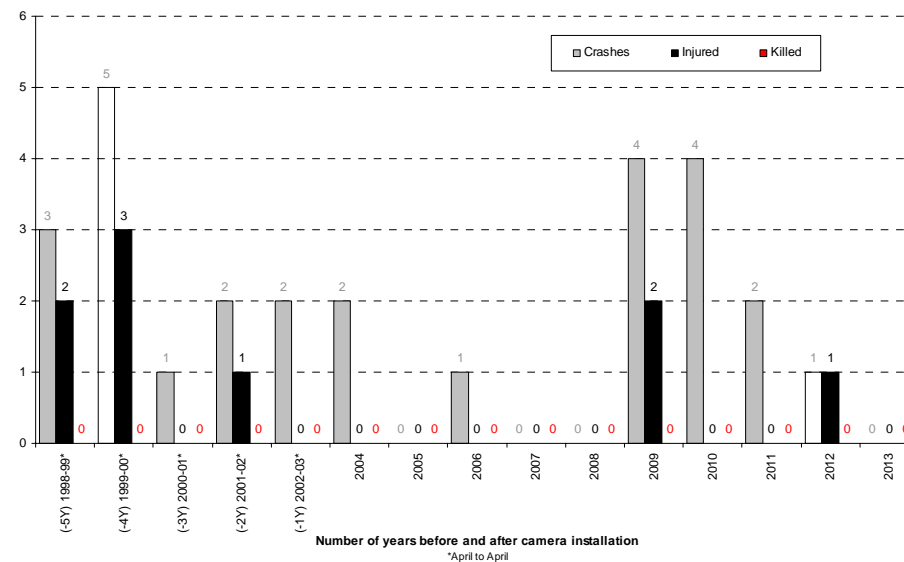
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	6	3	50%
Casualties	6	3	50%
Crashes	13	11	15%
Casualty Cost	\$0.69M	\$0.35M	15%

*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 15 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 \$340,000 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.

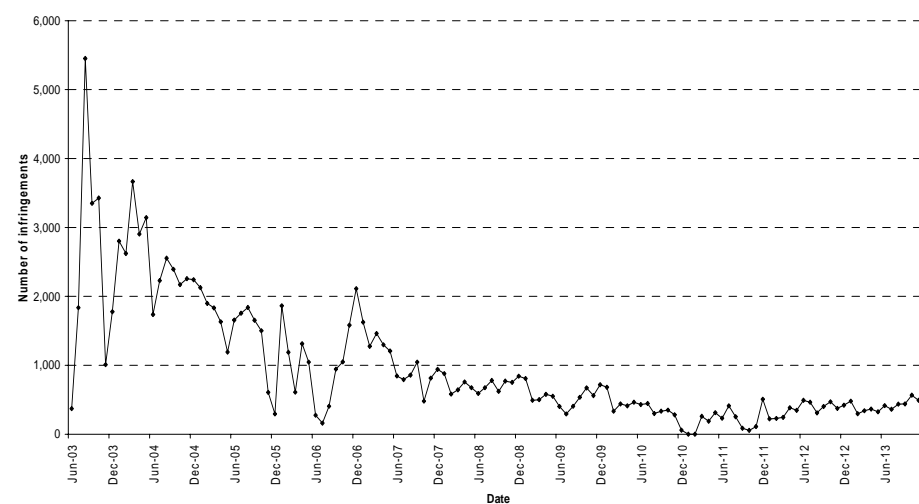
Trend in road safety performance at camera location

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

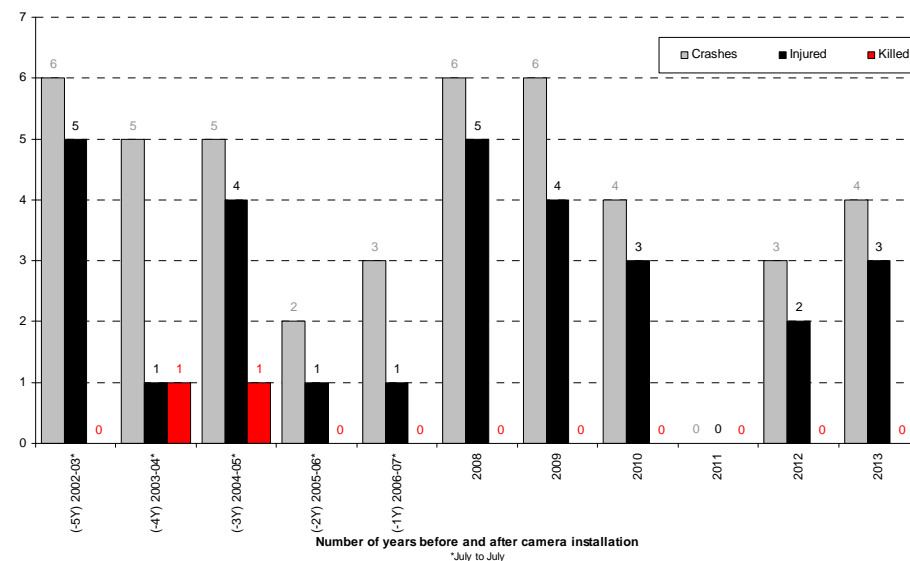
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	12	12	0%
Casualties	14	12	14%
Crashes	21	17	19%
Casualty Cost	\$14.31M	\$1.38M	90%

*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 19 per cent reduction in the annual average number of crashes and a 14 per cent reduction in the annual average number of casualties.
- This has been a saving of \$12.93 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.

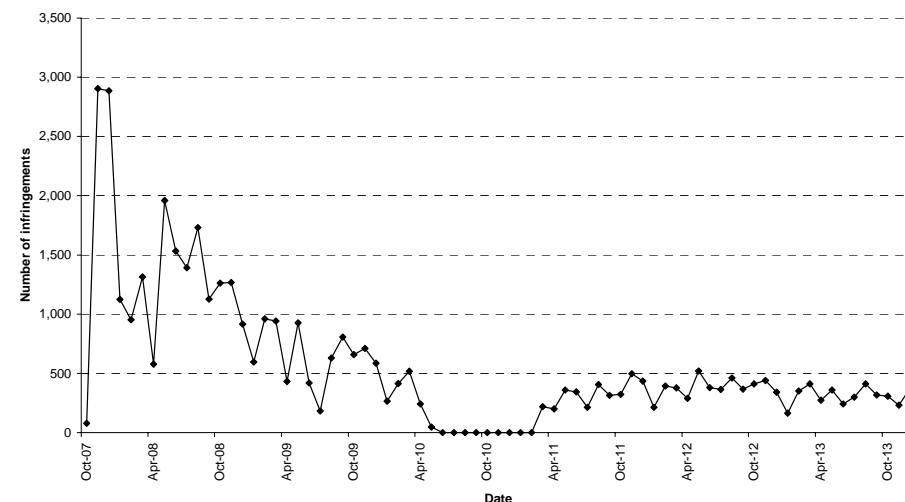
Trend in road safety performance at camera location

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**

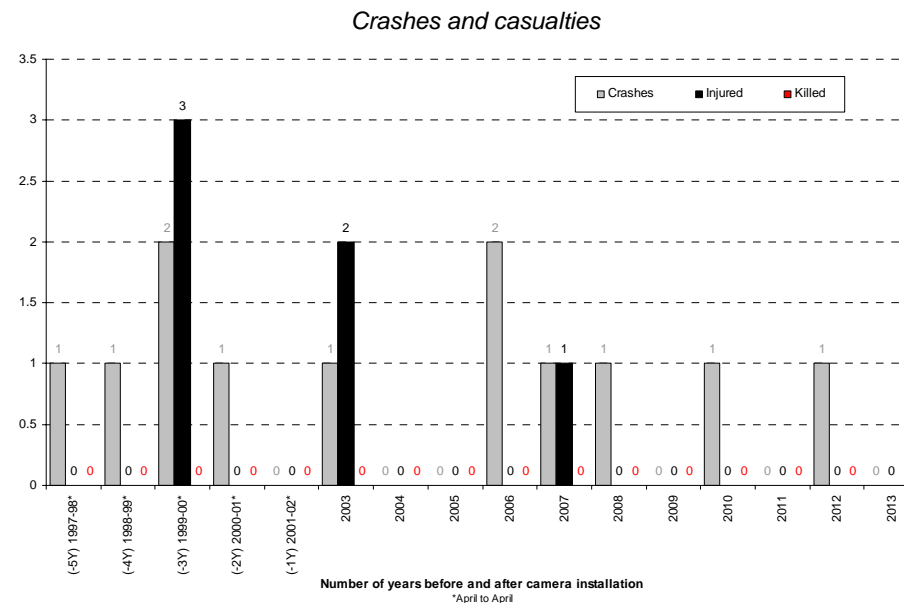
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	3	0	100%
Casualties	3	0	100%
Crashes	5	2	60%
Casualty Cost	\$0.35M	\$0M	100%

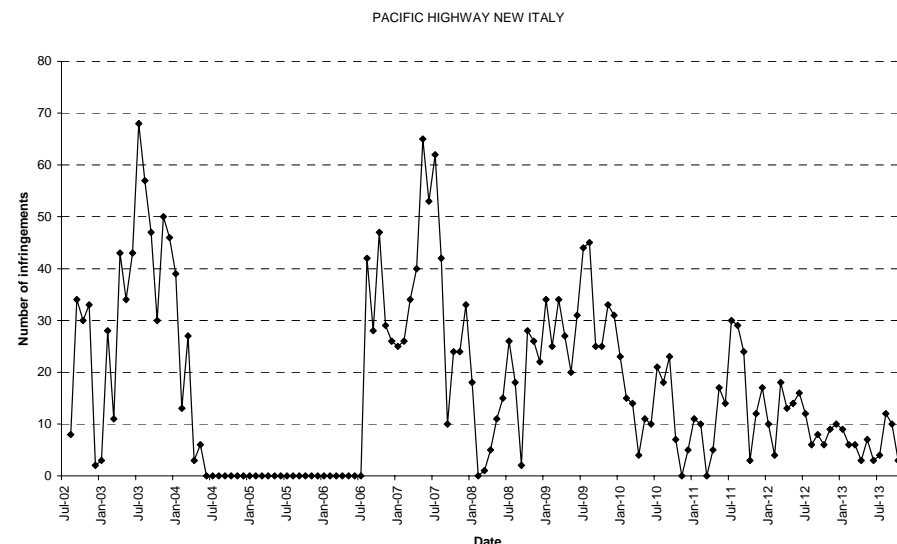
*April 1997 to April 2002

- 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 60 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 \$350,000 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



Infringements



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

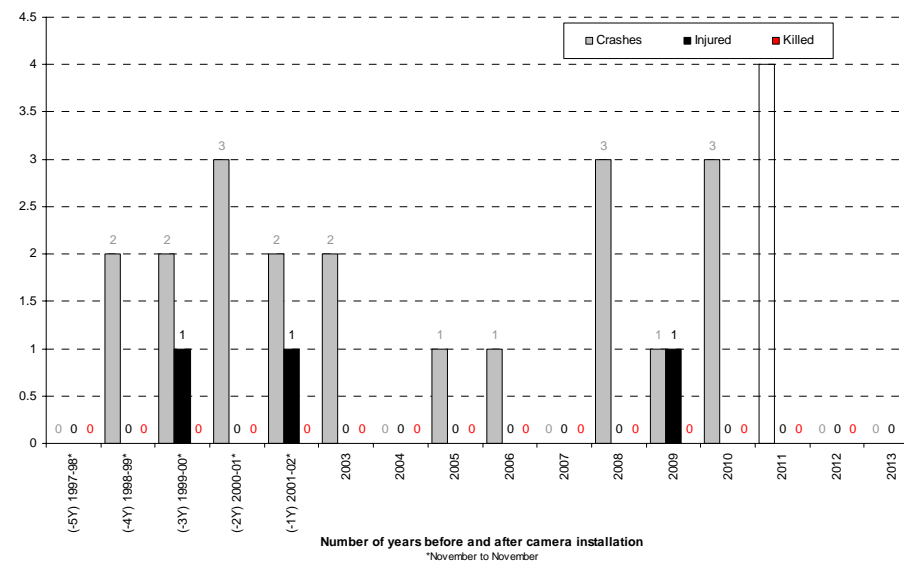
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	2	1	50%
Casualties	2	1	50%
Crashes	9	8	11%
Casualty Cost	\$0.23M	\$0.12M	50%

*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 11 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 \$110,000 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.

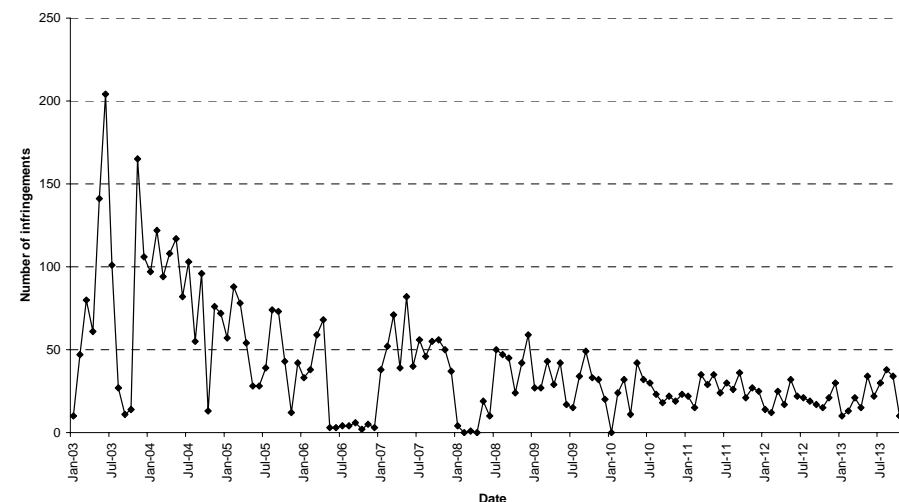
Trend in road safety performance at camera location

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**

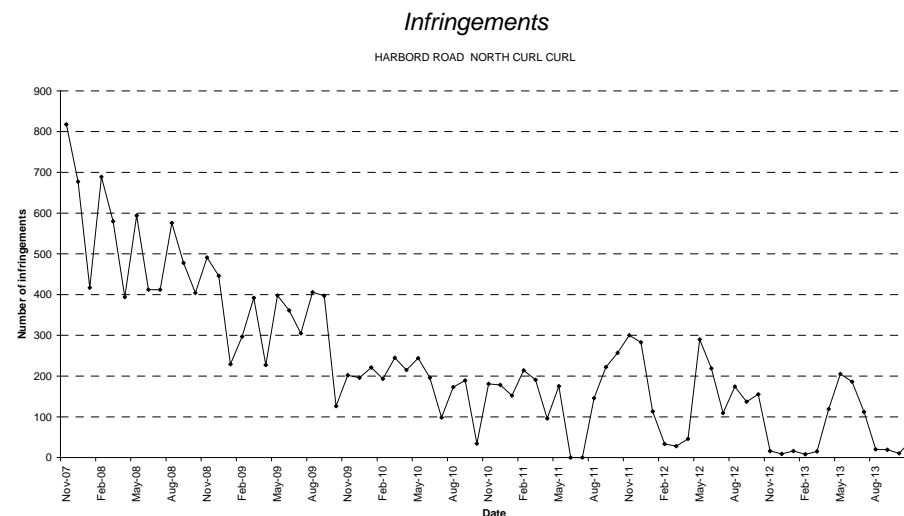
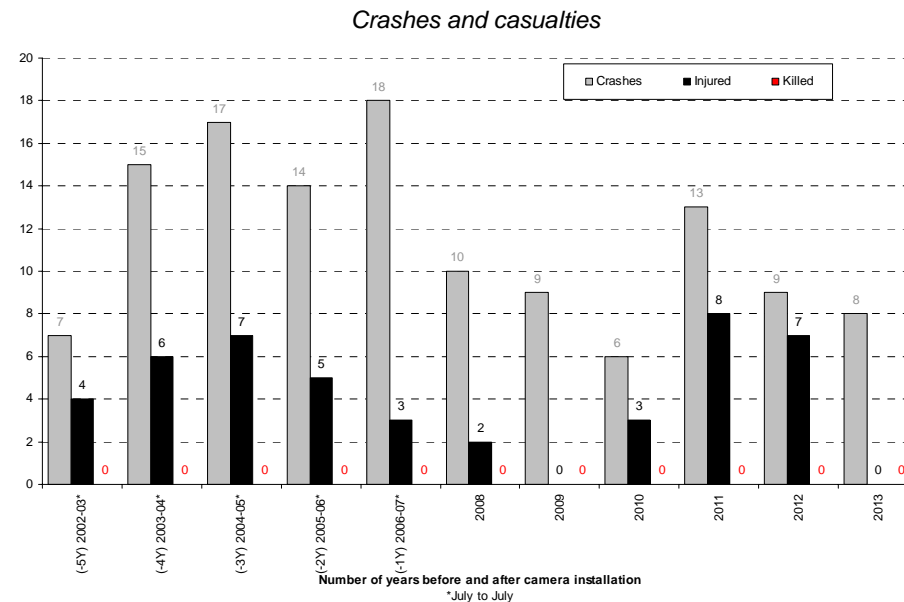
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	25	20	28%
Casualties	25	20	28%
Crashes	71	47	37%
Casualty Cost	\$2.88M	\$2.07M	28%

*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 37 per cent reduction in the annual average number of crashes and a 28 per cent reduction in the annual average number of casualties.
- This has been a saving of \$810,000 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: **Retained following 2014 preliminary review**

Current camera performance

	Five years before installation*	Most recent four years and 338 days	Percentage reduction**
Fatalities	0	0	-
Injuries	11	8	26%
Casualties	11	8	26%
Crashes	25	29	+18%
Casualty Cost	\$1.27M	\$0.92M	26%

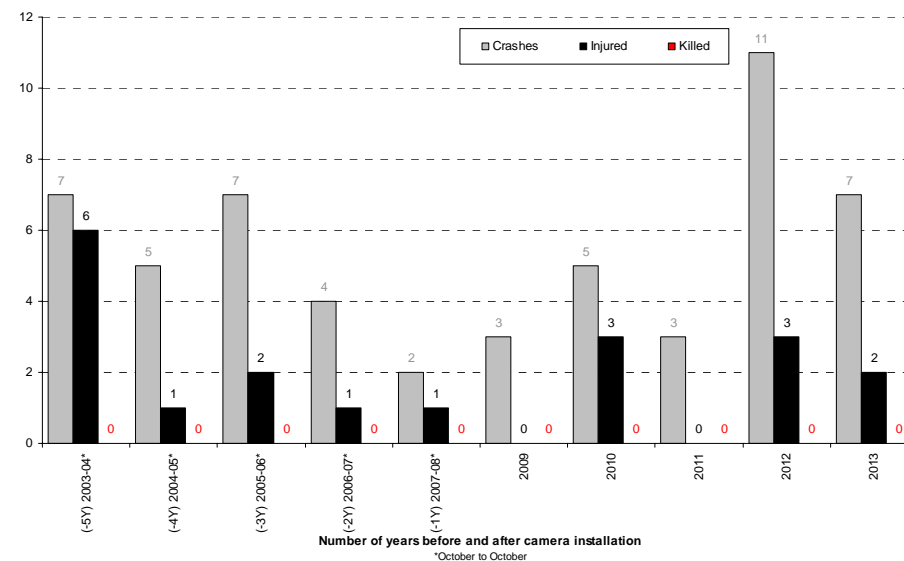
*October 2003 to October 2008

**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 four years and 338 day period, there has been an 18 per cent increase in the annual average number of crashes, however there has been a 26 per cent reduction in the annual average number of casualties.
- This has been a saving of \$350,000 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.

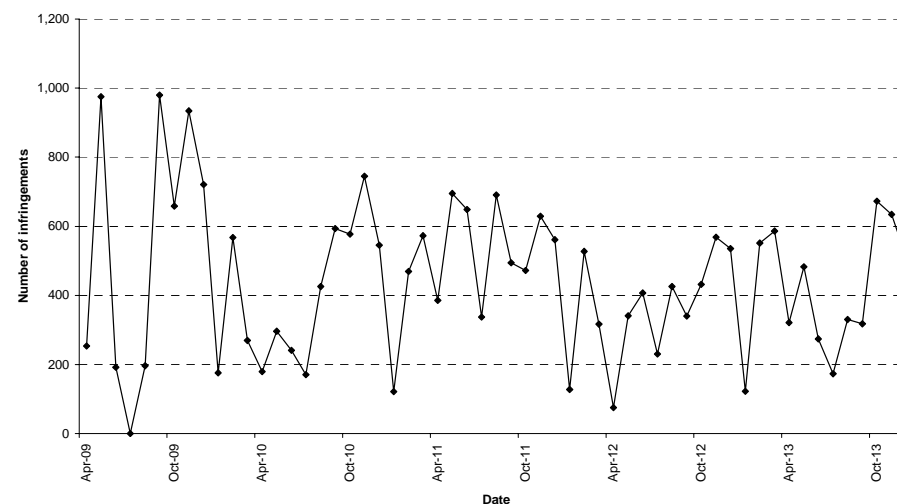
Trend in road safety performance at camera location

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

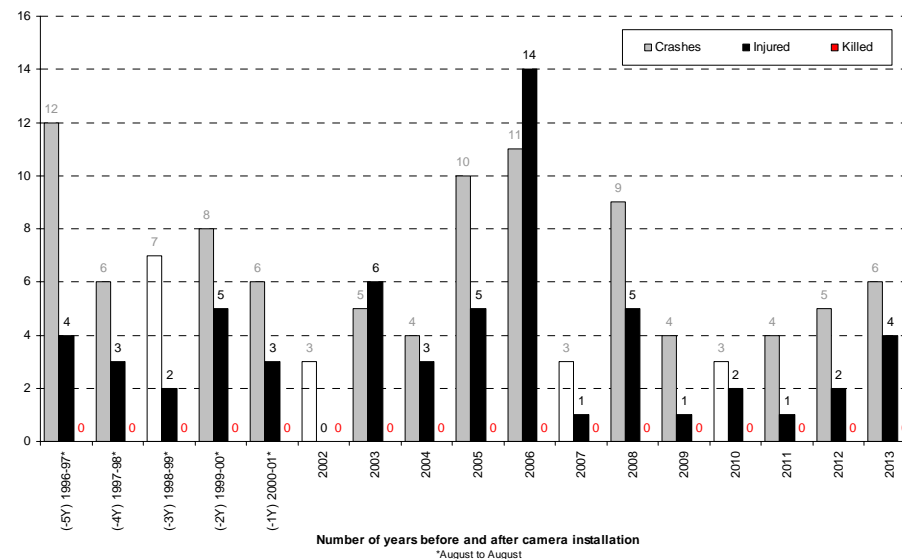
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	17	10	41%
Casualties	17	10	41%
Crashes	39	22	44%
Casualty Cost	\$1.96M	\$1.15M	41%

*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 44 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 \$810,000 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.

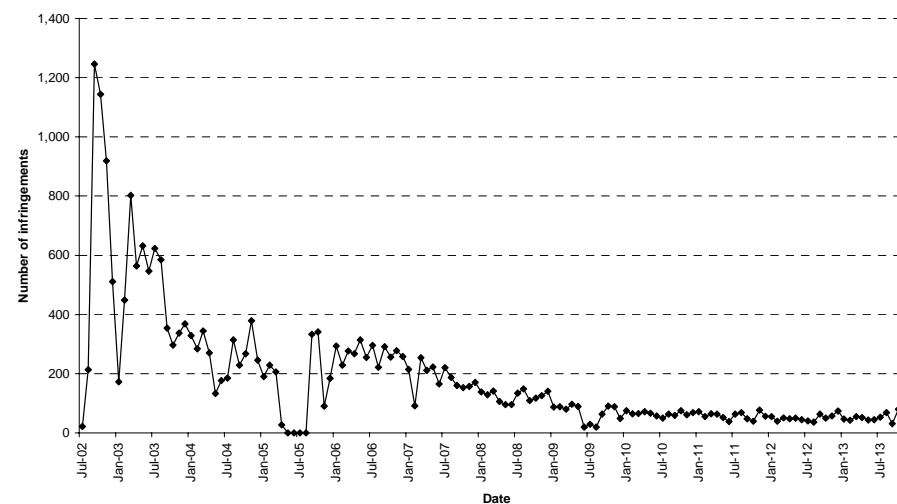
Trend in road safety performance at camera location

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

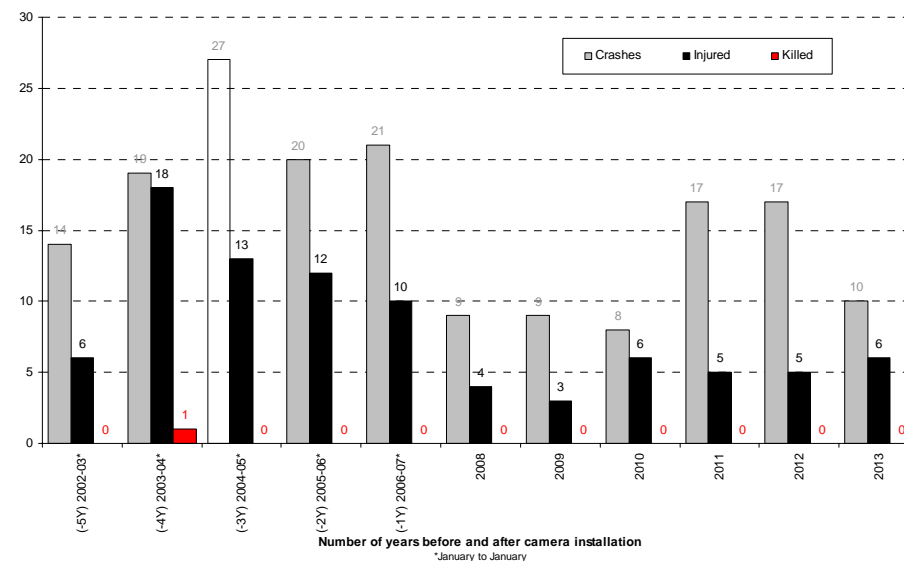
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	59	25	58%
Casualties	60	25	58%
Crashes	101	61	40%
Casualty Cost	\$13.25M	\$2.86M	78%

*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 40 per cent reduction in the annual average number of crashes and a 58 per cent reduction in the annual average number of casualties.
- This has been a saving of \$10.39 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.

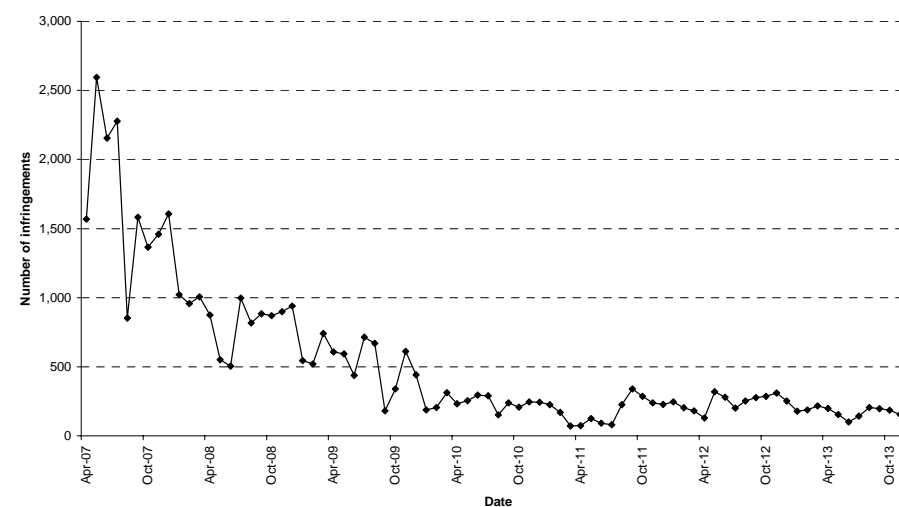
Trend in road safety performance at camera location

Crashes and casualties



Infringements

PENNANT HILLS ROAD NTH PARRAMATTA / OATLANDS



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

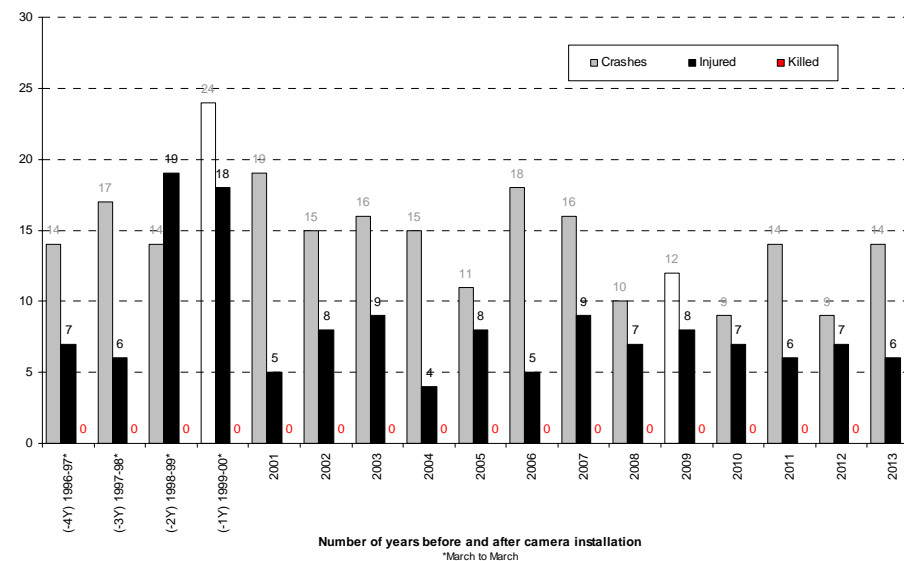
	Four years before installation*	Adjusted five year before installation period	Most recent five year period	Percentage reduction
Fatalities	0	0	0	100%
Injuries	50	62.50	34	46%
Casualties	50	62.50	34	46%
Crashes	69	86.25	58	33%
Casualty Cost	\$5.75M	\$7.19M	\$3.91M	46%

*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 33 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 \$3.28 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.

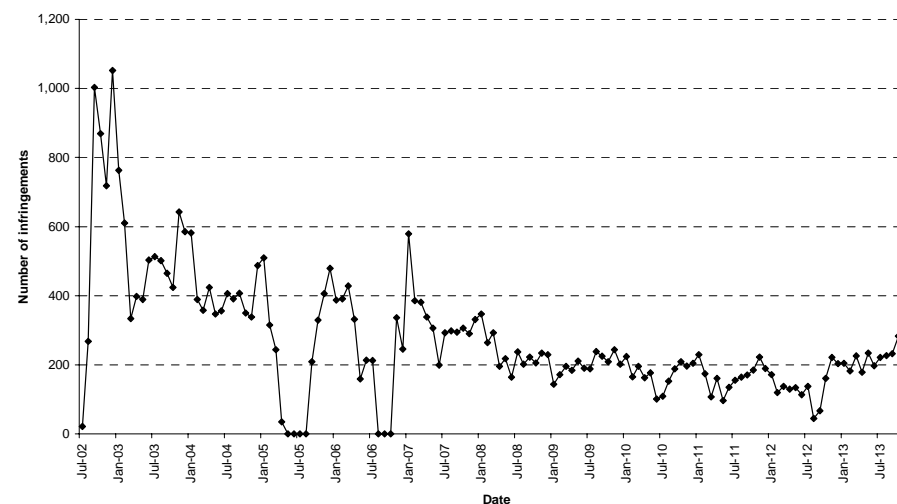
Trend in road safety performance at camera location

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

	Five years before installation*	Most recent five year period	Percentage reduction**
Fatalities	0	0	-
Injuries	23	15	35%
Casualties	23	15	35%
Crashes	34	34	0%
Casualty Cost	\$2.65M	\$1.73M	35%

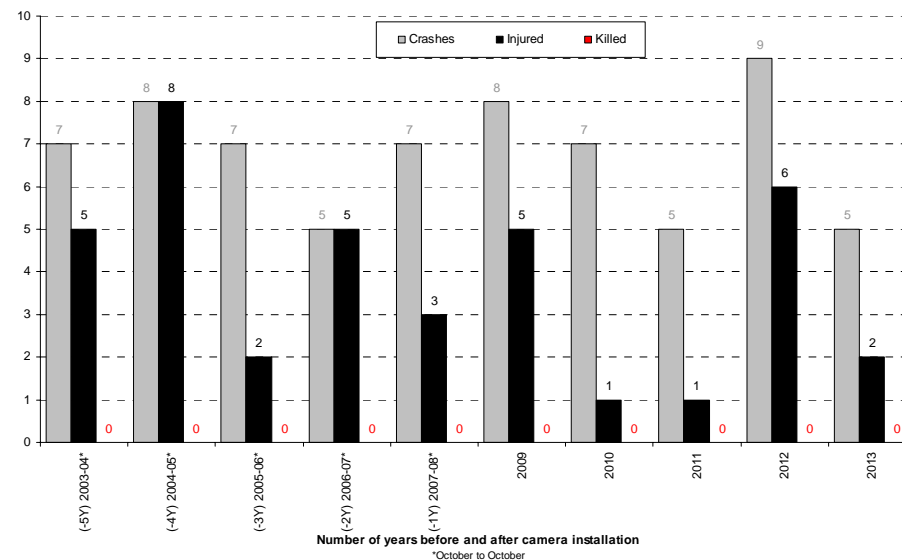
*October 2003 to October 2008

**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 not changed at this location.
- When comparing the five year pre installation period to the most recent five year period, there has been no reduction in the annual average number of crashes, however the number of casualties has reduced by 35 per cent.
- This has been a saving of \$920,000 in costs to the community.
- This location has been identified as one of the highest infringing sites in 2013. 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.

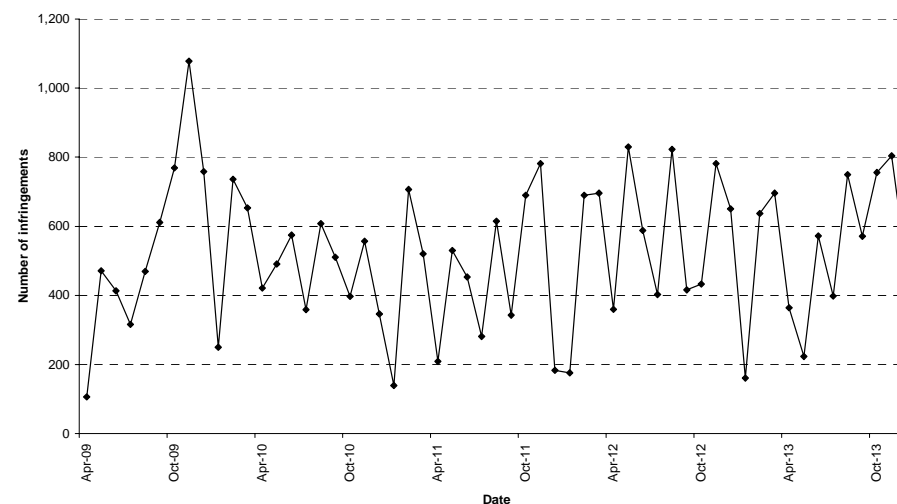
Trend in road safety performance at camera location

Crashes and casualties



Infringements

WOODVILLE ROAD OLD GUILFORD



M1 Pacific Motorway (formerly the F3 Freeway), Ourimbah

Location: M1 Pacific Motorway, 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

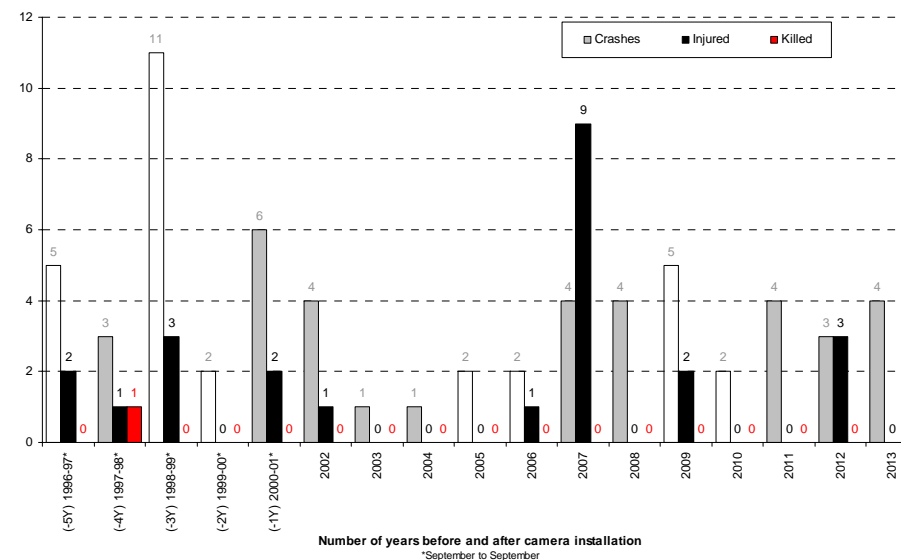
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	8	5	38%
Casualties	9	5	44%
Crashes	27	18	33%
Casualty Cost	\$7.39M	\$0.58M	92%

*September 1996 to September 2001

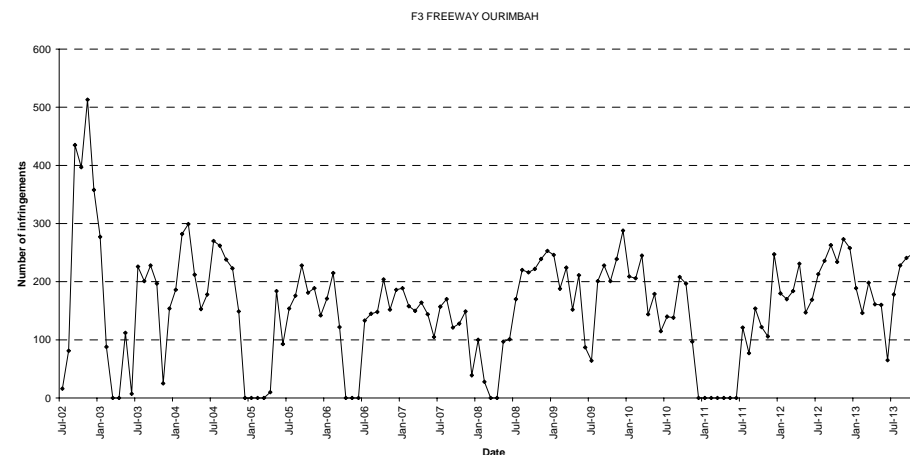
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 33 per cent reduction in the annual average number of crashes and a 44 per cent reduction in the annual average number of casualties.
- This has been a saving of \$6.81 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



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

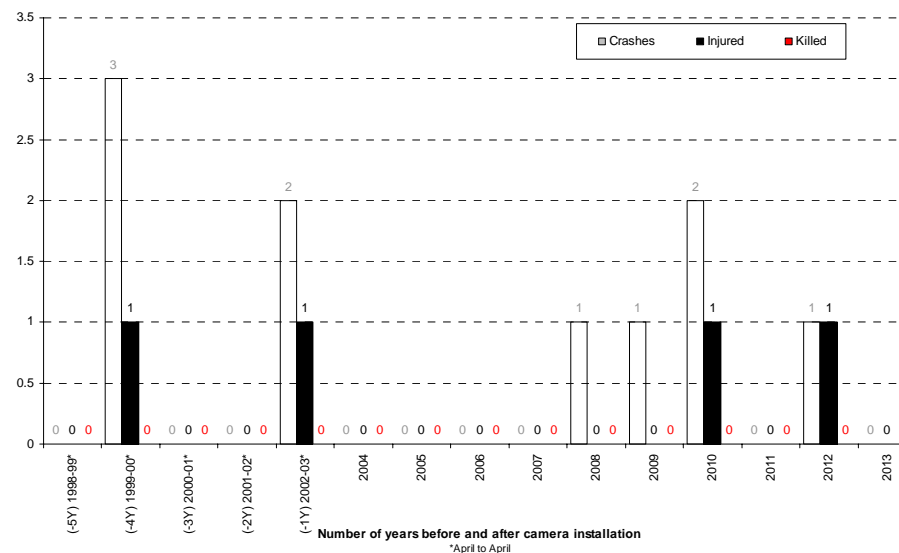
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	2	2	0%
Casualties	2	2	0%
Crashes	5	4	20%
Casualty Cost	\$0.23M	\$0.23M	0%

*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 20 per cent reduction in the annual average number of crashes and no reduction in the annual average number of casualties.
- 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.

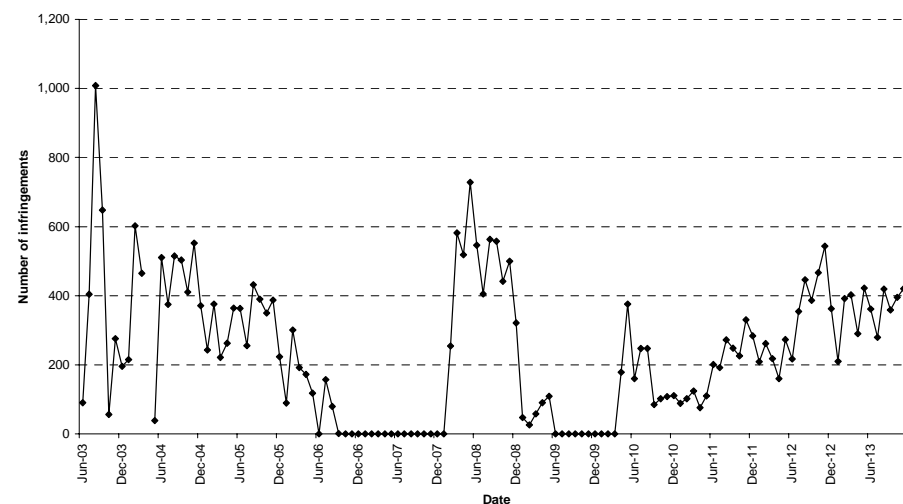
Trend in road safety performance at camera location

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 five year period	Percentage reduction**
Fatalities	1	1.25	0	100%
Injuries	14	17.5	10	43%
Casualties	15	18.75	10	47%
Crashes	40	50	15	70%
Casualty Cost	\$8.06M	\$10.09M	\$1.15M	89%

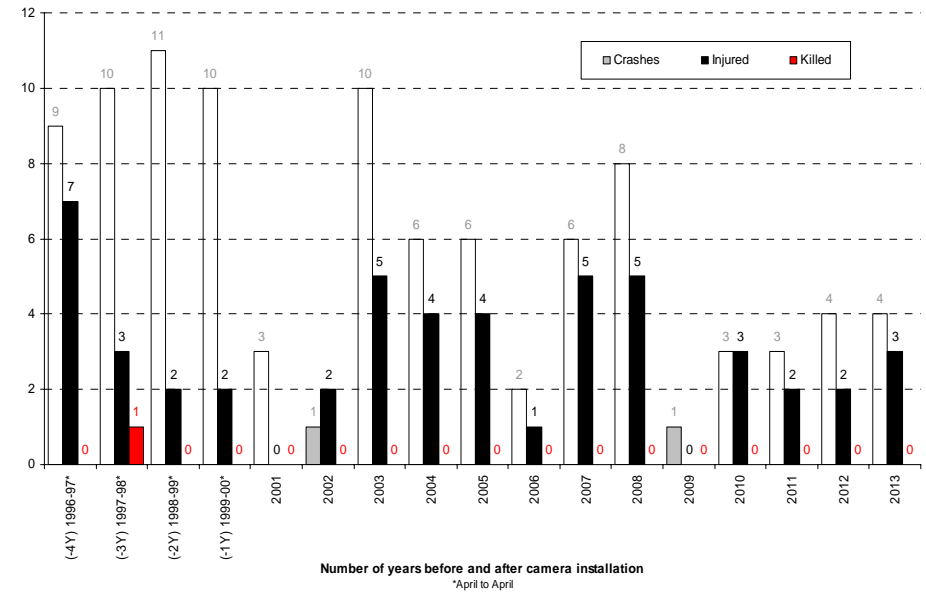
*April 1996 to April 2000. No data available for 1995.

**The percentage reduction is based on annualised crash data to allow for a direct comparison between the pre and post installation time periods

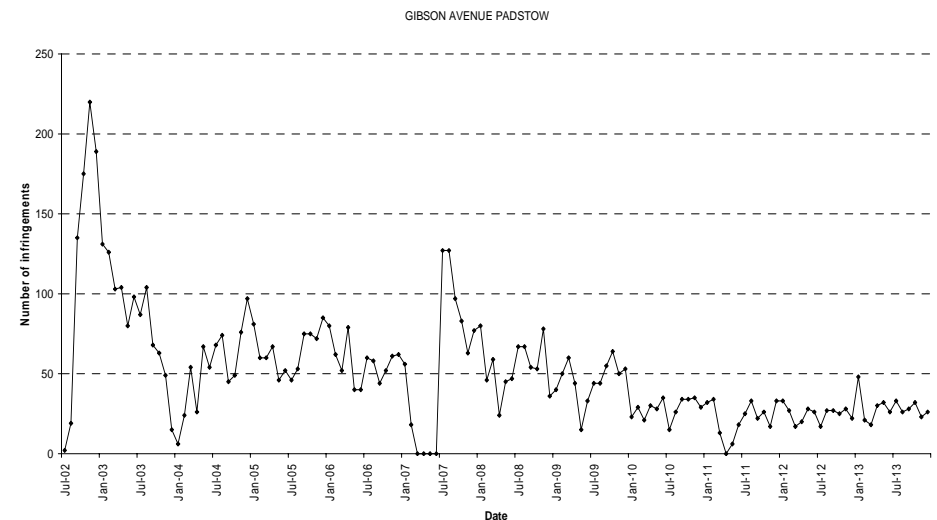
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the adjusted five year pre installation period to the most recent five year period, there has been a 70 per cent reduction in the annual average number of crashes and a 47 per cent reduction in the annual average number of casualties.
- This has been a saving of \$8.94 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



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

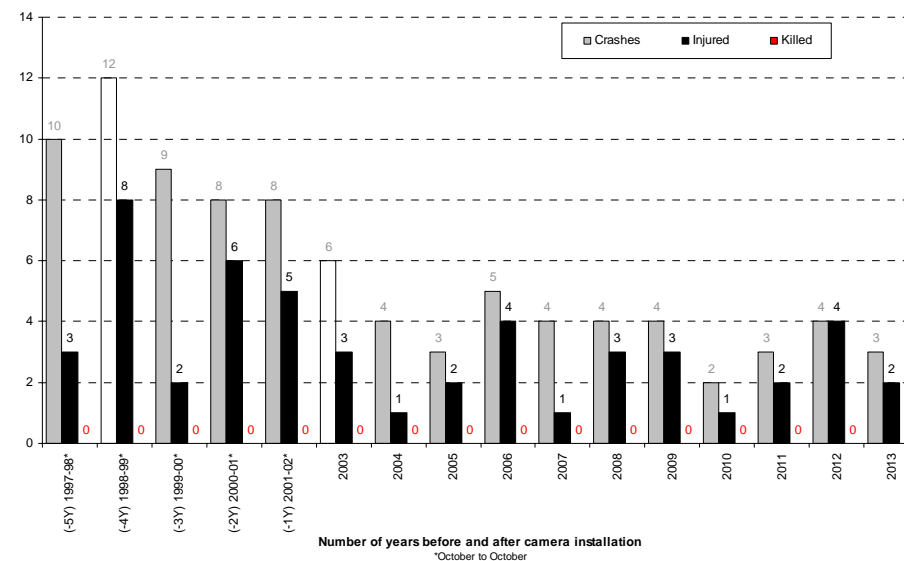
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	24	12	50%
Casualties	24	12	50%
Crashes	47	16	66%
Casualty Cost	\$2.76M	\$1.38M	50%

*October 1997 to October 2002.

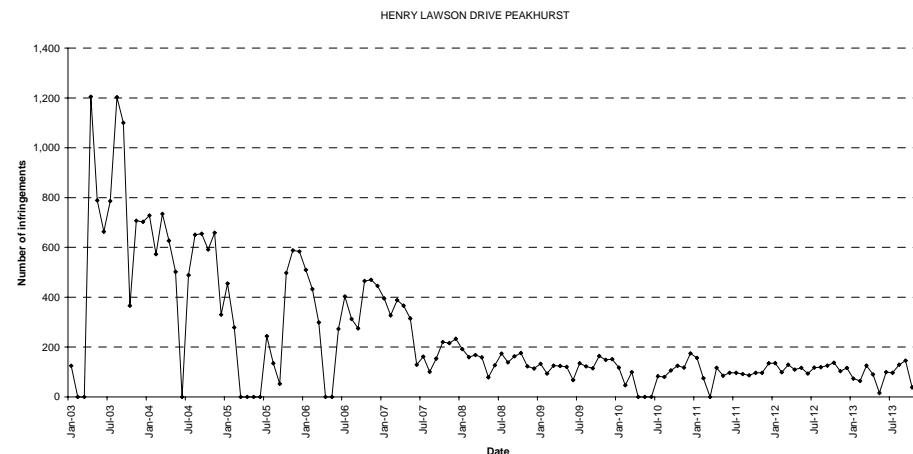
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 66 per cent reduction in the annual average number of crashes and a 50 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.38 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



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

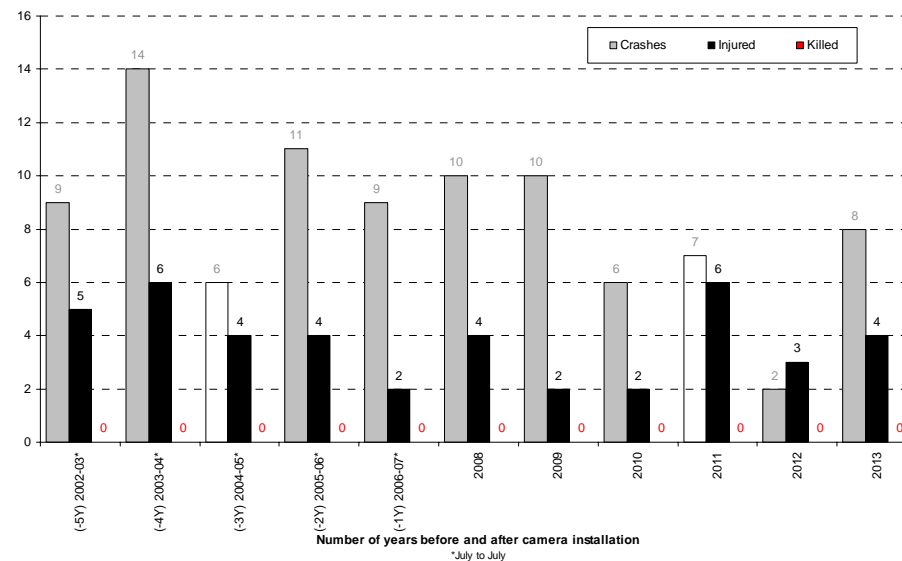
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	21	17	19%
Casualties	21	17	19%
Crashes	49	33	33%
Casualty Cost	\$2.42M	\$1.96M	19%

*July 2002 to July 2007

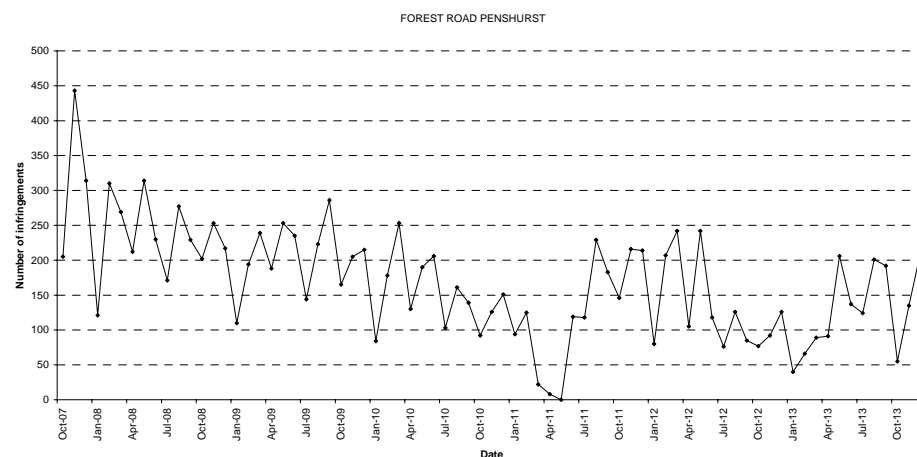
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 33 per cent reduction in the annual average number of crashes and a 19 per cent reduction in the annual average number of casualties.
- This has been a saving of \$460,000 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



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

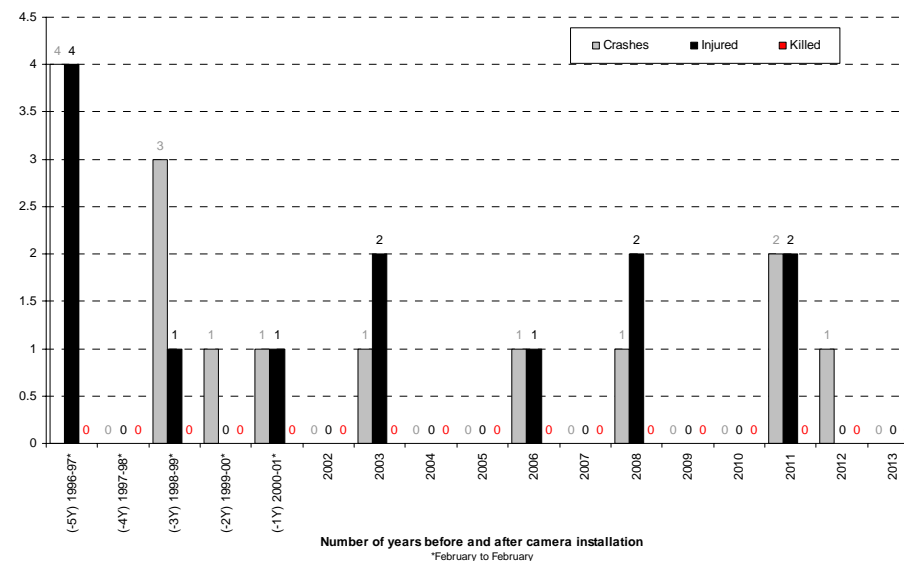
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	6	2	67%
Casualties	6	2	67%
Crashes	9	3	67%
Casualty Cost	\$0.69M	\$0.23M	67%

*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 67 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 \$460,000 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.

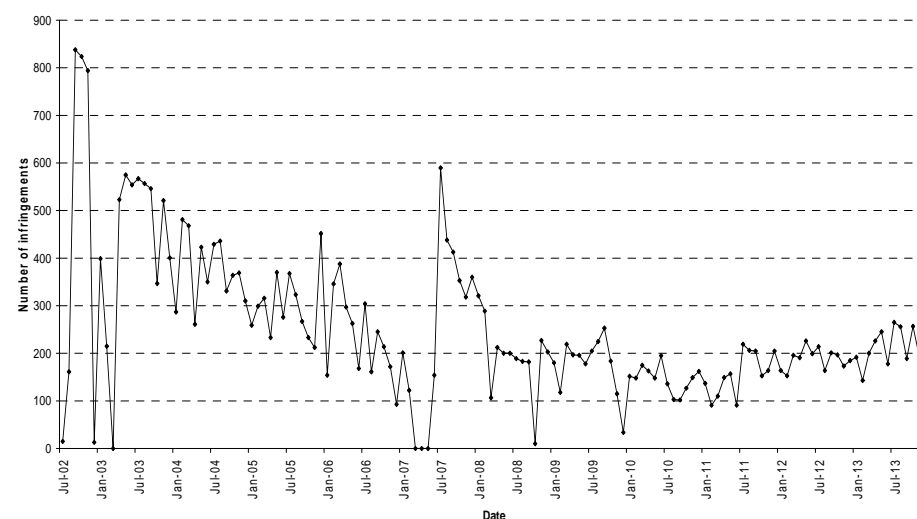
Trend in road safety performance at camera location

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: **Retained following 2014 preliminary review**

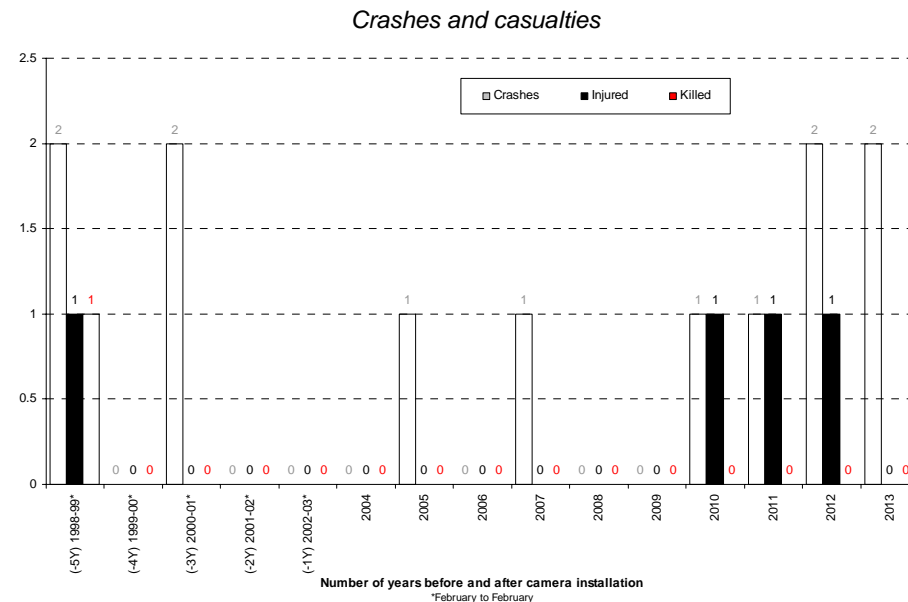
Current camera performance

	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	6	+50%
Casualty Cost	\$6.58M	\$0.35M	95%

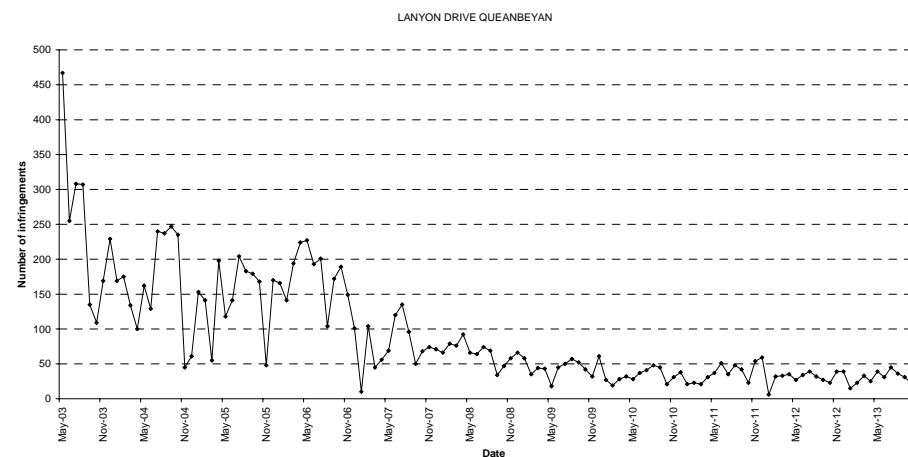
*February 1998 to February 2003

- 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 five year period, there has been a slight increase in crashes from four to six at this location, and in casualties from two 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. Therefore this camera is delivering the expected road safety benefits.
- This has been a saving of \$6.23 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



Infringements



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**

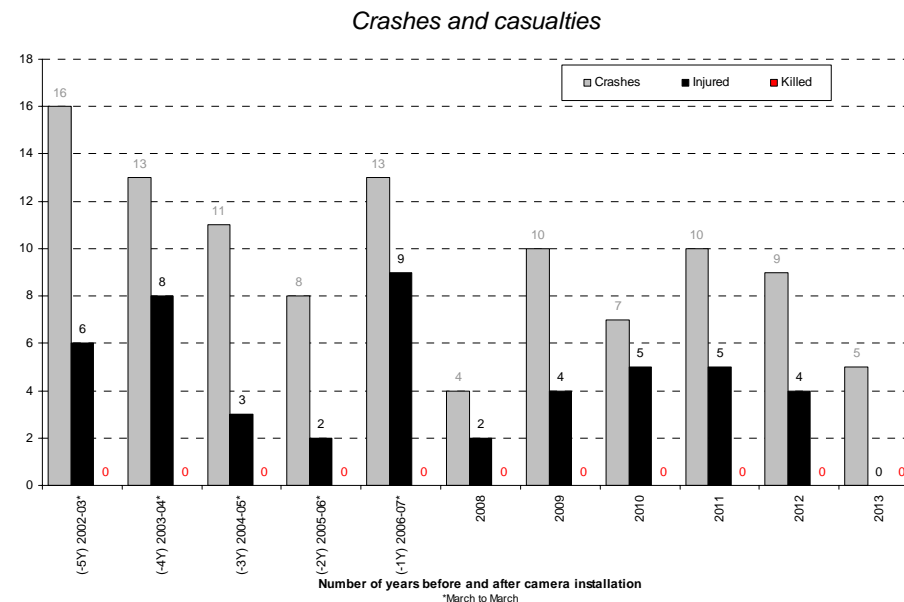
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	28	21	25%
Casualties	28	21	25%
Crashes	61	41	33%
Casualty Cost	\$3.22M	\$2.4M	25%

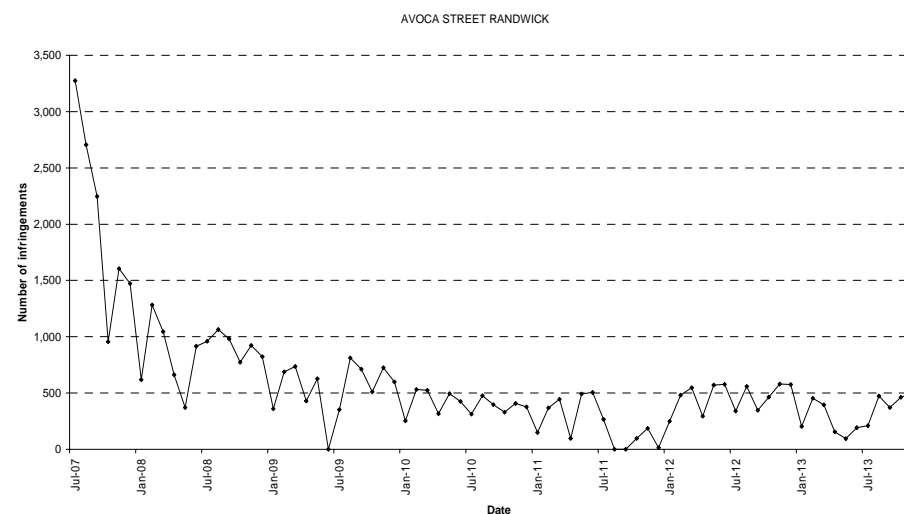
*March 2002 to March 2007

- 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 33 per cent reduction in the annual average number of crashes and a 25 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 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



Infringements



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: **Retained based on 2013 comprehensive review**

Current camera performance

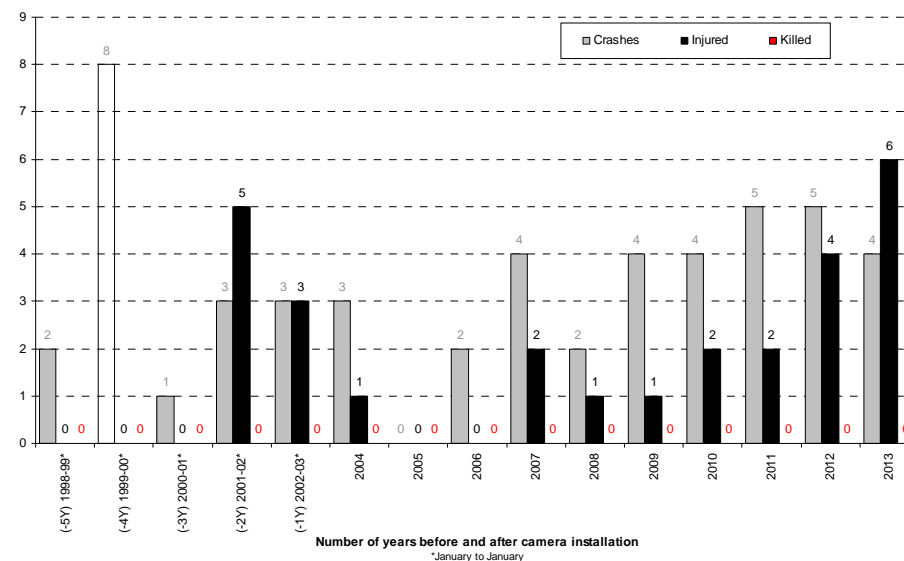
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	8	15	+88%
Casualties	8	15	+88%
Crashes	17	22	+29%
Casualty Cost	\$.92M	\$1.73M	+88%

*February 1998 to February 2003

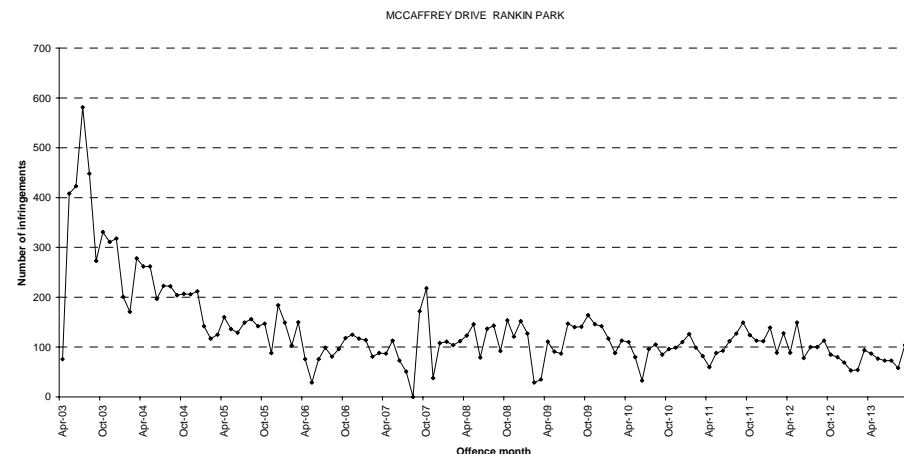
- This location was reviewed in 2013 due to concerns about the increase in crashes and casualties in recent years. The 2013 review found that the number of injury crashes decreased per year following the speed camera's installation. In addition the camera was found to perform the function of reducing speeds on the initial westbound (downhill) section of road. Speeding infringements were also found to have generally reduced following the introduction of the speed camera. Therefore based on this information, the speed camera is considered to be providing road safety benefits and it is recommended that the speed camera be retained.
- When comparing the pre installation period to the most recent five year period, there has been a 29 per cent increase in the annual average number of crashes and an 88 per cent increase 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 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



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

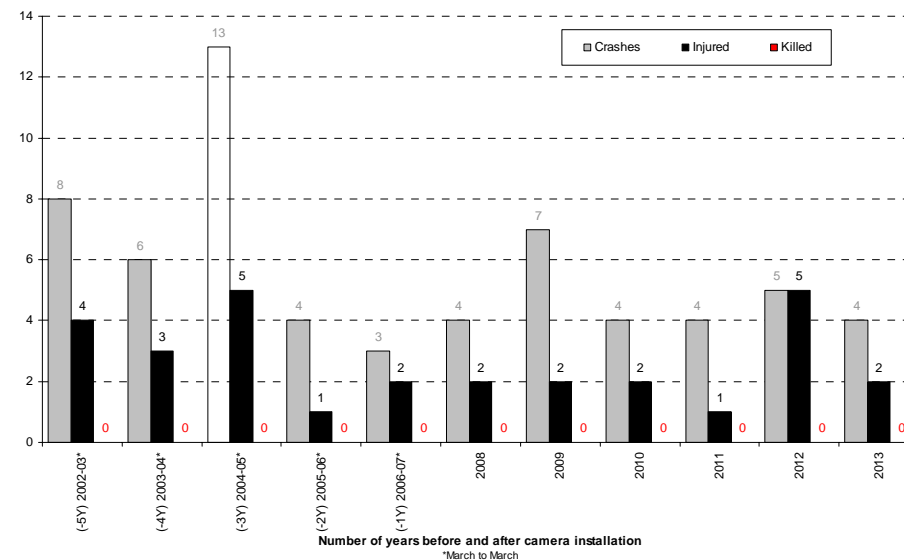
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	15	12	20%
Casualties	15	12	20%
Crashes	34	24	29%
Casualty Cost	\$1.73M	\$1.34M	20%

*March 2002 to March 2007

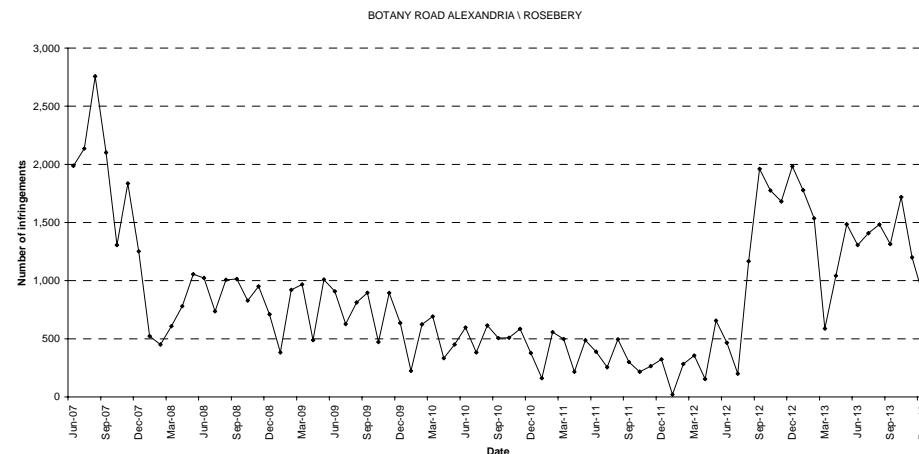
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 29 per cent reduction in the annual average number of crashes and a 20 per cent reduction in the annual average number of casualties.
- This has been a saving of \$390,000 in costs to the community.
- This location has been identified as one of the highest infringing sites in 2013. 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. Following this spike, infringements appear to be trending down again in December 2013. 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, 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: **Retained following 2014 preliminary review**

Current camera performance

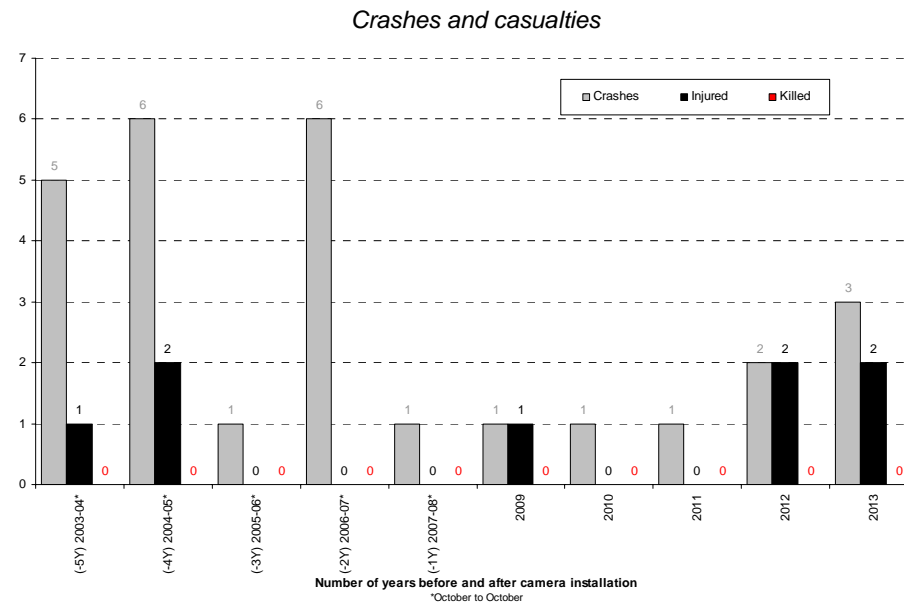
	Five years before installation*	Most recent 4 years and 338 day period	Percentage reduction**
Fatalities	0	0	-
Injuries	3	5	+69%
Casualties	3	5	+69%
Crashes	19	8	57%
Casualty Cost	\$0.35M	\$0.58M	+69%

* 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

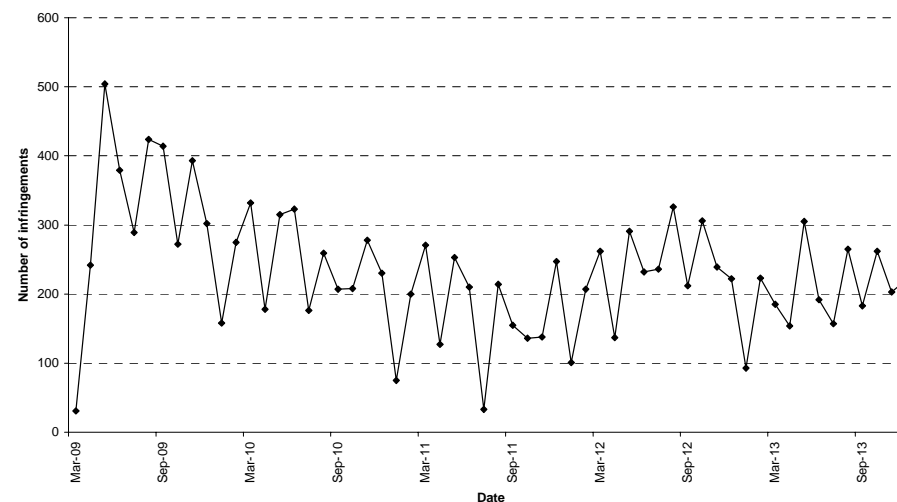
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 57 per cent reduction in the annual average number of crashes, however there has been an increase in the annual average number of casualties from three to five.
- 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



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

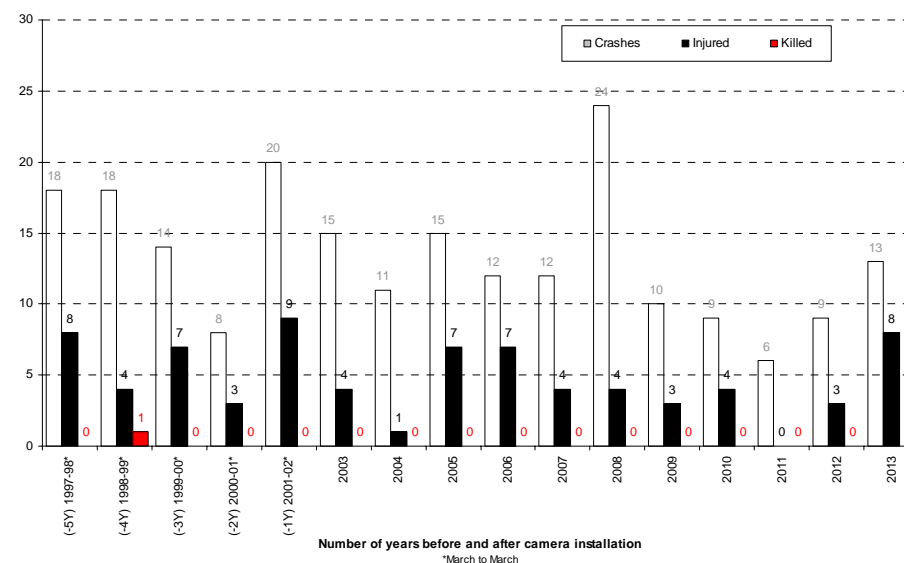
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	31	18	42%
Casualties	32	18	44%
Crashes	78	47	40%
Casualty Cost	\$10.03M	\$2.07M	79%

*March 1997 to March 2002

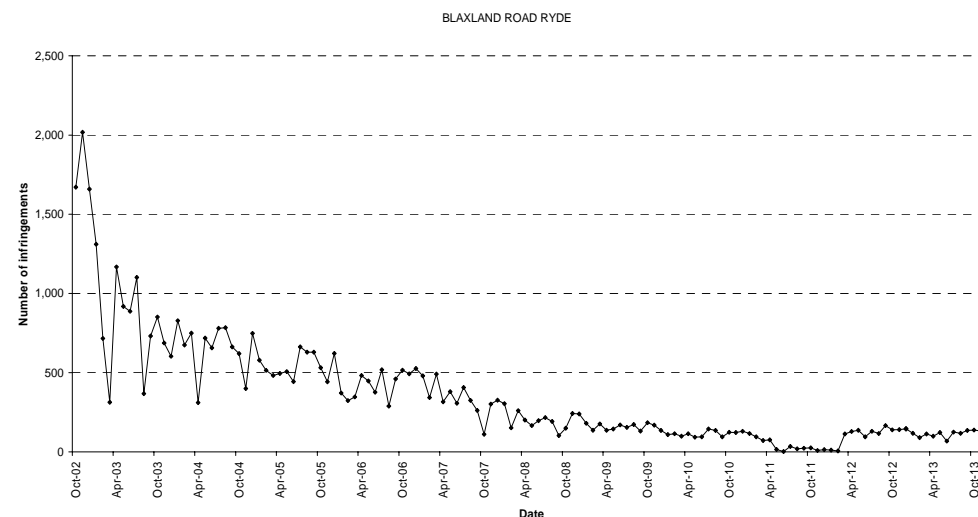
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 40 per cent reduction in the annual average number of crashes and a 44 per cent reduction in the annual average number of casualties.
- This has been a saving of \$7.96 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



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

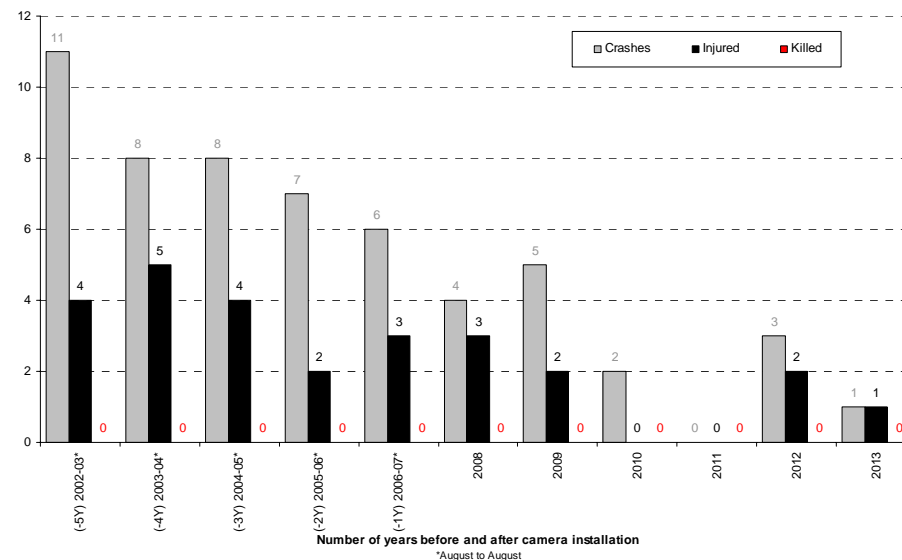
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	18	5	72%
Casualties	18	5	72%
Crashes	40	11	73%
Casualty Cost	\$2.07M	\$0.58M	72%

*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 \$1.49 million in costs to the community.
- This location has been identified as one of the highest infringing sites in 2013. The infringement graph details the trend in infringements at this location since the camera began operation. Despite the high number of infringements issued compared to other NSW locations, 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.

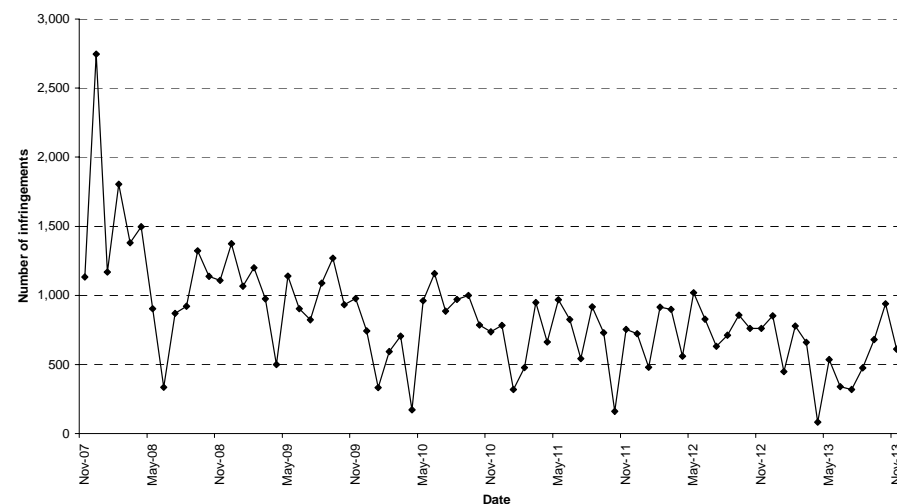
Trend in road safety performance at camera location

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: **Remove**

Current camera performance

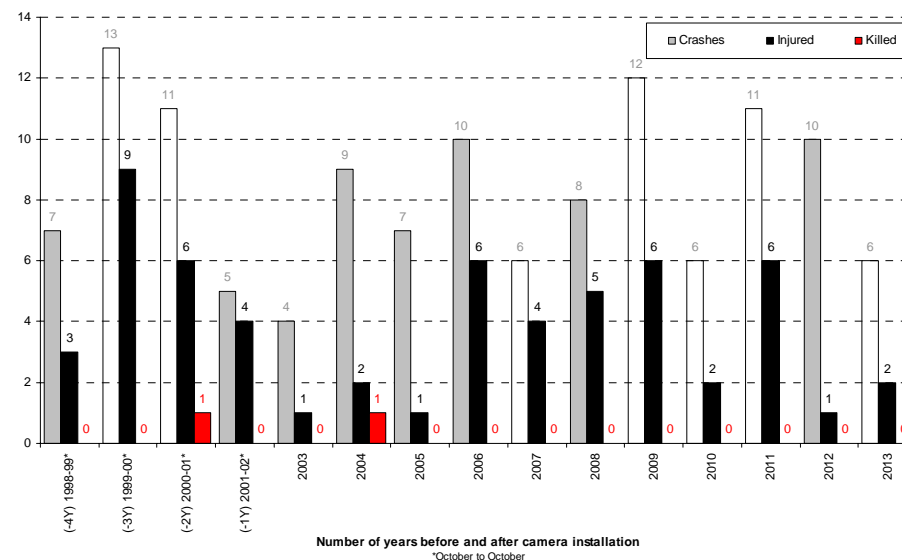
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	22	17	23%
Casualties	23	17	26%
Crashes	36	45	+25%
Casualty Cost	\$9 M	\$2 M	78%

*October 1998 to October 2002

- This location was reviewed in 2013 due to concerns about the increase in crashes and casualties in recent years. While the number of speed infringements have consistently reduced at this location, the review found that the number of injury crashes and the number of injuries has increased. This suggests that the speed cameras are not performing their required function and on balance, the review recommended they be decommissioned. A program of road safety works will be undertaken at this location to address the identified road safety risks.
- When comparing the pre installation period to the most recent five year period, there has been a 25 per cent increase in the annual average number of crashes and there has been a 26 per cent reduction in the annual average number of casualties. There has been a reduction in fatalities from one to zero.
- This has been a saving of \$7 million in costs to the community.
- 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.

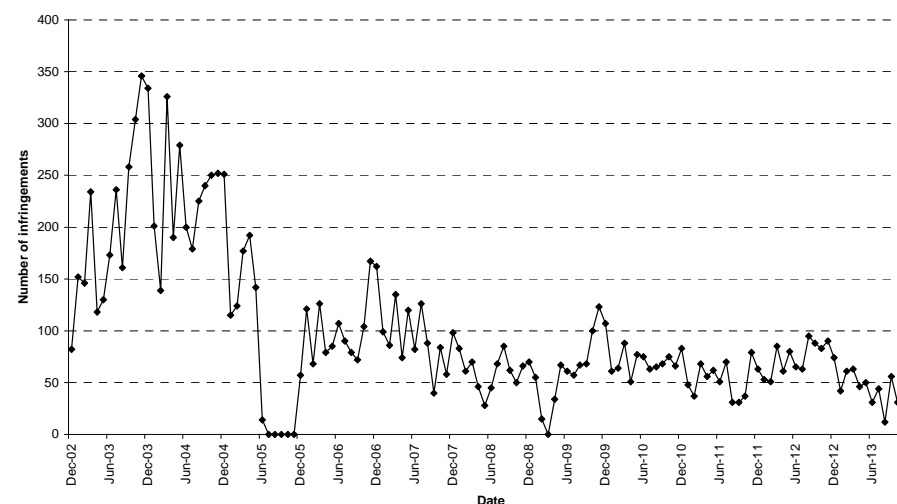
Trend in road safety performance at camera location

Crashes and casualties



Infringements

PACIFIC HIGHWAY SANDGATE



George Street, South Windsor

Location: George Street, between Rickaby Street and Yarrowonga 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

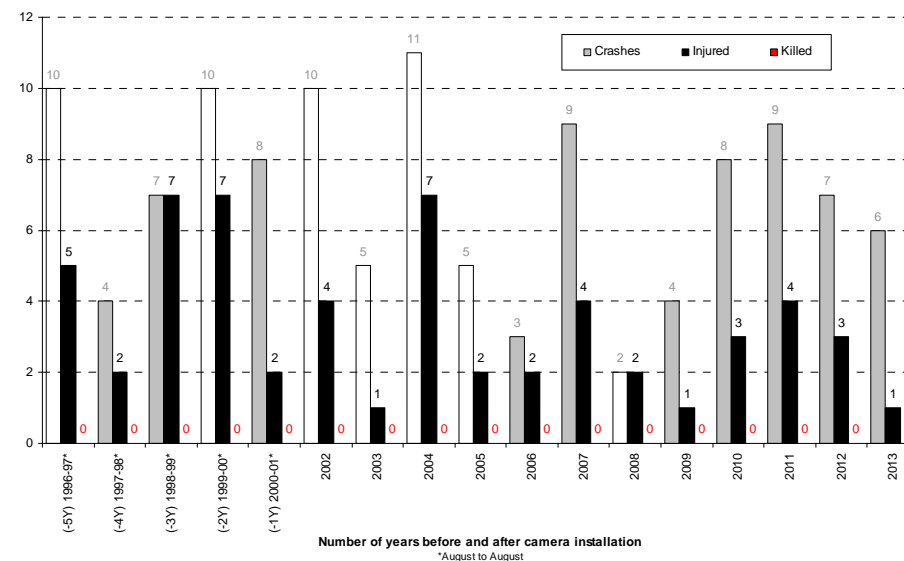
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	23	12	48%
Casualties	23	12	48%
Crashes	39	34	13%
Casualty Cost	\$2.65M	\$1.38M	48%

*August 1996 to August 2001

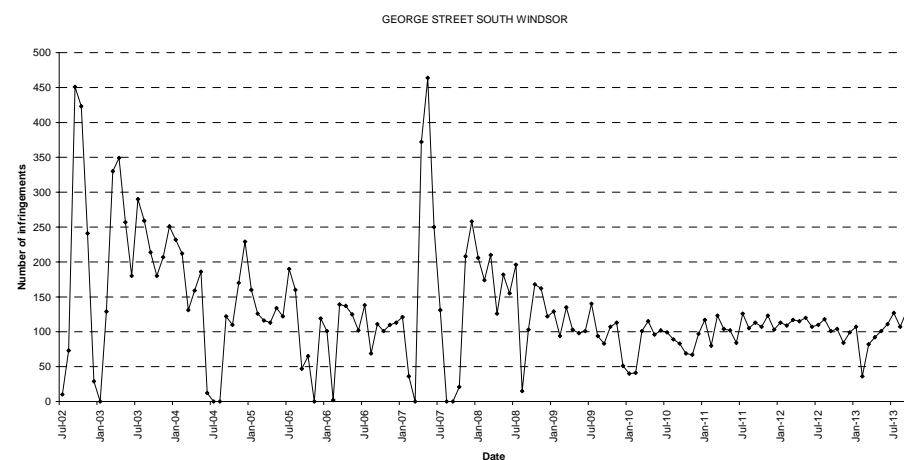
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 13 per cent reduction in the annual average number of crashes and a 48 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.27 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



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

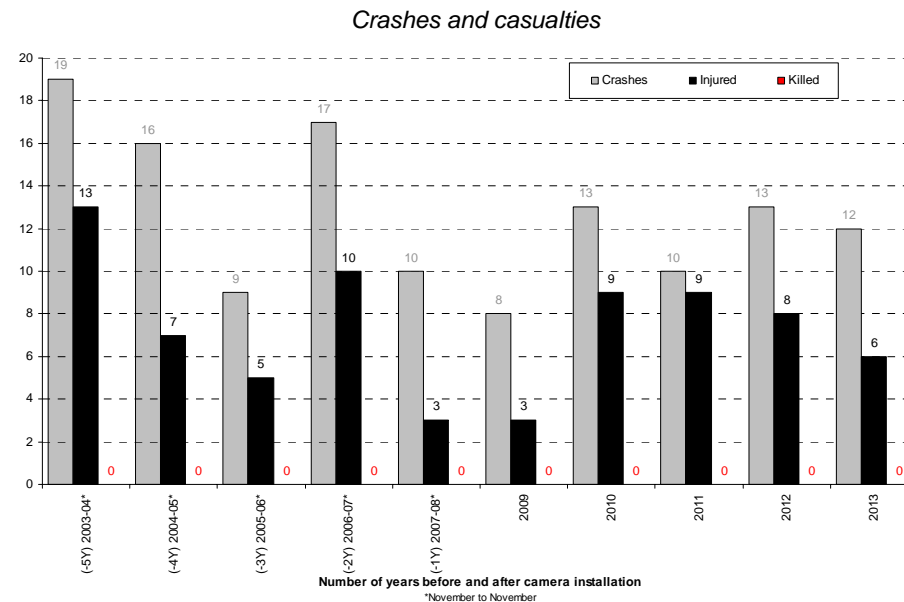
	Five years before installation*	Most recent four years and 331 days	Percentage reduction**
Fatalities	0	0	-
Injuries	38	35	6%
Casualties	38	35	6%
Crashes	71	56	20%
Casualty Cost	\$4.37M	\$4.03M	6%

*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

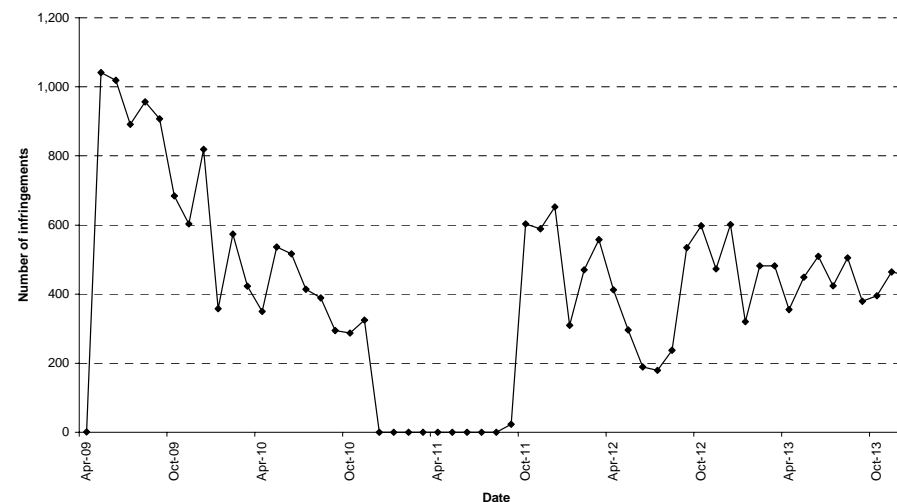
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent three years and 331 day period, there has been a 20 per cent reduction in the annual average number of crashes and a 6 per cent reduction in the annual average number of casualties.
- This has been a saving of \$340,000 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.
- 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



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

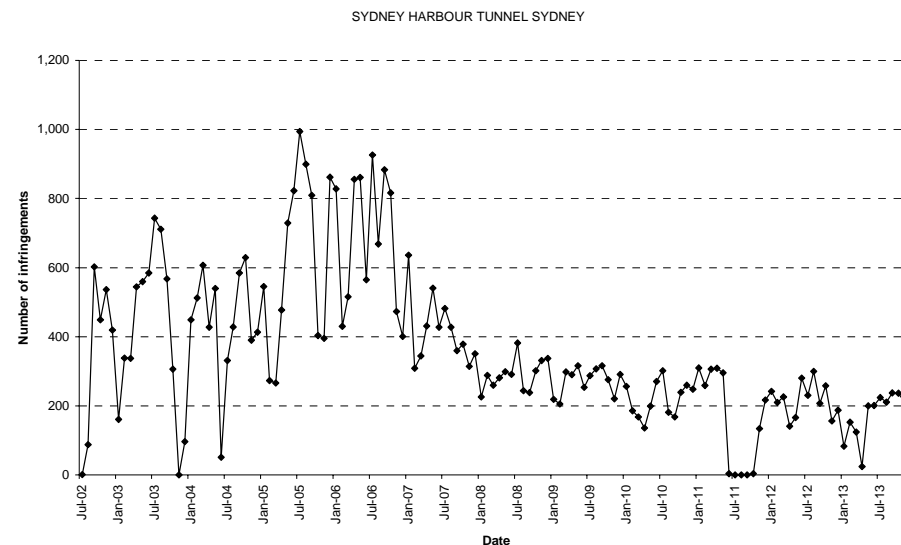
Started infringing: 02/08/2002

Crash and casualty data – January 2013 to December 2013

	Northbound	Southbound
Fatalities	0	0
Injuries	8	3
Casualties	8	3
Crashes	7	6

- 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**

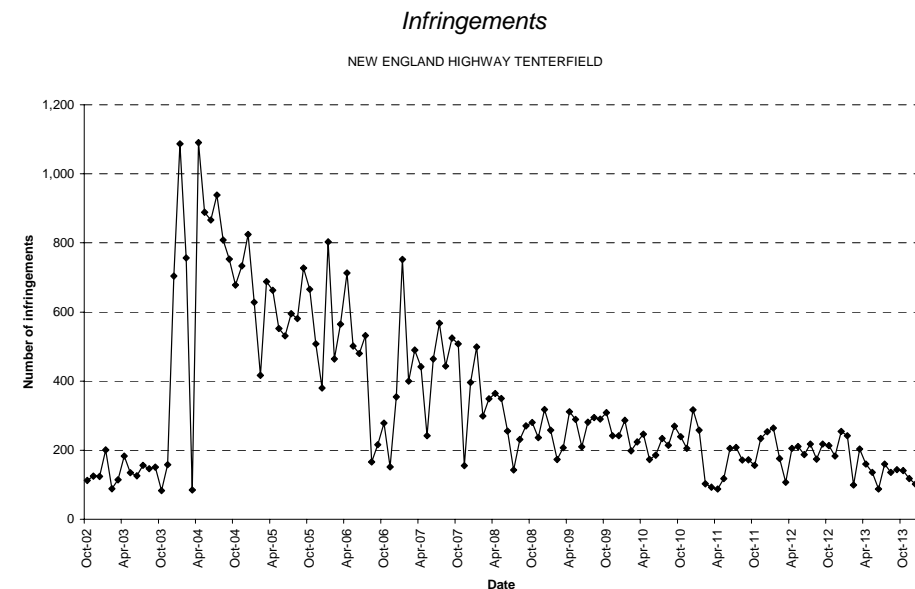
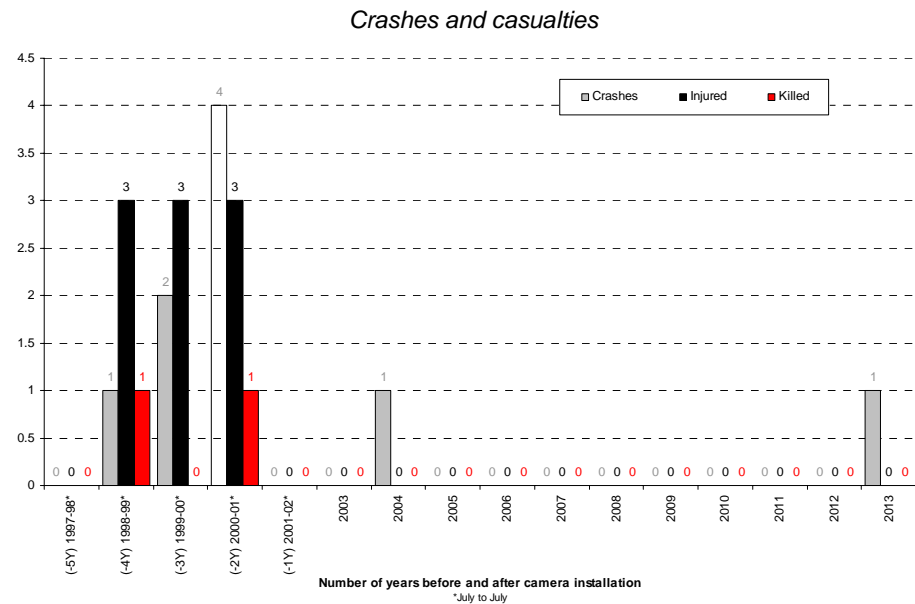
Current camera performance

	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	1	86%
Casualty Cost	\$13.97M	\$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 an 86 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 \$13.97 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



Terrigal Drive, Terrigal (school zone)

Location: Terrigal Drive, between Brunswick Road and Bellbird Avenue

Length description: 465m west to 120m east of camera

Total length: 585m

Number of cameras: 1

Started infringing: 27/02/2003

Status: **Effective**

Current camera performance

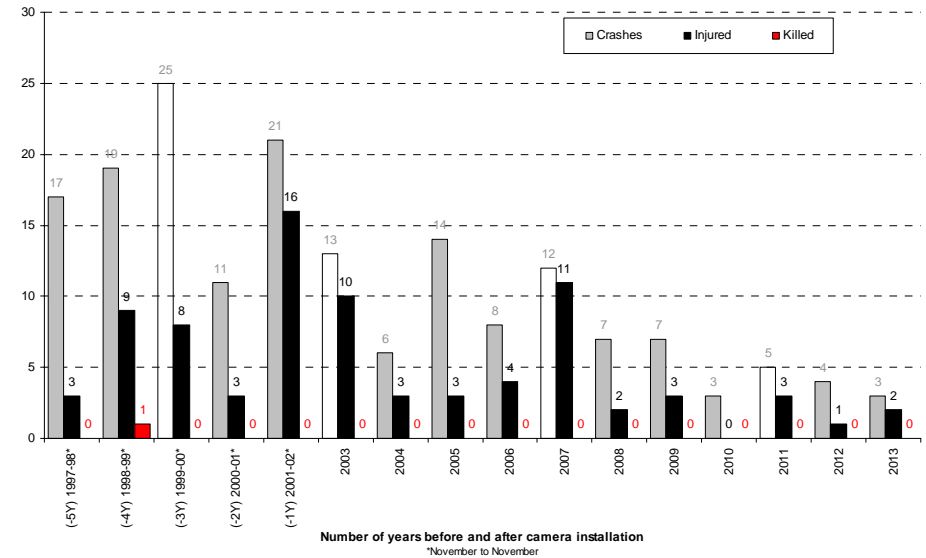
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	0	100%
Injuries	39	9	77%
Casualties	40	9	78%
Crashes	93	22	76%
Casualty Cost	\$10.95M	\$1.04M	91%

*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 76 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 \$9.91 million in costs to the community.
- The infringement graph details the trend in infringements at this location since the camera began operation. The extended period of camera downtime from December 2010 to June 2012 was due to road works. The subsequent spike in infringements in June 2012 may be attributed to a change in speed limit as the area became a school zone in March 2012. Roadworks and camera maintenance may influence the number of infringements issued.
- In 2014, major road safety and traffic works commenced at this location. The camera and accompanying signage has been removed for the works. The location will be monitored once works are complete and a final decision will be made about the need for ongoing enforcement.

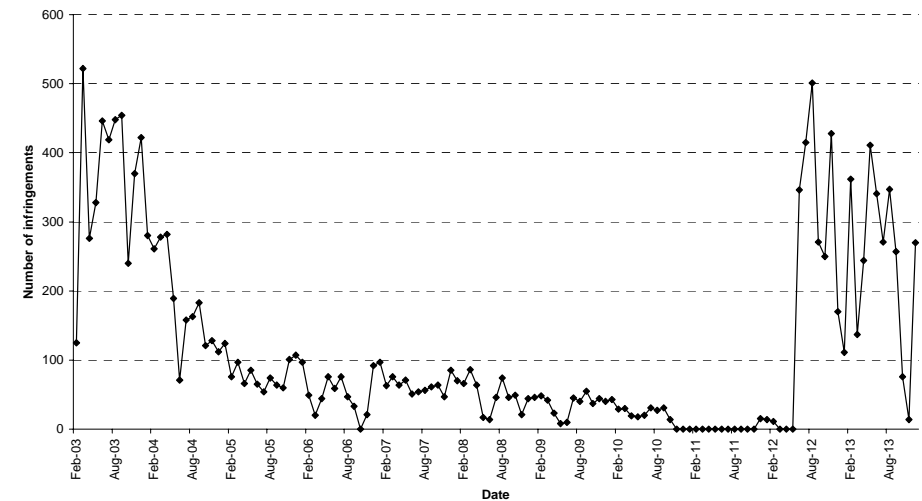
Trend in road safety performance at camera location

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

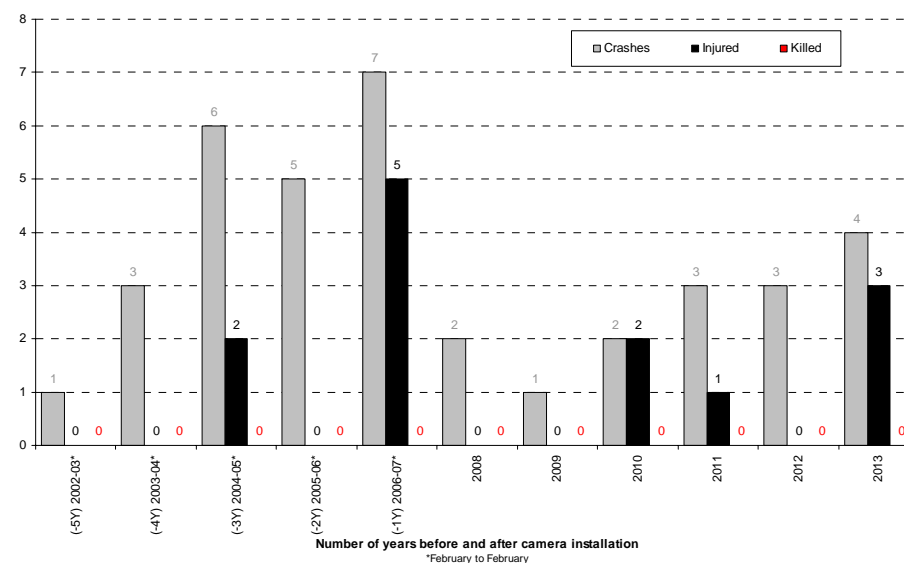
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	7	6	14%
Casualties	7	6	14%
Crashes	22	13	41%
Casualty Cost	\$0.81M	\$0.69M	14%

*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 41 per cent reduction in the annual average number of crashes and a 14 per cent reduction in the annual average number of casualties.
- This has been a saving of \$120,000 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.

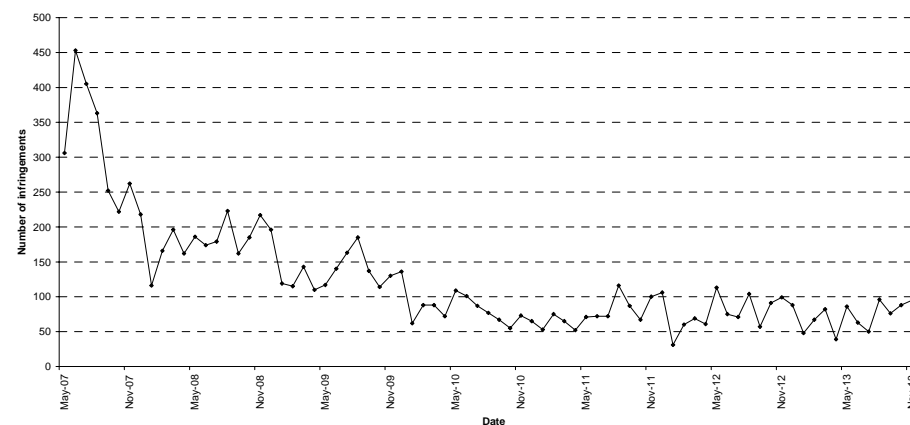
Trend in road safety performance at camera location

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

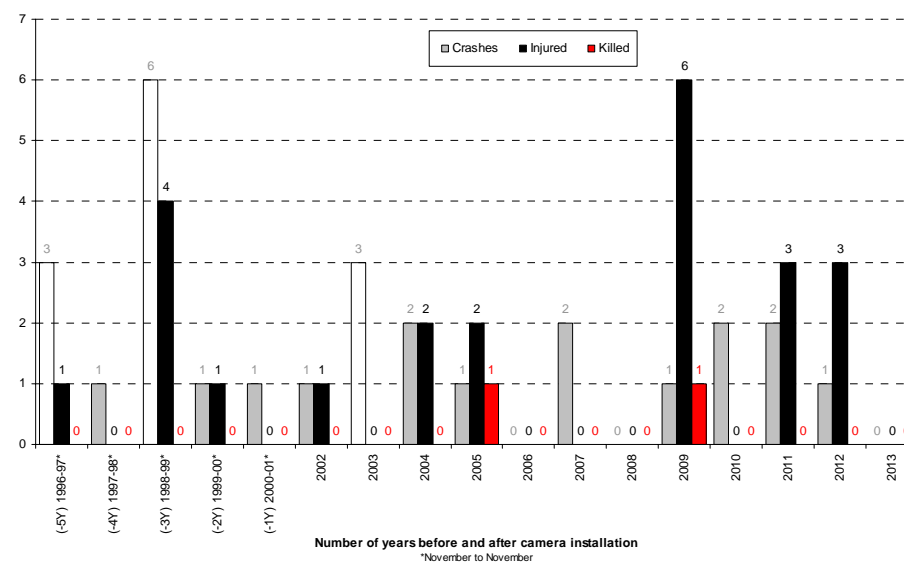
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	1	Increase from 0 to 1
Injuries	6	12	+100%
Casualties	6	13	+117%
Crashes	12	6	50%
Casualty Cost	\$0.69M	\$7.85M	+1037%

*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 50 per cent reduction in the annual average number of crashes however casualties have increased at this location including one fatality.
- This location was reviewed in 2012 due to concerns about the increase in casualties in recent years. 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. Therefore, based on this information the speed cameras at this location were retained.
- 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. Following an adjustment period, the graph shows there has been a reduction in speeding from the end of 2012. Roadworks and camera maintenance may influence the number of infringements issued.

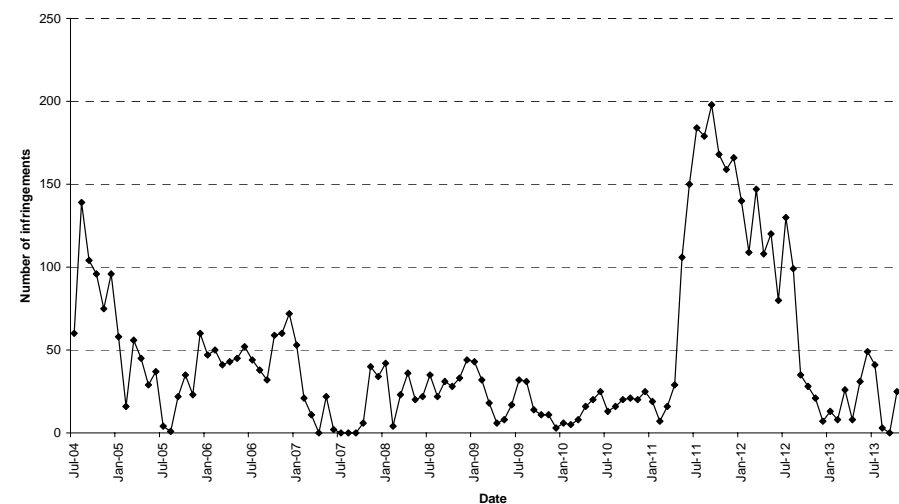
Trend in road safety performance at camera location

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

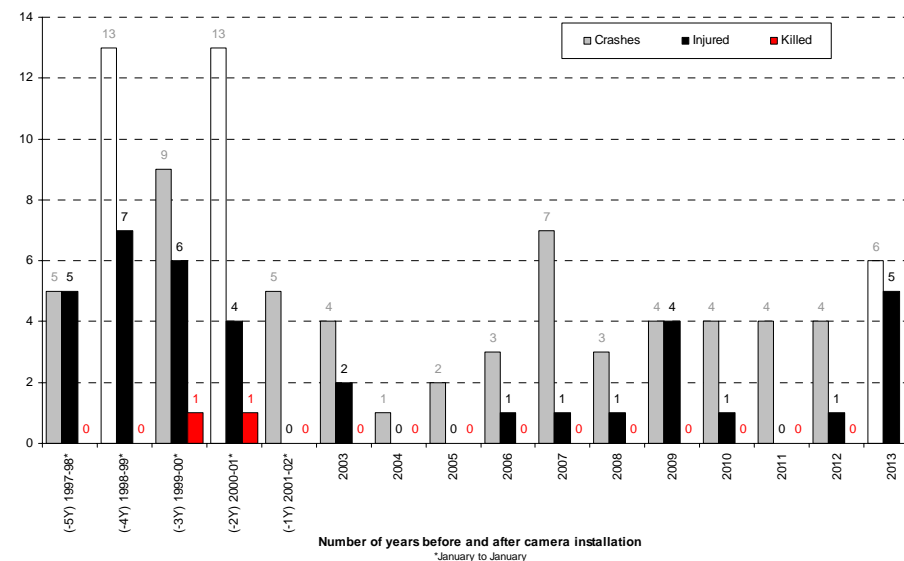
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	22	11	50%
Casualties	24	11	54%
Crashes	45	22	51%
Casualty Cost	\$15.46M	\$1.27 M	92%

* January 1997 to January 2002

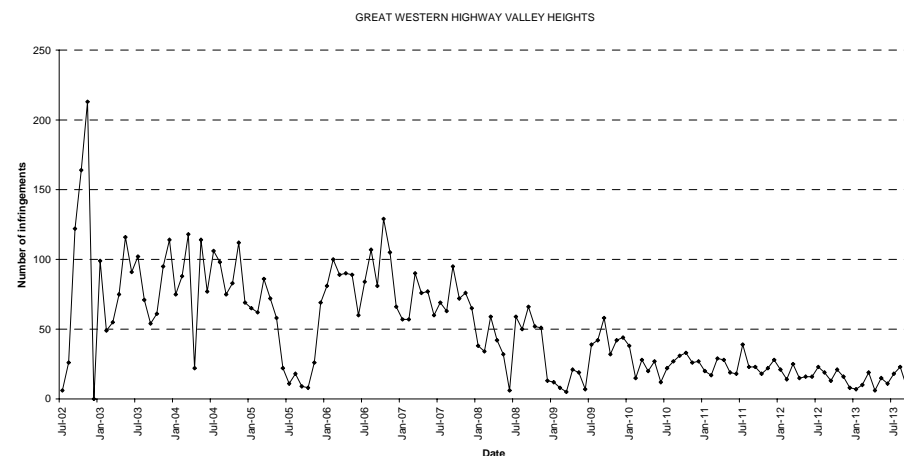
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 51 per cent reduction in the annual average number of crashes and a 54 per cent reduction in the annual average number of casualties.
- This has been a saving of \$14.19 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



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 four years and 338 day period	Percentage reduction**
Fatalities	0	0	-
Injuries	65	50	22%
Casualties	65	50	22%
Crashes	123	108	11%
Casualty Cost	\$7.46M	\$5.75M	22%

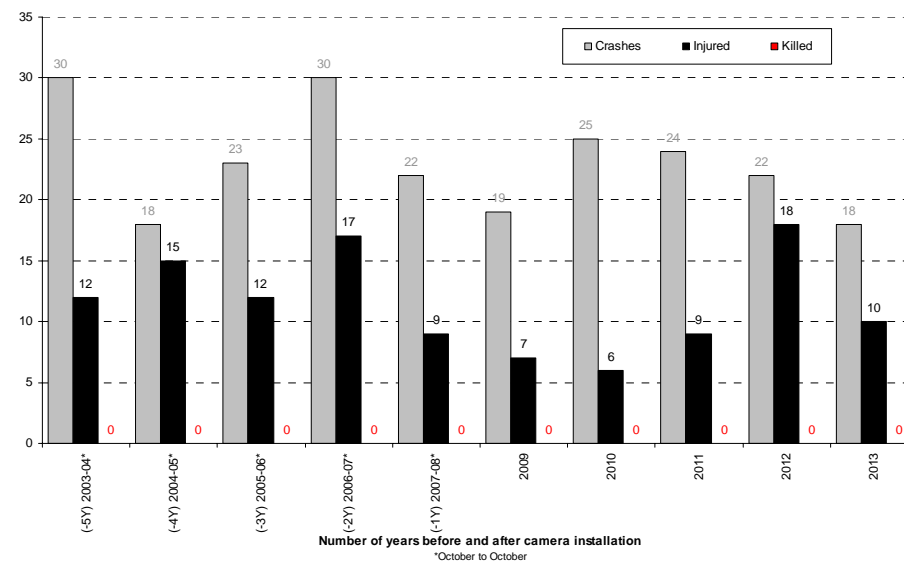
*October 2003 to October 2008

**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 an 11 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 \$1.71 million in costs to the community.
- This location has been identified as one of the highest infringing sites in 2013. The infringement graph details the trend in infringements at this location since April 2009. Infringement data before this date are not available. Despite the high number of infringements issued compared to other NSW locations, 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.

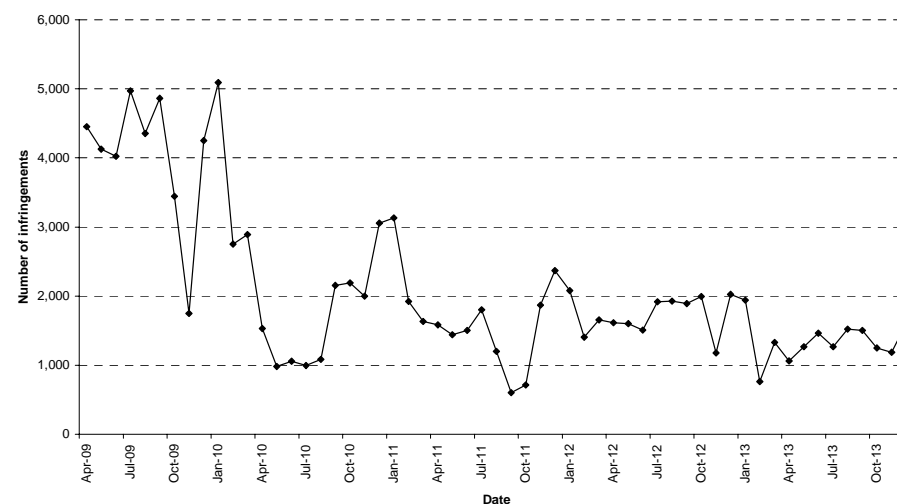
Trend in road safety performance at camera location

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**

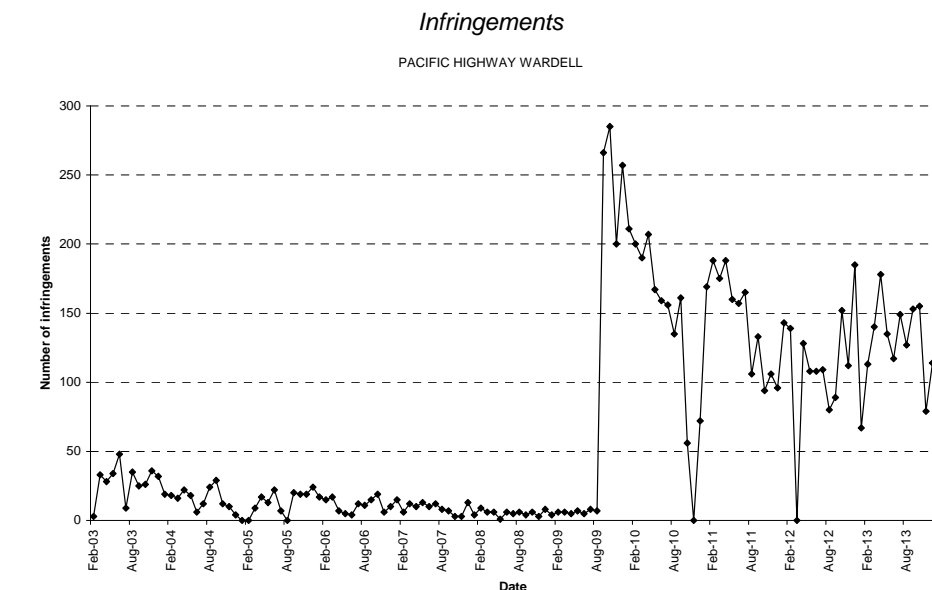
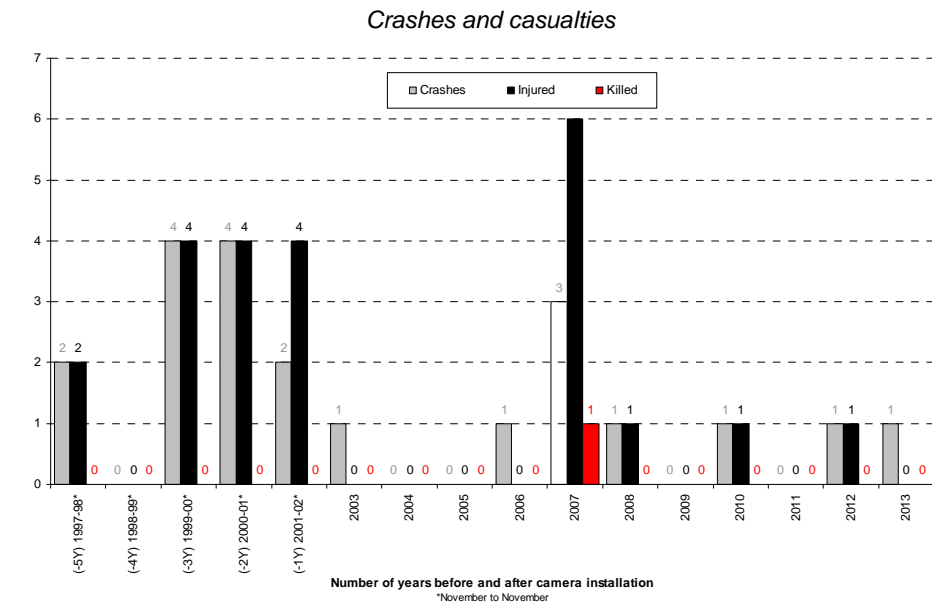
Current camera performance

	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	14	2	86%
Casualties	14	2	86%
Crashes	12	3	75%
Casualty Cost	\$1.61M	\$0.23M	86%

*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 an 86 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.38 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



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

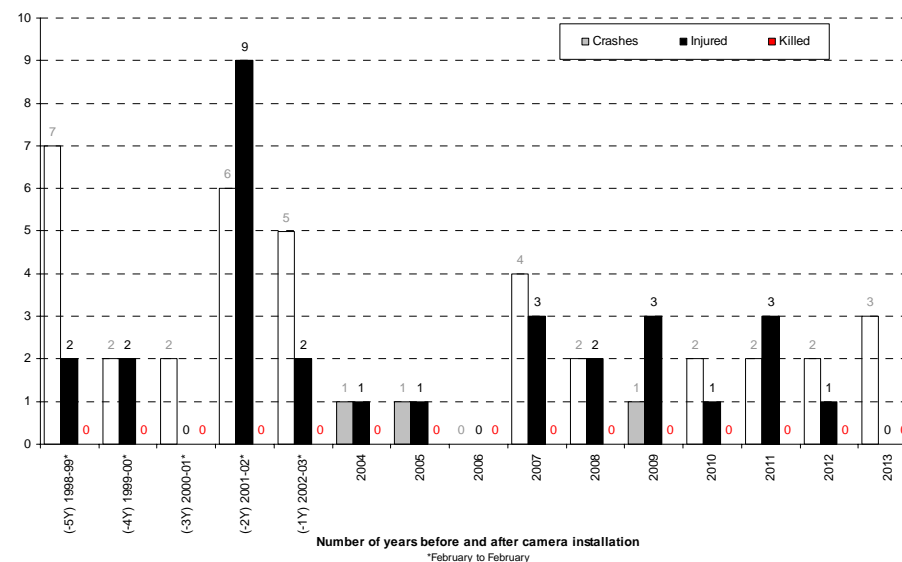
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	15	8	47%
Casualties	15	8	47%
Crashes	22	10	55%
Casualty Cost	\$1.73M	\$0.92M	47%

*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 55 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 \$810,000 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.

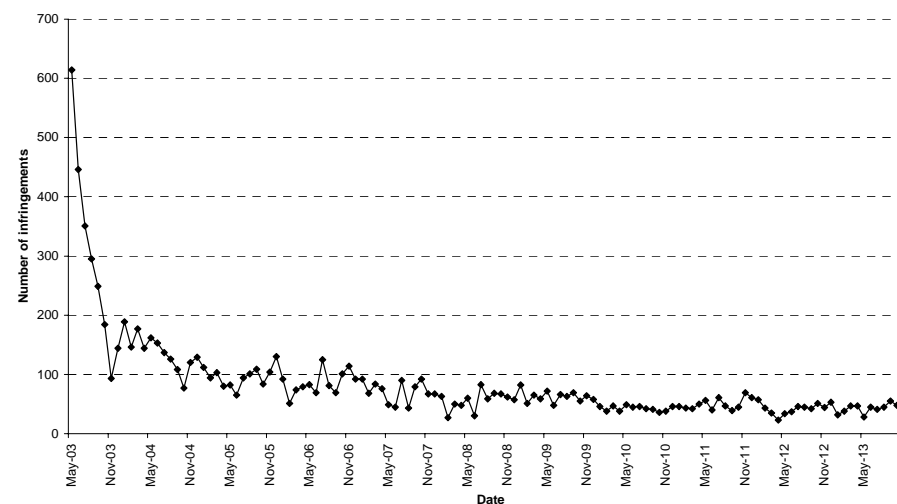
Trend in road safety performance at camera location

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

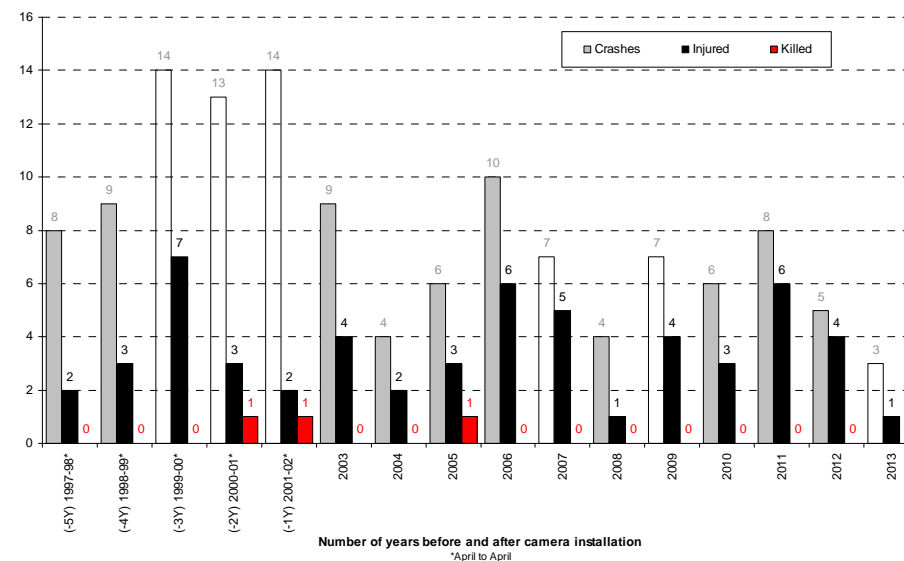
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	17	18	+6%
Casualties	19	18	5%
Crashes	58	29	50%
Casualty Cost	\$14.89M	\$2.07M	86%

*April 1997 to April 2002

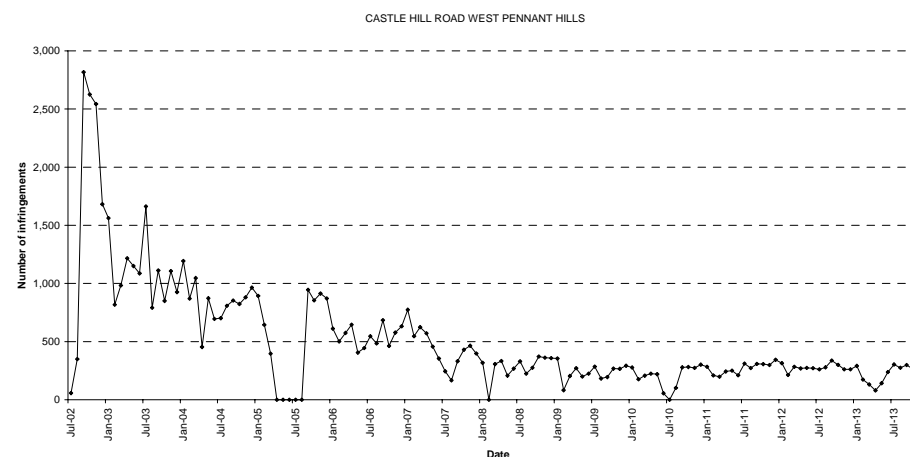
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 50 per cent reduction in the annual average number of crashes and a 5 per cent reduction in the annual average number of casualties.
- This has been a saving of \$12.82 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



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

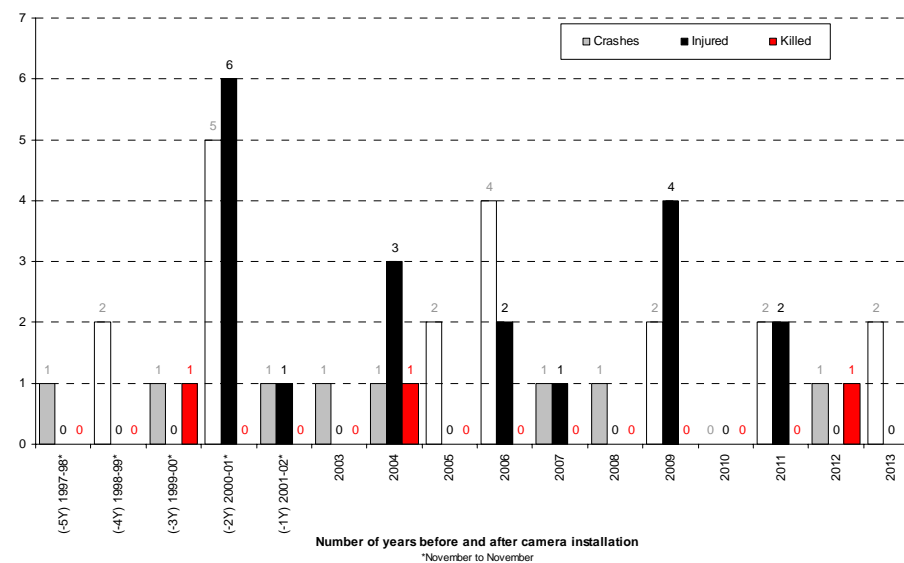
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	1	1	0%
Injuries	7	6	14%
Casualties	8	7	13%
Crashes	10	7	30%
Casualty Cost	\$7.27M	\$7.16M	2%

*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 30 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 \$110,000 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.

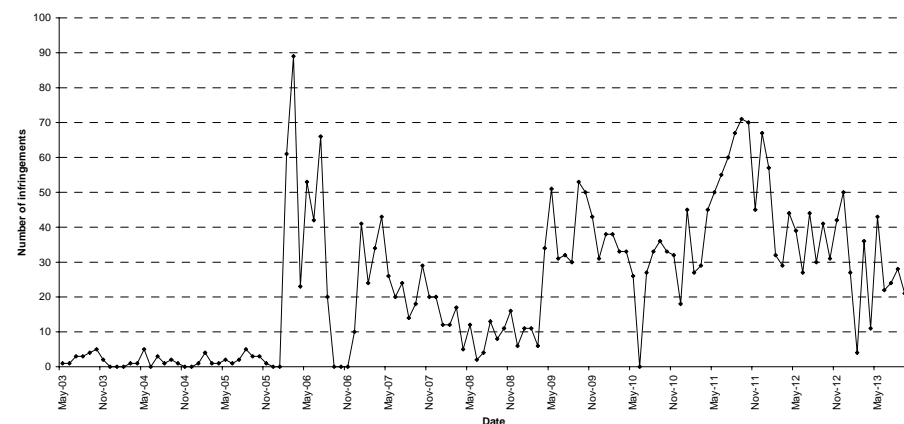
Trend in road safety performance at camera location

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 West 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

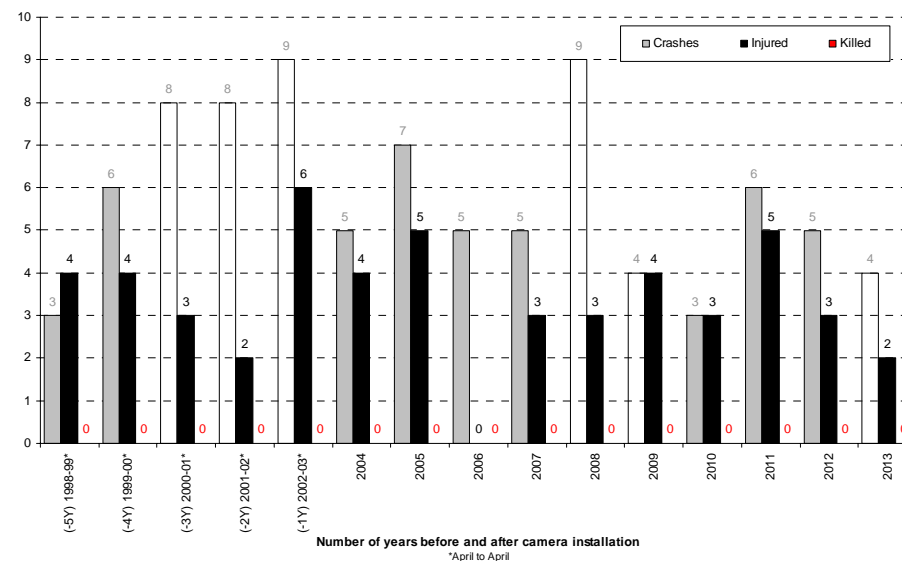
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	19	17	11%
Casualties	19	17	11%
Crashes	34	22	35%
Casualty Cost	\$2.19M	\$1.96M	11%

*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 35 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 \$230,000 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.

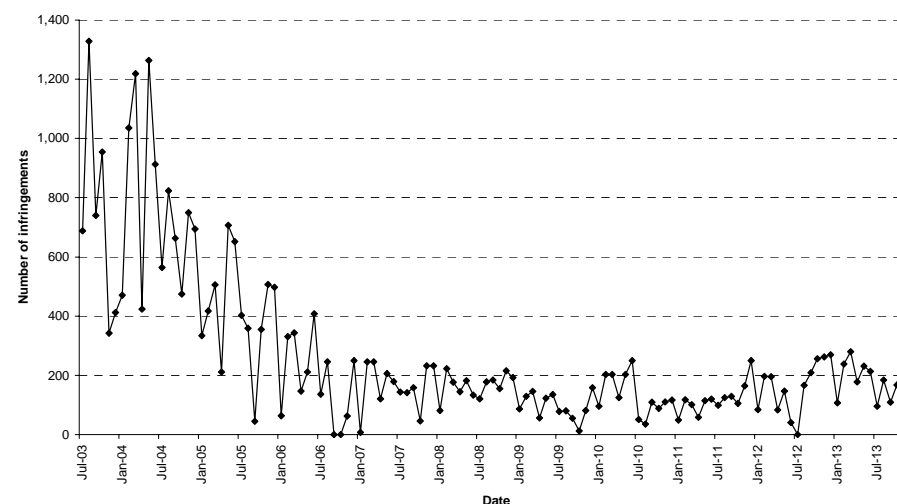
Trend in road safety performance at camera location

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

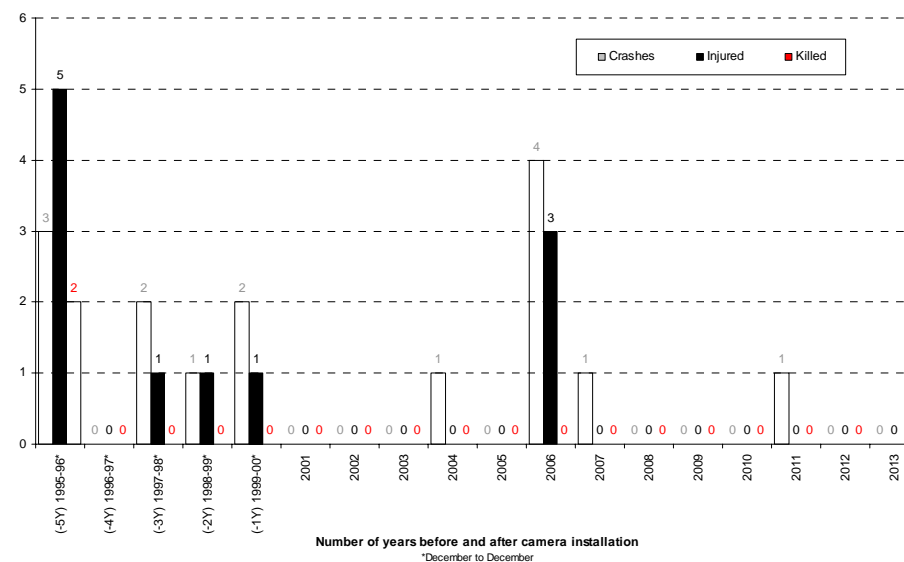
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	0	100%
Injuries	8	0	100%
Casualties	10	0	100%
Crashes	8	1	88%
Casualty Cost	\$13.85M	\$0M	100%

*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 \$13.85 million in costs to the community.
- This location has been identified as one of the highest infringing sites in 2013. The infringement graph details the trend in infringements at this location since July 2002. Infringement data before this date are unavailable. The spike in infringements in June 2007 may be attributed to the speed limit changing from 60km/h to 50km/h. Following this spike, infringements again reduced and have remained at a consistent level at this location. Roadworks and camera maintenance may influence the number of infringements issued.

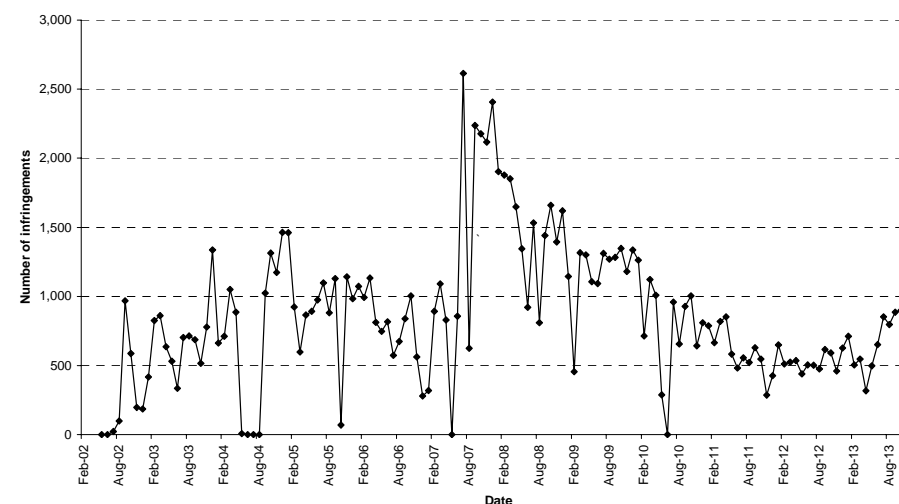
Trend in road safety performance at camera location

Crashes and casualties



Infringements

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

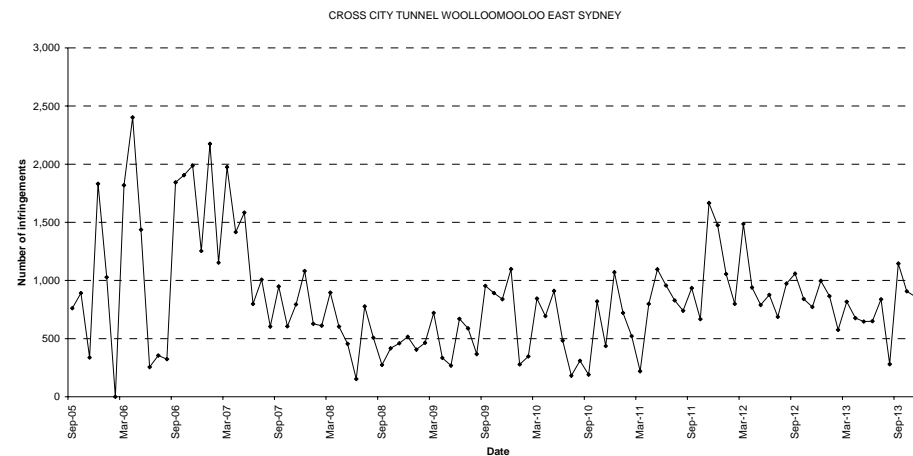
Started infringing: 05/09/2005

Crash and casualty data – January 2013 to December 2013

	Eastbound	Westbound
Fatalities	0	0
Injuries	0	1
Casualties	0	1
Crashes	0	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 the cameras began operating. Roadworks and camera maintenance may influence the number of infringements issued.

Infringements at fixed speed camera location



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

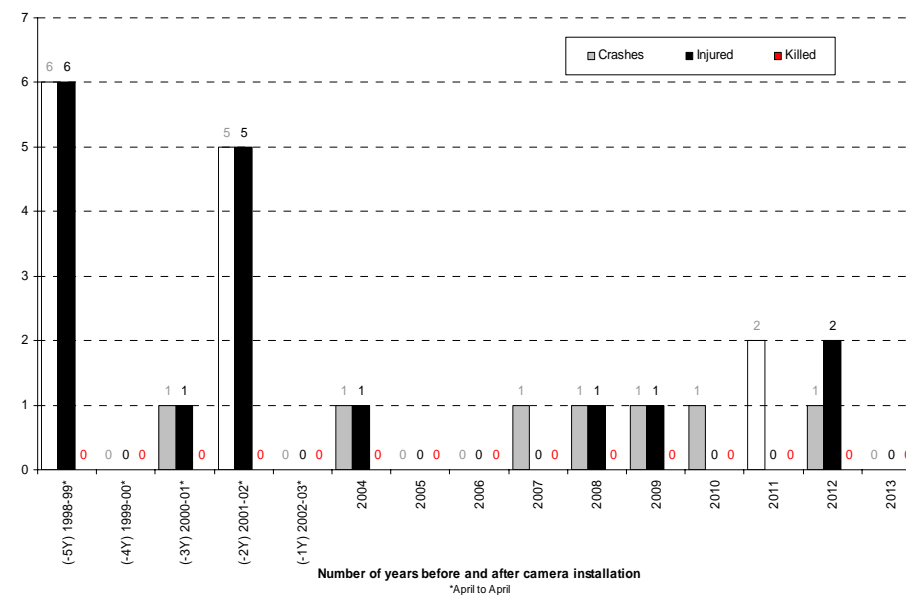
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	0	0	-
Injuries	12	3	75%
Casualties	12	3	75%
Crashes	12	5	58%
Casualty Cost	\$1.38M	\$0.35M	75%

*April 1998 to April 2003

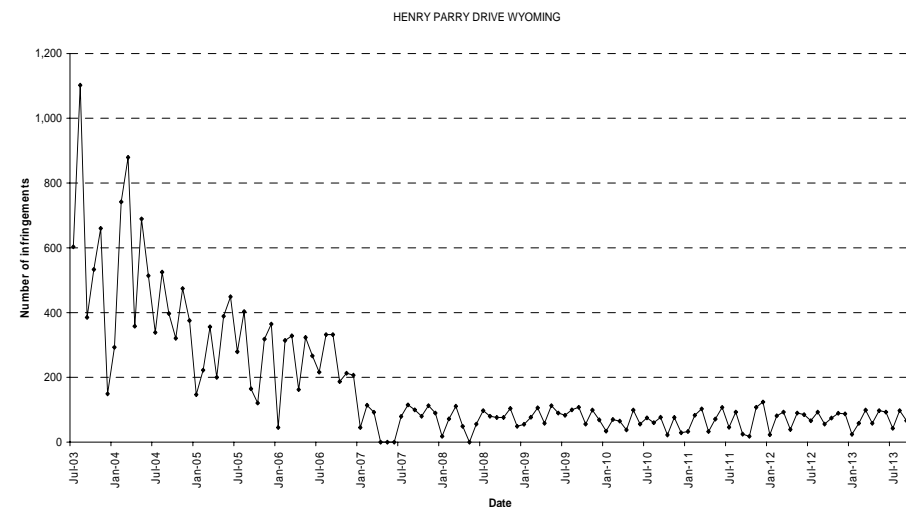
- The current pre and post installation analysis shows that crashes have decreased at this location.
- When comparing the pre installation period to the most recent five year period, there has been a 58 per cent reduction in the annual average number of crashes and a 75 per cent reduction in the annual average number of casualties.
- This has been a saving of \$1.03 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



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

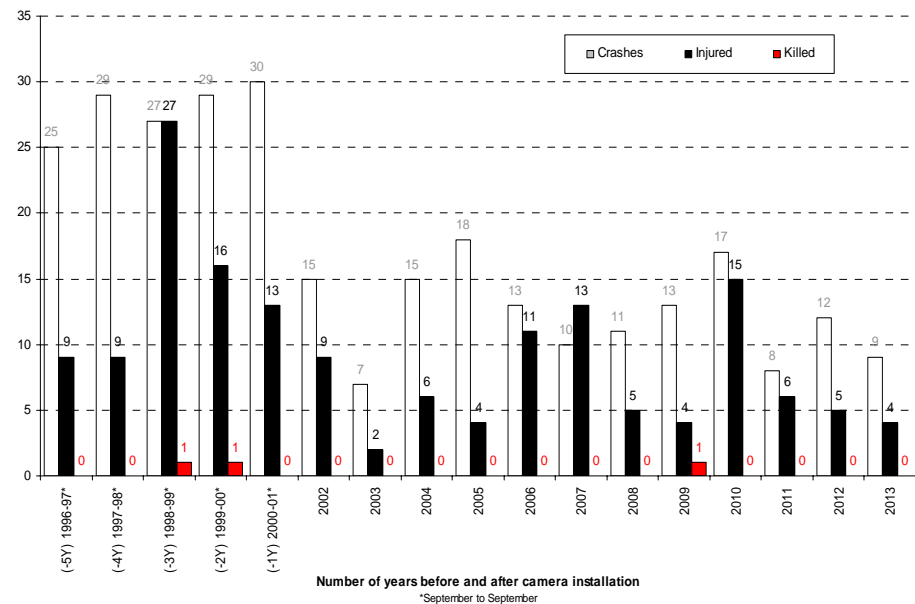
	Five years before installation*	Most recent five year period	Percentage reduction
Fatalities	2	1	50%
Injuries	74	34	53%
Casualties	76	35	54%
Crashes	140	59	58%
Casualty Cost	\$21.44M	\$10.38M	52%

*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 58 per cent reduction in the annual average number of crashes and a 54 per cent reduction in the annual average number of casualties.
- This has been a saving of \$11.06 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.

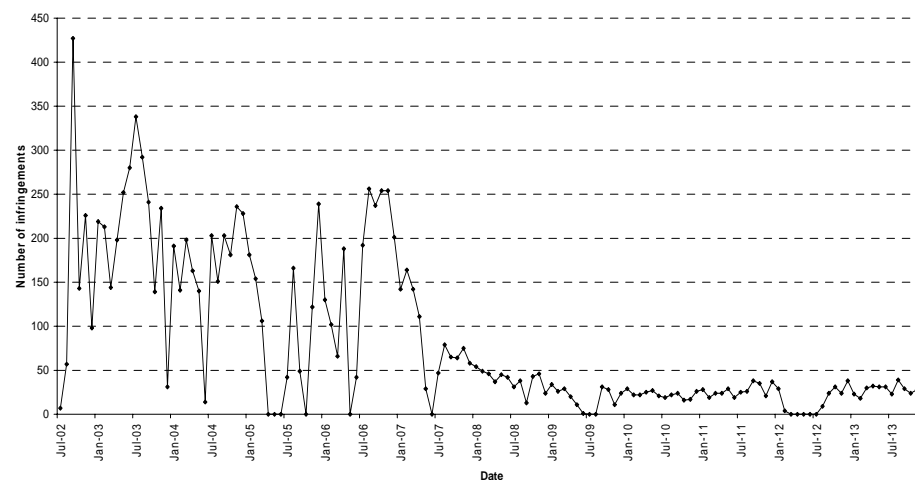
Trend in road safety performance at camera location

Crashes and casualties



Infringements

HUME HIGHWAY YAGOONA



Fixed speed camera locations with the most infringements

In April 2013, NRMA Motoring & Services called for an assessment of all high infringing speed camera locations across the state to determine whether the cameras were appropriately placed and clearly signposted.

The NSW Centre for Road Safety (CRS) has identified the 10 fixed speed camera locations with the highest number of infringements detected in 2013, detailed in the table below. Cameras located in high-risk locations, such as tunnels are excluded.

Most of the 10 speed camera locations are on main roads with high traffic volumes. All of these locations were found to be effective in the annual review, delivering crash and casualty reductions. These positive results are best reflected in the crash data for the Princes Highway, Kogarah, which shows one of the largest reductions in crashes when comparing the crash data for the five years before the cameras were installed with the most recent five years. Crashes at this location reduced by 40 when comparing the pre installation period to the most recent five year period (128 to 88).

The significant increase in infringements at Botany Road, Alexandria/Rosebery in 2013 compared to 2012 can be attributed to a change in speed limit from 60km/h to 50km/h in July 2012 at this location. This trend is to be expected, as an increase in infringements usually follows a reduction in speed limit. Conversely, it is also expected that speeding behaviour will reduce at this location over time.

The significant increase in infringements at Pacific Highway, Lindfield in 2013 compared to 2012 can be attributed to the eastbound camera being out of operation during 2012 due to road works at this location. While it is one of the highest infringing locations, infringements at this location have significantly reduced from a peak of 6000 infringements in its first month of operation in June 2007.

All camera locations had high compliance rates with more than 99 per cent of drivers passing the cameras without being infringed for speeding. This demonstrates that most drivers are aware of the cameras and do not exceed the speed limit, with less than one per cent of drivers penalised. It is this high level of compliance that provides road safety benefits. Compliance data compares the number of vehicles that pass a camera with the number of infringements issued by the camera.

CRS will continue to monitor infringement numbers at camera locations to identify and address any ongoing road safety risks. As is the case currently, Roads and Maritime Services (RMS) may increase the warning letter period and/or use Variable Message Signs to increase driver awareness of speed camera locations, where the trend in warning letters or number of infringements issued deems this appropriate. Ongoing site maintenance is also conducted by RMS to ensure that signage is effectively placed and not obscured by roadside objects, such as trees.

Fixed speed camera locations with the most infringements

Location	No. of cameras at location	Year infringements started	Total infringements issued in 2012	Total infringements issued in 2013	Compliance rate in 2013 (%)
1. Cleveland Street, Moore Park (school zone)	2	2007	27,605	18,547	99.83%
2. Pacific Highway, Wahroonga (school zone)	2	2009	20,798	16,159	99.92%
3. Botany Road, Alexandria/ Rosebery (school zone)	2	2007	10,704	15,732	99.80%
4. Pacific Highway, Ewingsdale	1	2006	12,766	12,790	99.80%
5. Pacific Highway, Woodburn	1	2001	6,431	8,306	99.65%
6. Pacific Highway, Lindfield (school zone)	2	2007	385	7,831	99.95%
7. Princes Highway, Berry	1	2003	6,439	6,649	99.83%
8. Victoria Road, Ryde (school zone)	2	2007	9,271	6,564	99.97%
9. Woodville Road, Old Guilford / Chester Hill (school zone)	2	2009	6,846	6,423	99.96%
10. Princes Highway, Kogarah (school zone)	2	2003	8,859	6,348	99.96%

Appendix D: NSW fixed speed cameras operating in warning mode

NSW fixed speed camera locations operating in warning mode

Following the results of the 2011 audit of speed cameras, the Minister for Roads and Freight 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 for 2013 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.

The results show that there are significant decreases in warning notices from the issuing of a first warning notice, to the second warning notice and subsequent infringement notice for a third strike.

Performance at fixed speed camera locations operating in warning mode (1 January 2013 to 31 December 2013)

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 st warning letter	2 nd warning letter	3 rd 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	8	8	11	4,035	291	131	4,457	7	0	7
Bangalow Road, Clunes (August 2011)	1	0	1	1	2	7396	517	268	8181	162	6	168
Eastern Arterial Road, Gordon (June 2012)	1	0	3	3	3	960	63	20	1043	0	0	0
President Avenue, Gymea - school zone (August 2011)	1	0	1	1	2	1574	104	42	1720	0	0	0
Carlingford Road, North Epping - school zone (June 2012)	1	0	1	1	1	3127	340	154	3621	4	1	5
Eastern Valley Way, North Willoughby (July 2012)	1	0	8	8	11	1759	118	27	1904	1	0	1
Pacific Highway, Urunga (January 2012)	1	0	0	0	0	4368	120	81	4569	24	0	24

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	Gwydir Highway	Between Glen Innes and Inverell	60
5	Hume Highway	Between Coolac and Yass	75
6	Hume Highway	Between Gundagai and Coolac	20
7	Mitchell Highway	Between Molong and Cundumbul	28
8	Monaro Highway	Between Bredbo and Cooma	34
9	New England Highway	Between Muswellbrook and Aberdeen	11
10	New England Highway	Between Muswellbrook and Singleton	46
11	Newell Highway	Between Eumungerie and Gilgandra	27
12	Newell Highway	Between Forbes and West Wyalong	94
13	Newell Highway	Between Peak Hill and Tomingley	17
14	Oxley Highway	Between Gunnedah and Tamworth	60
15	Pacific Highway	Between Harwood and New Italy	35
16	Pacific Highway	Between Kew and Port Macquarie	21
17	Pacific Highway	Between Nabiac and Taree	24
18	Pacific Highway	Between Port Macquarie and Kempsey	40
19	Pacific Highway	Between Urunga and Valla	13
20	Pacific Highway	Between Woodburn and Wardell	20
21	Picton Road	Between Wilton and Cataract	16

Heavy vehicle crashes and infringements at operational point-to-point enforcement locations for 2011, 2012 and 2013

Road	Section	Warning commenced	Enforcement commenced	Before installation heavy vehicle crashes (2006 - 2010)			After installation heavy vehicle crashes 2011			After installation heavy vehicle crashes 2012			After installation heavy vehicle crashes 2013			Total Infringements 2011	Total Infringements 2012	Total Infringements 2013	
				Fatalities	Injuries	Total	Fatalities	Injuries	Total	Fatalities	Injuries	Total	Fatalities	Injuries	Total				
Federal Hwy	Between Goulburn and Collector	30 May 2011	Aug 2011	0	3	7	0	0	1	0	1	1	0	1	3	5	62	223	121
Golden Hwy	Between Sandy Hollow and Merriwa	1 Mar 2012	Jun 2012	0	4	4	-#	-#	-#	0	1	1	1	0	1	2	-#	13	10
Great Western Hwy	Between Meadow Flat and Raglan	31 May 2010	Nov 2010	1*	8*	11*	0	1	3	1	1	2	0	0	0	5	21	24	3
Gwydir Hwy	Between Glen Innes and Inverell	25 Oct 2011	Feb 2012	0	2	4	-#	-#	-#	0	0	0	0	0	1	1	-#	7	1
Hume Hwy	Between Coolac and Yass	26 Aug 2011	Oct 2011	2	12	32	1	3	8	0	4	7	0	6	10	25	21	562	214
Hume Hwy	Between Gundagai and Coolac	26 Aug 2011	Oct 2011	1	6	16	0	0	0	0	0	0	1	0	1	1	27	384	131
Mitchell Hwy	Between Molong and Cundumbul	21 Dec 2012	Feb 2013	1*	2*	6	-#	-#	-#	-#	-#	-#	0	0	1	1	-#	-#	3
Monaro Hwy	Between Bredbo and Cooma	17 Sep 2011	Nov 2011	1	0	3	0	0	0	0	1	2	0	0	0	2	0	9	9
New England Hwy	Between Muswellbrook and Aberdeen	16 Dec 2011	Mar 2012	0	2	3	-#	-#	-#	0	1	1	0	0	0	1	-#	1	2
New England Hwy	Between Muswellbrook and Singleton	20 Dec 2011	Mar 2012	1	4	12	-#	-#	-#	1	4	12	0	1	1	13	-#	6	3
Newell Hwy	Between Eumungerie and Gilgandra	22 Dec 2011	Mar 2012	2	2	7	-#	-#	-#	0	3	4	0	0	0	4	-#	140	68
Newell Hwy	Between Forbes and West Wyalong	22 Mar 2013	May 2013	0*	13*	19	-#	-#	-#	-#	-#	-#	0	1	5	5	-#	-#	21
Newell Hwy	Between Peak Hill and Tomingley	22 Dec 2011	Mar 2012	2	1	3	-#	-#	-#	0	0	0	0	0	0	0	-#	40	28
Oxley Hwy	Between Gunnedah and Tamworth	30 Nov 2011	Jan 2012	3	2	7	-#	-#	-#	1	0	1	0	0	0	1	-#	8	8
Pacific Hwy	Between Harwood and New Italy	31 Mar 2010	Mar 2011	4	16	30	1	5	7	0	1	5	1	5	9	21	113	19	136
Pacific Hwy	Between Kew and Port Macquarie	17 Aug 2012	Oct 2012	1	20	30	-#	-#	-#	1	1	3	0	1	4	7	-#	0	199
Pacific Hwy	Between Nabiac and Taree	5 Aug 2011	Oct 2011	1	7	25	0	0	3	1	2	3	0	2	4	10	23	84	169
Pacific Hwy	Between Port Macquarie and Kempsey	14 Dec 2011	Feb 2012	0	9	34	-#	-#	-#	0	1	2	0	1	5	7	-#	2	8
Pacific Hwy	Between Urunga and Valla	29 Sep 2012	Dec 2012	2*	8*	14*	-#	-#	-#	1	0	1	0	0	1	2	-#	0	79
Pacific Hwy	Between Woodburn and Wardell	28 Jun 2011	Aug 2011	3	12	22	1	1	3	1	2	4	0	2	2	9	29	95	62
Picton Rd	Between Wilton and Cataract	17 Oct 2012	Dec 2012	5	5	16	-#	-#	-#	0	1	2	0	1	1	3	-#	0	5

* 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; Mitchell Highway between Molong and Cundumbul and Newell Highway between Forbes and West Wyalong are for 2008 – 2012.

Data are not provided for periods where point-to-point cameras were not installed at the location.

Summary

There will be 25 lengths that are part of the point-to-point enforcement program, 21 lengths were installed and were operational by the end of 2013:

- two lengths were installed in 2010
- 13 lengths were installed in 2011
- five lengths were installed in 2012
- one length was installed in 2013

The remaining four point-to-point lengths will be rolled out and operational by the end of 2014. There are 19 lengths that have enforced for the entire 2013 review period. While heavy vehicle speed compliance within these lengths is positive, the entire enforcing periods varies between three years and less, and it 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 three year period (2011-2013). 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 three year post installation period (2011-2013) there were five heavy vehicle crashes resulting in one fatality and two injuries.

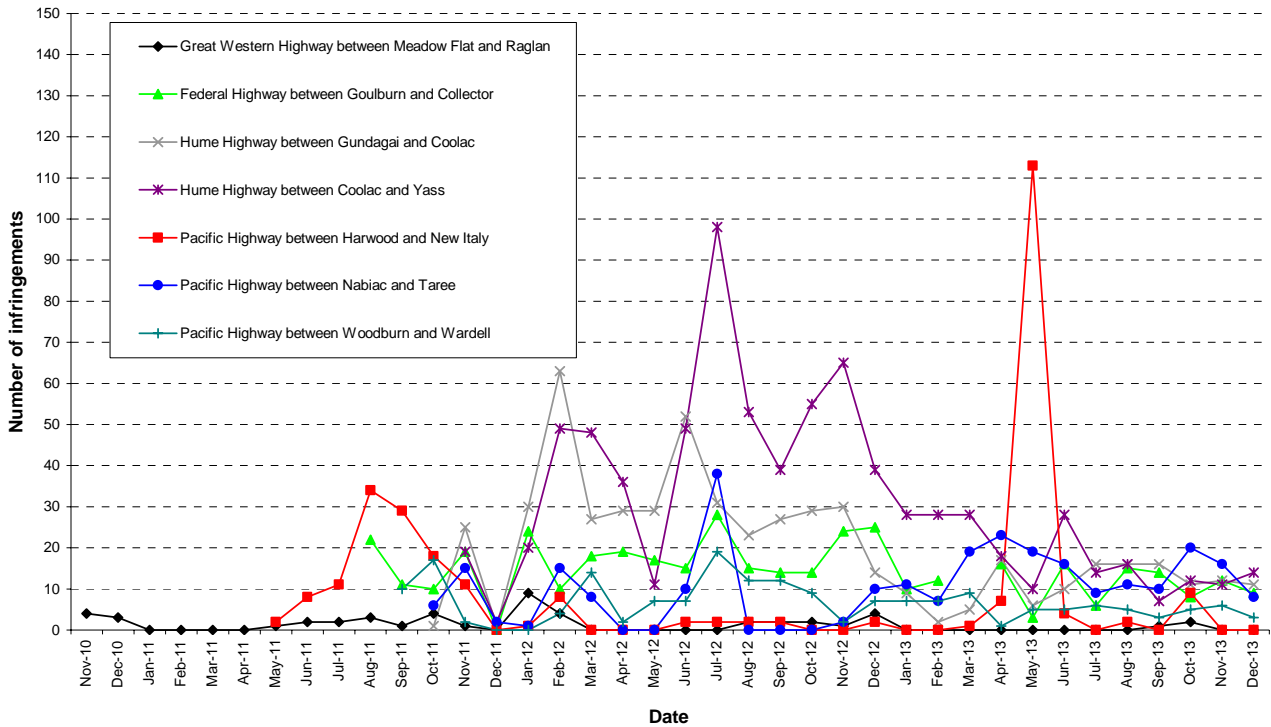
Eight point-to-point lengths have enforced for a full two year period (2012-2013):

- Federal Highway between Goulburn and Collector
- Great Western Highway between Meadow Flat and Raglan (has enforced for three years)
- Hume Highway between Coolac and Yass
- Hume Highway between Gundagai and Coolac
- Monaro Highway between Bredbo and Cooma
- Pacific Highway between Harwood and New Italy
- Pacific Highway between Nahiack and Taree
- Pacific Highway between Woodburn and Wardell

The pre installation and current post installation period data, detailed in the table above, shows that crashes and casualties have reduced at these locations.

The infringement data for these lengths are detailed in the graph below. 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. The graph also shows there has been a reduction in speeding behaviour at these lengths over time. Roadworks and camera maintenance may influence the number of infringements issued.

Point-to-point speed infringements to December 2013



The spike in infringements at the Pacific Highway between Harwood and New Italy length in May 2013 can be attributed to a reduction in speed limit due to road works that commenced in April 2013. The reduced average speed commenced infringing in May 2013 at this length.

A total of 1,267 speeding infringements were issued resulting in total fines of \$501,776 at point-to-point lengths in 2013.