Transport for NSW

NSW Automated Enforcement Camera Programs

December 2024

2023 Review







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Executive summary

The purpose of the NSW Automated Enforcement Camera Programs: 2023 Review is to monitor automated enforcement cameras in NSW to ensure they are having a positive road safety effect. This report was prepared using data up until the end of the 2022 calendar year.

The NSW Centre for Road Safety reviewed all NSW automated enforcement camera programs (fixed, red-light, average, mobile speed cameras and mobile phone detection cameras) in line with both the NSW Automated Enforcement Strategy for road safety.

This report has identified that NSW automated camera programs continued to provide substantial road safety benefits to the NSW community. Overall, road trauma rates were considerably lower at fixed, red-light, and average speed camera locations, compared to pre-installation, as shown in Table 1. The reduction in road trauma observed at camera locations across these three NSW speed camera programs represented a saving of \$1.4 billion to the NSW community over the five-year period 2018 to 2022.

Table 1: Road trauma reductions at locations five-years pre-installation compared to 2018–2022

	Camera program		gram
Measure	Fixed speed	Red-light	Average speed (heavy vehicles only)
Reduction in fatalities	76%	57%	49%
Reduction in serious injuries	N/A*	53%	53%
Reduction in all injuries	60%	63%	49%
Reduction in fatal and serious injury crashes	N/A*	52%	42%
Reduction in casualty (killed or injured) crashes	56%	59%	43%
Road trauma cost savings over five years 2018-2022 (\$ Million)	\$756M	\$445M	\$191M

 $^{^{\}star}$ Most fixed speed cameras were installed prior to serious injury crash data being available in NSW

The review indicated that the mobile speed camera program also continued to deliver road safety benefits. Since reintroduction of the mobile speed camera program in 2010, the data showed that road trauma rates have reduced, and speeding was reduced in all speed zones except 110 km/h. This report does not include a road trauma cost saving for the mobile speed camera program as individual cameras only enforce sites for an average of several hours each month on a randomised schedule. A thorough evaluation of the NSW mobile speed camera program, including road trauma cost savings, will be undertaken in the future, as set out in the Automated Enforcement Strategy.

Table 2 compares road trauma rates across the whole NSW road network in 2009, the year prior to the mobile speed camera program being reintroduced, with recent years.

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Table 2: NSW road trauma rates in 2009, 2020, 2021 and 2022

Measure	2009	2020	2021	2022
Fatalities	453	284	275	281
Fatality rate (per 100,000 population)	6.4	3.5	3.4	3.4
Speeding-related fatalities	207	130	107	114
Speeding fatality rate (per 100,000 population)	2.9	1.6	1.3	1.4
Proportion of speeding-related fatalities	46%	46%	39%	41%

While speeding-related road fatalities increased from 107 in 2021 to 114 in 2022, the proportion of road fatalities where speeding was a factor in 2022 (41%) was far lower than in 2009 (46%), before the mobile speed camera program was reintroduced in NSW, and lower than in 2020 (46%).

Table 3 shows the percentage of light vehicles exceeding the speed limit at speed survey sites in 2022 compared with both 2009 and 2021.

Table 3: Percentage of light vehicles exceeding the speed limit in 2009, 2021 and 2022

Posted Speed Limit	2009	2021	2022	2022 vs. 2021	2022 vs. 2009
40 km/h school zone	35%	27%	22%	-5%	-13%
40 km/h	69%	57%	54%	-3%	-15%
50 km/h	66%	43%	43%	-	-23%
60km/h	40%	26%	23%	-3%	-17%
70 km/h	46%	24%	22%	-2%	-24%
80 km/h	39%	23%	14%	-9%	-25%
90 km/h	39%	33%	26%	-7%	-13%
100 km/h	43%	30%	41%	+11%	-2%
110 km/h	50%	50%	50%	-	_

The 2022 NSW speed survey results show that there was a decrease or no change in the proportion of light vehicles exceeding the speed limit compared with 2021 for all speed zones except for 100 km/h.

During the period in which mobile speed cameras were operating with no warning signage during 2021 and 2022, the lowest proportion of light vehicle speeding on record was observed for six speed zones in one of those years, all except 40 km/h (non-school zone), 50 km/h and 110 km/h.

The 2022 NSW speed survey results suggest that the NSW mobile speed camera program was achieving its goal of contributing to network-wide speeding deterrence.

In December 2019, NSW introduced the Mobile Phone Detection Camera (MPDC) program to enforce illegal mobile phone use while driving. The program commenced with a three-month warning letter period before fines were sent from 1 March 2020. The program operates by using fixed and transportable, high-definition cameras to capture images of the front-row cabin space of all vehicles to detect illegal mobile phone use.

Fixed MPDC are positioned on roads with high traffic volumes and by using the selection criteria outlined in the NSW Automated Enforcement Strategy for road safety. Transportable cameras operate by moving between enforcement sites on the NSW road network. The program aims to achieve general deterrence of illegal mobile phone use by promoting to drivers that the cameras operate anywhere, anytime in all weather conditions.

Overall, there has been a steady decrease in the offence rate from 2020 as drivers change their behaviour when driving on NSW roads. On average, around one in 585 drivers checked in NSW was illegally using a mobile phone and issued a penalty notice, a non-compliance rate of 0.17% in the 2022 calendar year. This represents a positive shift in driver behaviour compared to the non-compliance rate detected during the pilot period (from January to June 2019) when one in every 82 drivers (1.2%) checked was detected using a mobile phone illegally.

The NSW Centre for Road Safety is committed to using evidenced based programs to deliver reductions in road trauma. This review found that the NSW automated enforcement camera programs continued to be effective at reducing road trauma in NSW.

Introduction

The purpose of the NSW Automated Enforcement Camera Programs: 2023 Review is to monitor individual automated enforcement camera programs in NSW to ensure they are having a positive road safety effect. This report monitored all automated speed camera enforcement in NSW including fixed; red-light; average and mobile speed cameras. The report also includes mobile phone detection camera enforcement. Road safety enforcement conducted by the NSW Police Force was not included.

This report was prepared using data up until the end of the 2022 calendar year. The time lag between the data period and reporting is because fatality and road trauma outcomes are not finalised until late in the following year, due to data matching processes between NSW Police, NSW Health, and Transport for NSW (Transport).

The review of automated enforcement camera programs was conducted in line with both the <u>NSW</u> <u>Auditor General's recommendations</u> and the <u>NSW Automated Enforcement Strategy for road safety</u>. It includes monitoring of individual cameras, such that if an individual camera is found to not have a positive road safety effect, the NSW Centre for Road Safety will consider alternative road safety measures, such as infrastructure improvements at the location. The findings from this review also guide future automated enforcement priorities.

Speeding

Speeding, which encompasses excessive speed (driving above the speed limit) or inappropriate speed (driving too fast for the prevailing conditions), is recognised as a major contributing factor in both the number and severity of crashes in NSW. In 2022, 114 people (41 per cent) were killed and 913 were seriously injured (23 per cent) in speed related crashes in NSW.

Speeding increases the risk of having a crash and increases the risk of death or serious injury in the event of a crash. Studies of survival and impact 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.

Speed enforcement is one of the key elements of an integrated speed management approach. It changes road user behaviour and helps ensure drivers do not exceed the posted speed limit, resulting in fewer crashes and reduced road trauma.

Transport also invests in innovative products such as the Speed Adviser mobile application as shown in Figure 1 which assists drivers in managing their speed.



Figure 1: Speed Adviser app, an innovative road safety tool developed by Transport. Copyright State of New South Wales (Transport for NSW)

Mobile Phone Distraction

Driver distraction can be understood as any circumstance where the driver's attention is diverted away from the driving task towards another competing activity. Distractions can be cognitive, visual, auditory, or manual.

Mobile phone use whilst driving is an example of distracted driving behaviour. In NSW, during 2017 – 2021, there were 116 casualty crashes involving a driver/rider using a hand-held mobile phone – resulting in 16 deaths and 176 injuries. It should be noted that mobile phone use prior to and during a crash is underreported due to difficulty in obtaining such evidence at crash scenes.

Research shows driver distraction is the main contributing factor in approximately 16% of crashes, with up to 20% of those crashes involving technology such as mobile phones¹. One study found mobile phone use during or shortly before a casualty crash was associated with a fourfold increased likelihood of crashing².

Red-light Running

Crashes at intersections are often more severe, with drivers and passengers vulnerable to side-impacts, while pedestrians have no protection in a crash. Red-light speed cameras are installed at high crash risk intersections identified through crash history or potential for serious crashes.

¹ Regan & Oviedo-Trespalacios, 2022

² McEvoy et al., 2005

NSW Automated Enforcement Strategy for road safety

In 2022, the <u>2026 Road Safety Action Plan</u> (2026 RSAP) was published. The 2026 RSAP focuses on enhancing education and local engagement, transforming the safety of the road network, and accelerating safety features in vehicles. The 2026 RSAP aims to achieve Transport's long-term goal of zero road deaths and serious injuries by 2050.

The <u>NSW Automated Enforcement Strategy for road safety</u> (AES) was published in 2022; a replacement for the NSW Speed Camera Strategy (2012). The AES provides an overarching framework to manage all the road safety automated enforcement programs used in NSW. The strategy has three overarching aims:

- 1. Deliver reductions in road trauma on NSW roads aligned to our trauma reduction targets, by reducing illegal and unsafe road behaviour
- 2. Reduce the risk of trauma related crashes
- 3. Complement on-road policing.

The AES also commits to monitoring the effectiveness of individual camera programs and making this information publicly available. It states that "In line with the Auditor General's recommendation, Transport for NSW will continue to monitor the effectiveness of individual camera programs and make this information publicly available – in replacement of its annual review of speed camera programs." This Automated Enforcement Camera Review reports on 2022 outcomes. As accessibility to data increases, it is hoped that data will be presented in a more user-friendly and interactive manner, further increasing transparency.

Community Road Safety Fund

Under legislation, all fine revenue collected from automated camera enforcement, including speed cameras, red light, mobile phone and seatbelt detection cameras (the latter introduced in July 2024), goes into the <u>Community Road Safety Fund</u>. The fund is used to deliver targeted road safety initiatives including School Zone Flashing Lights and School Crossing Supervisors, Safer Roads infrastructure projects, community and school road safety education programs, Police enhanced enforcement and Safer Vehicles testing and research, as well as automated enforcement.

The initiatives form part of the NSW 2026 Road Safety Action Plan and play an important role in our goal of reducing fatalities by 50% and serious injuries by 30% on NSW roads by 2030.

Fines issued by police are not paid into the Community Road Safety Fund.

Types of automated enforcement camera programs in NSW

Five automated enforcement camera programs were in operation in NSW during 2022. These were the fixed, red-light, average, and mobile speed camera programs as well as the mobile phone detection camera program. Table 4 shows the details of automated enforcement camera programs in NSW and explains how they contribute to reducing road trauma.

Table 4: Types of speed camera enforcement in NSW

Camera program	Main purpose	Introduced	Program size (2022)
Fixed speed	 Site-based enforcement, to address a localised risk (e.g., black spot / high-risk locations). Provides location specific speeding deterrence. 	1997	137 cameras at 107 locations
Red-light speed	 Site-based enforcement to address a localised risk at high-risk intersections. Provides location-specific speeding and red-light running deterrence. Important for pedestrian safety. 	2009	245 cameras at 223 intersections
Average speed	 Route-based enforcement to address a more localised risk on specific routes. Provides more localised speeding deterrence on specific routes. As of 31 December 2022, used in NSW for heavy vehicles only. 	2010	29 lengths
Mobile speed	 Network-based enforcement to address a state-wide risk/problem. Provides network-wide speeding deterrence through unpredictability. 	2010 (Previously ran 1991 to 2008)	1,166 locations delivering 21,000 enforcement hours per month
Mobile phone detection	 Network-based enforcement to address a state-wide risk/problem. Provides network-wide general deterrence of illegal mobile phone use whilst driving. 	2019	47 cameras

Key findings

The NSW Automated Enforcement Camera Programs: 2023 Review report identified that NSW speed camera programs continued to provide substantial road safety benefits to the NSW community. Overall, trauma rates were considerably lower at fixed, red-light, and average speed camera locations compared to pre installation.

The mobile speed camera program also continued to deliver road safety benefits, compared to results prior to the reintroduction of the mobile speed camera program in 2010. Since reintroduction, the data showed that road trauma rates have reduced, and speeding was reduced for all speed zones for light vehicles and most speed zones for heavy vehicles.

For mobile phone detection cameras, the infringement rate has continued to decrease over time since the introduction of the cameras.

Time periods analysed

The key findings for the analysis of individual speed camera locations were based on a before and after comparison. The 'before' period was the five-years prior to the installation of each speed camera. The 'after' period was the most recent five calendar years (2018 to 2022). Detailed information regarding the automated enforcement camera review methodology is provided in Appendix B.

Fixed speed camera program

The program size as of 31 December 2022 was 137 cameras at 107 locations. The median camera installation year was 2003. An example of a fixed speed camera is shown in Figure 2.

Overall, there was a substantial reduction in road trauma at fixed speed camera locations since the cameras were installed, compared with the five-year period prior to installation. Table 5 shows the trauma reductions at camera locations compared to trauma reductions observed across NSW over the same period.

The reduction in road trauma at fixed speed camera locations represented a saving of \$756 million to the community over the five-year period 2018 to 2022.



Figure 2: Example of a fixed speed camera used is NSW. Copyright State of New South Wales (Transport)

Table 5: Comparison of trauma rate reductions at fixed speed camera locations compared with across NSW for the same period

Measure	At fixed speed camera locations	Across NSW
Reduction in fatalities	76%	33%
Reduction in all injuries	60%	31%
Reduction in casualty crashes	56%	28%

Traffic volume increase

Over the period that fixed speed cameras have been reviewed within this report, there was a 21 per cent increase in traffic volume across NSW.

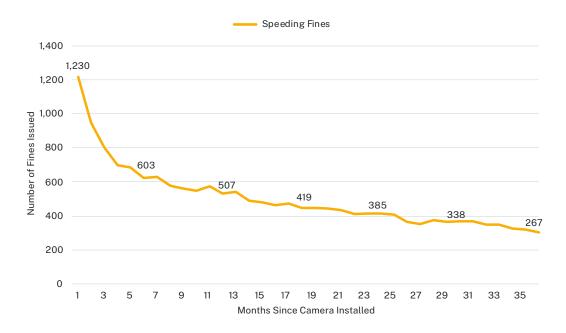
Speeding compliance at fixed speed cameras

During 2022, over 99 per cent of vehicles passing fixed speed cameras were complying with the posted speed limit. This high rate of compliance has remained consistent since soon after the program was introduced to NSW in 1997, given the cameras have an impact very soon after installation. In 2022, there were a total of 482,426 speeding fines issued from fixed speed camera enforcement.

Speeding fines issued by fixed speed cameras

Figure 3 shows a graph of the fixed speed camera program speeding fine data and includes data up to the end of the 2022 calendar year. The graph shows that there is a marked decline in the number of fines issued over the first few months after installation, as motorists change their behaviour at the locations where fixed speed cameras enforce. At 6 months, the typical fixed speed camera was issuing 51% fewer speeding fines than during the first month after installation. At 12 months, 24 months and 36 months, this reduction in speeding fines was 59%, 69% and 78% respectively.

Figure 3: Average monthly speeding fines issued per fixed speed camera since installation



Review of individual camera locations

Table 6 shows the outcome of the review process for individual fixed speed camera locations. Of the 107 fixed speed camera locations, 92 are analysed here. 15 locations are subject to separate analysis in Appendix C, as they are either operating in long term warning mode or are in high-risk tunnel locations.

Of the 92 locations, 91 locations were operational for five or more years while one location was operational for less than five years. Three locations were operational during 2022 however these locations have since been decommissioned. All data used in the review process for individual fixed speed camera locations is presented in Appendix C.

Table 6: 2022 review status for individual fixed speed camera locations

2022 review status	Number of fixed speed camera locations
Retain	83
Retain and monitor	5
Insufficient data	1
Decommissioned	3
Total	94

Red-light speed camera program

The program size as of 31 December 2022 was 245 cameras at 222 locations. The median camera installation year was 2013. An example of a red-light speed camera warning sign is shown in Figure 4.

Overall, there was a substantial reduction in road trauma at red-light speed camera locations since the cameras were installed, compared with the five-year period prior to installation.

Table 7 shows the trauma reductions at camera locations compared to trauma reductions observed across NSW over the same period.

The reduction in road trauma at red-light speed camera locations represented a saving of \$445 million to the community over the five-year period 2018 to 2022.



Figure 4: Example of a red-light speed camera warning sign. Copyright State of New South Wales (Transport for NSW)

Transport for NSW

Table 7: Comparison of trauma rates at red-light speed camera locations compared with across NSW for the same period

Measure	At red-light speed camera locations	Across NSW
Reduction in fatalities	57%	22%
Reduction in serious injuries	53%	15%
Reduction in all injuries	63%	40%
Reduction in pedestrian casualties	70%	42%
Reduction in fatal and serious injury crashes	52%	14%
Reduction in casualty crashes	59%	38%

Traffic volume increase

Over the period that red-light speed cameras have been reviewed within this report, there has been a 5 per cent increase in traffic volume across NSW.

Speeding compliance at red-light speed cameras

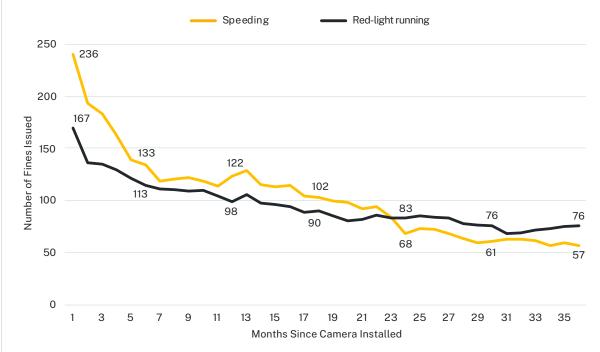
During 2022, over 99 per cent of vehicles passing red-light speed cameras were complying with the posted speed limit. This high rate of compliance has remained consistent since soon after the program was introduced to NSW in 2009, given the cameras have an impact very soon after installation. In 2022, there were a total of 401,681 fines issued from red-light speed camera enforcement. Of these fines, 248,976 (62%) were issued for speeding offences and 152,705 (38%) were issued for red-light running offences.

Fines issued by red-light speed cameras

Figure 5 shows the red-light speed camera program speeding fine data and includes data up to the end of the 2022 calendar year. The graph shows that there is a marked decline in the number of speeding fines issued over the first few months after installation as motorists change their behaviour at the locations where red-light speed cameras enforce. At 6 months, the typical red-light speed camera was issuing 44% fewer speeding fines than during the first month after installation. At 12 months, 24 months and 36 months, this reduction in speeding fines was 48%, 71% and 76% respectively.

There is a similar, albeit lesser reduction in the number of red-light running fines issued over the first few months after installation as motorists change their behaviour at the locations where red-light speed cameras enforce. At 6 months, the typical red-light speed camera was issuing 32% fewer red-light running fines than during the first month after installation. At 12 months, 24 months and 36 months, this reduction in speeding fines was 41%, 50% and 54% respectively.

Figure 5: Average monthly speeding fines is sued per red-light speed camera since installation



Review of individual camera locations

Table 8 shows the outcome of the review process for individual red-light speed camera locations. Of the 223 red-light speed camera locations, 171 locations were operational for five or more years while 52 locations were operational for less than five years.

Table 8: 2022 review status for individual red-light speed camera locations

2022 review status	Number of red-light speed camera locations
Retain	139
Retain and monitor	32
Insufficient data	52
Decommissioned	0
Total	223

Average speed camera program

The Program size as of 31 December 2022 was 29 lengths. The median installation year of these lengths was 2011. An example of an average speed camera enforcing heavy vehicles in NSW can be found in Figure 6.

Overall, there has been a substantial reduction in heavy vehicle road trauma at average speed camera locations since the cameras were installed, compared with the five-year period prior to installation.

Table 9 shows heavy vehicle trauma reductions at camera locations compared to heavy vehicle trauma reductions observed across NSW over the same period.

The reduction in road trauma at average speed camera locations represented a saving of \$191 million to the community over the five-year period 2018 to 2022.



Figure 6: An example of an average speed camera in NSW. Copyright State of New South Wales (Transport for NSW)

Table 9: Comparison of heavy vehicle trauma rates at average speed camera locations compared with across NSW for the same period

Measure	At average speed camera locations	Across NSW
Reduction in fatalities from crashes involving a heavy vehicle	49%	28%
Reduction in serious injuries from crashes involving a heavy vehicle	53%	11%
Reduction in all injuries from crashes involving a heavy vehicle	49%	34%
Reduction in fatal and serious injury crashes involving a heavy vehicle	42%	11%
Reduction in casualty crashes involving a heavy vehicle	43%	33%

Traffic volume increase

Over the period that average speed enforcement lengths have been reviewed within this report, there has been a 21 per cent increase in heavy vehicle volumes across NSW.

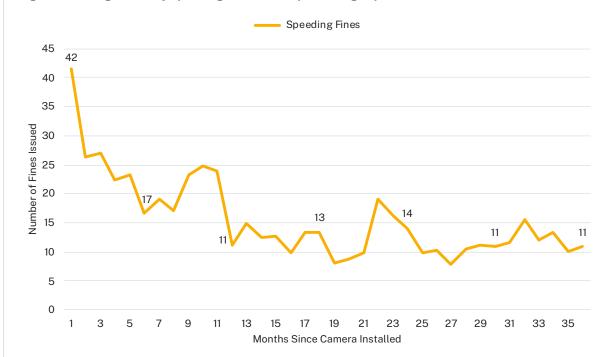
Speeding compliance at average speed cameras

During 2022, over 99 per cent of heavy vehicles passing average speed cameras were complying with the posted speed limit. This high rate of compliance has remained consistent since soon after the program was introduced to NSW in 2010, given the cameras have an impact very soon after installation. In 2022, there were a total of 2,936 speeding fines issued from average speed camera enforcement.

Speeding fines issued by average speed cameras

Figure 7 shows a graph of the average speed camera program speeding fine data and includes data up to the end of the 2022 calendar year. The graph shows that there is a marked decline in the number of fines issued over the first few months after installation, as heavy vehicle drivers change their behaviour when driving on average speed camera lengths. At 36 months, the typical average speed camera was issuing 74% fewer speeding fines than during the first month after installation.

Figure 7: Average monthly speeding fines issued per average speed camera since installation



Review of individual camera locations

Table 10 shows the outcome of the review process for individual average speed camera locations. Of the 29 average speed camera lengths, 25 are analysed here, all were operational for five or more years. Four locations are subject to separate analysis in Appendix E, as they are in high-risk tunnel locations.

Table 10: 2022 review status for individual average speed camera locations

2022 review status	Number of average speed camera locations
Retain	21
Retain and monitor	4
Insufficient data	0
Decommissioned	0
Total	25

Mobile speed camera program

As of 31 Dec 2022, the mobile speed camera program operated at enforcement sites across 1,166 mobile speed camera locations. An example of a mobile speed camera enforcing speed in 2020 can be found in Figure 8. Roof top signage was not required at the time of this photo.

This report is based on data up until the end of the 2022 calendar year. As such, this report is not representative of a significant change to the mobile speed camera program announced in October 2022; the re-introducing of portable warning signs prior to and after the mobile speed camera vehicle and a return to single-directional enforcement from 1 January 2023.

The report is representative of several significant changes to the mobile speed camera program between 2020 and 2022:

- the removal of advance warning signs on the 19th of November 2020
- · changes to vehicle livery from December 2020
- · increase in monthly enforcement hours to 21,000 from 1 July 2021
- · commencement of bi-directional enforcement from 1 July 2021
- introduction of rooftop warning signage from February 2022.

In 2022, the mobile speed camera program delivered 78% of the contracted 21,000 enforcement hours per month. The primary reasons for the shortfall in enforcement hours was severe flooding across large areas of NSW and lost time due to implementation of new policy changes such as introducing rooftop warning signs. Table 11 presents some key statistics for the mobile speed camera program during 2022.



Figure 8: An example of a mobile speed camera in November 2020. Copyright State of New South Wales (Transport for NSW)

Table 11: Mobile speed camera program statistics in 2022

Measure	Count
Hours of enforcement	195,827
Vehicles checked	92,711,806
Speeding fines issued	319,005
Offence rate (per hour of enforcement)	1.63
Offence rate (per vehicle checked)	0.34% (1 in 291 vehicles)

During 2022, over 99.6 per cent of vehicles passing mobile speed cameras were complying with the posted speed limit. In 2022, there were a total of 319,005 speeding fines issued from mobile speed camera enforcement.

The mobile speed camera program continued to deliver road safety benefits when compared to the most recent period without the program in operation, and there was a 10 per cent increase in traffic volume across NSW since the mobile speed camera program was reintroduced in 2010.

Annual speed survey results show that there has generally been a decrease in the proportion of vehicles exceeding the speed limit for all speed zones, since the mobile speed camera program was reintroduced to NSW in 2010.

Table 12 and Table 13 show the percentage of vehicles exceeding the speed limit in 2009, 2021 and 2022 for light vehicles and heavy vehicles respectively. Detailed annual speed survey results for 2009 to 2022 can be found in Appendix F.

Table 12: Percentage of light vehicles exceeding the speed limit in 2009, 2021 and 2022

Posted Speed Limit	2009	2021	2022	2022 vs. 2021	2022 vs. 2009
40 km/h school zone	35%	27%	22%	-5%	-13%
40 km/h	69%	57%	54%	-3%	-15%
50 km/h	66%	43%	43%	-	-23%
60km/h	40%	26%	23%	-3%	-17%
70 km/h	46%	24%	22%	-2%	-24%
80 km/h	39%	23%	14%	-9%	-25%
90 km/h	39%	33%	26%	-7%	-13%
100 km/h	43%	30%	41%	+11%	-2%
110 km/h	50%	50%	50%	-	_

Table 13: Percentage of heavy vehicles exceeding the speed limit in 2009, 2021 and 2022

Posted Speed Limit	2009	2021	2022	2022 vs. 2021	2022 vs. 2009
40 km/h school zone	32%	26%	22%	-4%	-10%
40 km/h	52%	51%	53%	+2%	+1%
50 km/h	62%	43%	44%	+1%	-18%
60km/h	32%	27%	20%	-7%	-12%
70 km/h	34%	20%	20%	-	-14%
80 km/h	33%	25%	11%	-14%	-22%
90 km/h	34%	35%	24%	-11%	-10%
100 km/h	38%	45%	36%	-9%	-2%
110 km/h*	56%	64%	71%	+7%	+15%

 $^{^{\}star}$ The speed limit for heavy vehicles in NSW is 100 km/h $\,$

The 2022 NSW speed survey results show that there was a decrease or no change in the proportion of light vehicles exceeding the speed limit compared with 2021 for all speed zones except for 100 km/h. While mobile speed cameras where operating with no warning signage during 2021 and 2022, the lowest proportion of light vehicle speeding on record was observed for all speed zones except 40 km/h (non-school zone), 50 km/h and 110 km/h.

The proportion of heavy vehicles exceeding the speed limit in 2022 was also generally lower compared with recent years. While mobile speed cameras where operating with no warning signage during 2021 and 2022, the lowest proportion of heavy vehicle speeding on record was observed for all speed zones except 40 km/h (both school zone and non-school zone), 50 km/h, 100 km/h and 110 km/h.

The 2022 NSW speed survey results suggest that the goal of network-wide speeding deterrence was likely greatly helped by the operation of the NSW mobile speed camera program.

Mobile phone detection camera program

The program as of 31 December 2022 comprised 47 fixed and transportable cameras deployed across metropolitan and regional NSW aiming to reach close to 100% of NSW drivers.

By 31 December 2022, around 260 million vehicles checks were completed by these mobile phone detection cameras with over 99% of these vehicles compliant since the program commenced enforcement on 1 March 2020.

Overall, there has been a steady decrease in the offence rate from 2020 as drivers change their behaviour when driving on NSW roads. On average, around one in 585 drivers checked in NSW was illegally using a mobile phone and issued a penalty notice, a non-compliance rate of 0.17% in the 2022 calendar year. This represents a positive shift in driver behaviour compared to the non-compliance rate detected during the pilot period (from January to June 2019) when one in every 82 drivers (1.2%) checked was detected using a mobile phone illegally.

Table 14 shows the volume of illegal mobile phone use fines since the of the NSW mobile phone camera detection program commence enforcement on 1 March 2020.

Table 14: Illegal mobile phone use fines issued between 1 March 2020 and 31 December 2022

Calendar Year	Police Issued Fines			Offence Rate (1 in XX Vehicles)
2020	10,331	136,260	0.22%	1 in 449
2021	12,851	163,722	0.19%	1 in 514
2022	13,217	194,765	0.17%	1 in 581

Description of report appendices

The following appendices to this report include supporting information (**Appendix A**), the automated enforcement camera review methodology (**Appendix B**), and detailed information on individual fixed speed camera locations (**Appendix C**), individual red-light speed camera locations (**Appendix D**), individual average speed camera locations (**Appendix E**) and the mobile speed camera program review, including results of the annual speed survey (**Appendix F**).

Appendix A: Supporting information

Safety benefits of camera enforcement

Automated enforcement is an important road safety initiative with proven road safety benefits. It is a commonly employed method of enforcement in best practice road safety jurisdictions worldwide. The primary type of automated enforcement is speed enforcement, which helps to reduce the incidences of speeding on our roads, which in turn reduces the risk of crashes and reduces the likelihood of death or serious injuries in the event of a crash.

Speed enforcement activities aim to reduce speeding by increasing the perceived likelihood of being caught and punished. Speed cameras generally tend to detect an initial high number of drivers speeding followed by a rapid and sustained speeding compliance as drivers modify their behaviour. This is also reflected by a reduction in crashes over that time.

More recently, automated enforcement has been applied to address road safety issues beyond speeding such as driver distraction from illegal mobile phone use, which is understood to be a serious contributor to trauma on the road network despite being underreported in crash data due to difficulty in obtaining such evidence at crash scenes.

Transparent operation of NSW automated enforcement camera programs

The NSW government lists all speed camera locations, allowing members of the public to find the locations of all fixed and red-light speed cameras, the locations of mobile speed camera enforcement, and the positions of all average speed camera lengths. Members of the public can nominate locations for speed cameras via the NSW Centre for Road Safety website.

Transport also offers the <u>Speed Adviser mobile application</u> (that uses the GPS capability in mobile phones), which monitors location and speed, and alerts when vehicles are exceeding speed limits. Since 2022, Speed Adviser informs users where mobile speed cameras may be in operation and advises users when they are entering a mobile speed camera zone.

Data sources

The following data sources were utilised for this report and a brief description of each data source is provided.

NSW crash data

The crash data recorded by Transport in the database, Safe System Analytics (SSA), are confined to those crashes which conform to the national guidelines for reporting and classifying road vehicle crashes. This is based on the following criteria:

- · The crash was reported to the Police
- The crash occurred on a road open to the public
- · The crash involved at least one moving road vehicle
- · The crash involved at least one person being killed or injured.

Injury severity

Crash data is presented by severity of injury, and defined as follows:

- Fatality: a person who dies within thirty days from injuries received in a road traffic crash.
- Serious injury: a person identified in SSA (casualty or driver or rider) who is matched to a hospital admission record on the same day or on the day after a crash and did not die within 30 days of the crash and is admitted with at least one injury diagnosis; or linked to an iCare (Lifetime Care) participant record.
- Moderate injury: a person identified in SSA (casualty or driver or rider) who is matched to an emergency department attendance record on the same day or on the day after a crash but was not killed or not subsequently admitted to hospital; or a previously defined Minor/Other or No Injury SSA record matched to a State Insurance Regulatory Authority (SIRA) Compulsory Third Party (CTP) record with an Abbreviated Injury Scale (an AIS) score of 2 (Moderate) or higher.
- Minor / Other injury: a person identified as an injury in SSA who is not matched to a hospital
 admission record or emergency department attendance record; or a previously defined No Injury SSA
 record matched to a SIRA CTP record with a MAIS score of 1 (Minor).
- Injury Severity uncategorised: a person identified as an injury in SSA prior to 2005 for which data linkage with health records is not available.
- · Casualty: any person killed or injured because of a crash.
- · Casualty crash: a crash that results in at least one person being killed or injured.

Crash data reported from 2005 onwards included additional detail regarding injury severity, as categorised as above. Prior to 2005, crash data was not matched to hospital admissions or emergency department presentations, so all non-fatal injuries prior to 2005 were uncategorised with respect to the severity of injury.

Crash costs

The estimated casualty cost for the "before" period and the most recent five calendar year "after" period was 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. The casualty costs used were based on the costs for the weighted average of urban and non-urban fatal and injury reductions, as follows:

- \$8,757,819 per fatality
- \$561,892 per serious injury
- \$87,645 per moderate or minor/other injury
- \$244,731 per uncategorised injury.

Crash costs are based on figures from the Transport for NSW Economic Parameter Values 2023.

Fine data

Fine data for all NSW automated enforcement camera programs are publicly available at the <u>Revenue NSW</u> website. All fines from automated enforcement cameras are directed to the Community Road Safety Fund to pay for road safety programs across NSW.

State-wide comparison traffic volume data

The Australian Bureau of Infrastructure, Transport and Regional Economics publishes the <u>yearbook</u> of Australian Infrastructure Statistics each year. NSW state-wide measures of vehicle kilometres travelled (VKT) as calculated for the yearbook are the basis of the state-wide vehicle volumes cited within this report.

State-wide speed survey data

Vehicle speeds were assessed state-wide via the NSW Centre for Road Safety annual speed survey program. In 2022, speed surveys for the program were conducted at 147 NSW locations, including a range of road types with a range of speed limits, to gather current information about the speeding behaviour of both light vehicle drivers and heavy vehicle drivers.

The surveys measure free travel speeds, with a headway of four or more 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.

Appendix B: Automated enforcement camera review methodology

There are several criteria for measuring the performance of automated enforcement cameras in NSW. Two criteria common across all camera programs are the analysis of compliance rates (number of fines issued per vehicle checked), and analysis of crash rates. Compliance and crash data analysis is site specific for fixed speed cameras, red-light speed cameras; route specific for average speed cameras; and network-wide for mobile speed cameras and mobile phone detection cameras.

Network-wide speed surveys are also used to measure the performance of mobile speed cameras. Table 15 outlines how each performance criteria is evaluated for each type of camera.

Table 15: Criteria for measuring the performance of individual automated enforcement camera programs

Camera program	Performance data	Measure of performance
Fixed speed	Compliance data	Increase in compliance at camera location and/or reduction in speeding fines issued.
	Crash data	For fixed speed cameras located within a school zone, crash data were examined from patch-to-patch (the length of road designated as a school zone, as identified by the start and end 40 km/h patches marked on the road).
		For fixed speed cameras located within tunnels, crash data were examined for the entire length of the tunnel.
		For all other cameras, reduction in casualties and crashes within 500 metres of the camera (individual camera locations assessed). For locations with more than one camera in operation (where cameras were less than 100 metres apart), the crash data analysis length was for 500 metres either side of the mid-point of the two cameras.
Red-light speed	Compliance data	Increase in speed compliance at the intersection and/or reduction in speeding fines issued.
	Crash data	Reduction in casualties and crashes within 10 metres of an intersection. Pedestrian casualties were specifically examined.
Average speed	Compliance data	Increase in heavy vehicle compliance within the enforcement length and/or reduction in heavy vehicle speeding fines issued
	Crash data	Reduction in heavy vehicle crashes within enforcement lengths

Camera program	Performance data	Measure of performance
Mobile speed	Annual speed surveys	Reduction in vehicles exceeding speed limit across the road network, by testing a random sample of locations.
	Compliance data	Increase in compliance rates across the road network, and/or reduction in speeding fines issued.
	Crash data	Reduction in speeding-involved crashes and casualties across the whole NSW road network.
Mobile phone	Compliance data	Increase in compliance rates at camera sites.
detection	Observational studies	Increase in compliance observed in observational studies conducted at locations across the road network.
	Crash data	Reduction in illegal mobile phone use-involved crashes and casualties across the whole NSW road network.

Data parameters

Five years of data

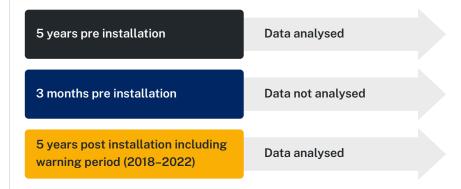
Typically, at least five years of data are required to assess a camera's performance.

As some camera locations or lengths have been operational for less than five years, the data for these locations are insufficient to reliably assess performance. Preliminary observations have instead been provided for these locations.

Time periods analysed

Data for the period before the installation of the camera (the "before" period) have been compared against data after the camera's commencement date (the "after" period, when warning letters and then speeding fines are issued). To assess the current performance of the speed camera, the most recent five calendar year period (i.e., 2018 – 2022) is selected as the "after" period. Figure 9 shows the timeline employed for before and after installation crash data analysis.

Figure 9: Before and after installation for crash data analysis



Pre-installation periods

For fixed, red-light, and average speed camera programs, the five year "before" period ends three months prior to the "commencement date." This is to ensure that the "before" period does not capture the "pre-installation period" when behavioural changes may result from the presence of not-yet operational camera housing.

Warning mode periods

Fixed and red-light speed cameras generally operate in warning mode for a one-month period after the "commencement date". A one-month warning mode period also applied for mobile speed cameras when the program was introduced but has not been applied since then. NSW average speed camera lengths generally operate in warning mode for a two-month period after the "commencement date". The warning mode period is included in the post installation camera crash data analysis.

Automated enforcement camera review recommendations

Once the review process is complete, recommendations can be made for each speed camera location as per Table 16. Triggers for each outcome are predominantly based on crash data analysis at each camera location. Mobile speed cameras and mobile phone detection cameras are not included in the individual camera review as they are deployed periodically based on a random schedule and the goal of this program is to achieve network-wide speeding and illegal mobile phones use deterrence, respectively.

Table 16: Automated enforcement camera review recommendations for individual camera locations

Recommendation	Trigger	Outcome	
Retain	There has been no increase in casualty crashes, or	The camera will continue to be used at the location.	
	There has been an increase in the number of casualty crashes, but it is not a statistically significant result, and does not require an additional road safety intervention at this time, and the location has been reviewed within the last 5 years, or		
	There has been a statistically significant increase in the number of casualty crashes, but the location has been reviewed within the last 5 years.		
Retain and monitor	There has been an increase in the number of casualty crashes, but it is not a statistically significant result and does not presently require an additional road safety intervention.	The camera will continue to be used at the location. The location will also be flagged for ongoing monitoring in future reviews.	
Insufficient data	There is less than 5 years of 'after' data available.	The camera will be assessed once 5 years of "after" data is available.	
Decommissioned	At time of publication the camera was decommissioned. The camera was included in this report since the camera was operational for part of 2022.	No action required.	

Appendix C: Fixed speed camera locations

At the end of 2022 there were 107 fixed speed camera locations in operation across NSW. In this report, road safety benefits were only assessed in detail for 92 fixed speed camera locations. Fifteen fixed speed camera locations were excluded, as follows:

- Seven locations as shown in Table 19 were operating in long term warning mode.3
- Eight locations as shown in Table 21 were installed at high-risk tunnel locations. These cameras were generally installed when the tunnel was constructed, therefore no pre-installation data are available.

Fixed speed cameras are located at specified road lengths where there is a demonstrated crash history or a high crash risk, to detect and deter speeding at specific locations. In managing the program, Transport may increase the warning letter period and/or use Variable Message Signs to increase driver awareness of camera locations, where the trend in warning letters or number of speeding fines issued, suggests that this action was required. Transport also conducts ongoing site maintenance to ensure that signage is effectively placed and not obscured by roadside objects, such as trees.

Summarised data for each individual fixed speed camera location can be found in Table 17 and Table 18. Table 17 contains location details and the review outcome status for 2022. Table 18 contains summarised before and after road trauma data, on which this automated enforcement camera review was based.

Table 17: Location details and review status for individual fixed speed camera locations

#	Camera #	Suburb	Location	School zone	Installed	Review status
1	9816, 9817	Alexandria, Rosebery	Botany Road, between Gardeners Road and Gillespie Avenue	Yes	13/06/2007	Retain
2	9820	Ashfield	Hume Highway, between Murrell Street and Queen Street	Yes	7/08/2007	Retain
3	9534	Auburn	Parramatta Road, between Harbord Street and Duck Street	No	15/05/2002	Retain
4	9818, 9819	Bankstown	Hume Highway, between Rookwood Road and Stacey Street	Yes	4/07/2007	Retain
5	9616	Bar Point	Pacific Motorway, between Jolls Bridge and Mt White Exit Ramp	No	10/04/2006	Retain

³ Following the results of the 2011 audit of speed cameras, the then 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. However, cameras at seven of locations remain in warning mode following reviews by the Centre for Road Safety and safety concerns expressed by the community.

#	Camera #	Suburb	Location	School zone	Installed	Review status
6	9643	Berkshire Park	Richmond Road, between Sanctuary Drive and Llandilo Road	No	30/06/2000	Retain and monitor
7	9822, 9823	Beverly Hills	King Georges Road, between Frederick Avenue and Norfolk Avenue	Yes	9/07/2007	Retain
8	9617	Bexley North	Bexley Road, between Miller Avenue and Kingsland Road North	No	29/05/2006	Retain
9	9579	Blandford	New England Highway, between Moore Street and Timor Road	No	10/04/2002	Retain
10	9594	Bomaderry	Bolong Road, between Beinda Street and Coomea Street	No	31/03/2003	Retain
11	9832	Bonnyrigg	Cabramatta Road West, between Tarlington Parade and Katinka Street	Yes	17/10/2007	Retain
12	9612	Brogo	Princes Highway, between Pioneer Close and Bellemount Lane	No	2/05/2003	Decommissioned
13	9509	Bulli	Princes Highway, between Grevillea Park Road and Black Diamond Place	No	4/12/2001	Retain
14	9522	Burwood Heights	Hume Highway, between Appian Way and Kelso Street	No	5/12/2001	Retain
15	9540	Camellia	James Ruse Drive, between Thomas Street and River Road West	No	6/12/2001	Retain
16	9651	Canterbury	Canterbury Road, between Dibbs Street and Fore Street	No	19/04/2001	Retain
17	9626	Caringbah	Captain Cook Drive, between Endeavour Road and Gannons Road	No	12/04/2001	Retain
18	9553	Carlingford	Pennant Hills Road, between Evans Road and Coleman Avenue	No	16/08/2002	Retain
19	9804	Castle Hill	Old Northern Road, between Telfer Road and McMullen Avenue	Yes	18/05/2007	Retain
20	9622	Charmhaven	Pacific Highway, between Costa Avenue and Lowana Avenue	No	10/04/2007	Retain

#	Camera #	Suburb	Location	School zone	Installed	Review status
21	9625	Concord West	Concord Road, between Nirranda Street and Mepunga Street	No	24/07/2000	Retain
22	9851	Condell Park	Edgar Street, between Augusta Street and Birdsall Avenue	Yes	24/10/2007	Retain
23	9811, 9812	Eastgardens, Maroubra	Bunnerong Road, between Fitzgerald Avenue and Smith Street	Yes	20/06/2007	Retain
24	9549	Edgecliff	New South Head Road, between Waratah Street and New Beach Road	No	7/12/2001	Retain
25	9669	Engadine	Heathcote Road, between New Illawarra Road and Forum Drive	No	4/06/2017	Retain
26	9623	Ewingsdale	Hinterland Way, between Myocum Road and St Helena Road	No	22/09/2006	Retain
27	9561	Fairfield East	Fairfield Street, between Donald Street and Mandarin Street	No	4/07/2002	Retain
28	9637	Gateshead	Pacific Highway, between Hughes Street and The Crescent	Yes	30/05/2000	Retain
29	9563	Glencoe	New England Highway, between Old Ben Lomond Road and Ross Road	No	4/09/2003	Retain
30	9543	Greystanes	Greystanes Road, between Mavis Street and Doris Street	No	30/11/2001	Retain
31	9806, 9807	Guildford	Woodville Road, between Kimberley Street and Oxford Street	Yes	16/05/2007	Retain
32	9597	Gwynneville	Princes Motorway, between Gipps Road Overpass and Memorial Drive Overpass	No	7/08/2003	Retain
33	9830	Hurstville	Forest Road, between Cronulla Street and Lily Street	Yes	17/10/2007	Retain
34	9845, 9846	Kingswood	Parker Street, between Copeland Street and Gascoigne Street	Yes	28/01/2009	Retain
35	9600, 9601	Kogarah	Princes Highway, between Rocky Point Road and South Street	Yes	15/07/2003	Retain

#	Camera #	Suburb	Location	School zone	Installed	Review status
36	9574	Korora	Pacific Highway, between Bruxner Park Road and Old Coast Road	No	20/02/2003	Retain
37	9638	Kurrajong Heights	Bells Line of Road, between Queen Street and Old Bells Line of Road	No	22/05/2000	Retain
38	9550	Lane Cove	Centennial Avenue, between Gentle Street and Lawn Avenue	No	10/12/2001	Retain
39	9546	Lansvale	Hume Highway, between Quest Avenue and Knight Street	No	5/12/2001	Retain
40	9824, 9825	Lindfield	Pacific Highway, between Eton Road and Llewellyn Street	Yes	9/07/2007	Retain
41	9821	Liverpool	Bigge Street, between Campbell Street and Elizabeth Drive	Yes	14/11/2007	Retain
42	9636	Lochinvar	New England Highway, between Robert Road and Station Lane	Yes	9/05/2000	Retain and monitor
43	9813, 9814	Maroubra	Malabar Road, between Fitzgerald Avenue and Mons Avenue	Yes	20/06/2007	Retain
44	9582	Mayfield West	Pacific Highway, between Gordon Street and Frith Street	No	23/12/2002	Retain
45	9810	Merrylands	Merrylands Road, between Chetwynd Road and Clarence Street	Yes	16/05/2007	Retain
46	9833, 9834	Miranda	Kingsway, between Sylva Avenue and University Road	Yes	7/11/2007	Retain
47	9837, 9838	Moore Park	Cleveland Street, between Anzac Parade and South Dowling Street	Yes	14/11/2007	Retain
48	9602	Mosman	Macpherson Street, between Davidson Parade and Montague Road	Yes	15/07/2003	Retain
49	9645	Mount Pritchard	Elizabeth Drive, between Brown Road and Humphries Road	No	7/07/2000	Retain
50	9666	Mount Victoria	Great Western Highway, between Victoria Street and Ambermere Drive	No	25/07/2015	Retain

#	Camera #	Suburb	Location	School zone	Installed	Review status
51	9826, 9827	Narrabeen	Pittwater Road, between Devitt Street and Godwin Street	Yes	31/10/2007	Retain
52	9667	Narraweena	Warringah Road, between May Road and Victor Road	No	14/12/2015	Retain
53	9583	Nords Wharf	Pacific Highway, between Nords Wharf Road and Cams Wharf Road	No	27/02/2003	Retain and monitor
54	9831	North Curl Curl	Harbord Road, between Abbott Road and Miles Street	Yes	31/10/2007	Retain
55	9606	North Gosford	Henry Parry Drive, between Glennie Street and Compton Street	Yes	15/07/2003	Retain
56	9665	North Macksville	Giinagay Way, between Bellview Drive and Ferry Street	No	10/01/2015	Retain
57	9578	North Macksville	Giinagay Way, between Lumsden Lane and Champions Lane	No	3/03/2003	Retain
58	9847, 9848	North Narrabeen	Pittwater Road, between Garden Street and Namona Street	Yes	28/01/2009	Retain
59	9541	North Parramatta	Pennant Hills Road, between Gladstone Street and Sorrell Street	No	30/11/2001	Retain
60	9657, 9658	North Parramatta, Oatlands	Pennant Hills Road, between Gollan Avenue and Masons Drive	Yes	10/04/2007	Retain
61	9639	North Wollongong	Princes Highway, between Ajax Avenue and Exeter Avenue	No	13/06/2000	Retain
62	9662	North Wollongong	Princes Motorway, between Mount Ousley Road and University Avenue Overpass	No	7/08/2003	Retain
63	9841, 9842	Old Guildford, Chester Hill	Woodville Road, between Middleton Road and Orchardleigh Street	Yes	30/01/2009	Retain
64	9660, 9661	Ourimbah	Pacific Highway, between Dog Trap Road and Ourimbah Creek Road	Yes	15/07/2003	Retain
65	9535	Ourimbah	Pacific Motorway, between Dogtrap Road Overpass and Ourimbah Creek Road Underpass	No	6/12/2001	Retain

#	Camera #	Suburb	Location	School zone	Installed	Review status
66	9646	Padstow	Gibson Avenue, between Bryant Street and Turvey Street	No	3/07/2000	Retain
67	9573	Peakhurst	Henry Lawson Drive, between Belmont Road and Ogilvy Street	No	29/01/2003	Retain
68	9829	Penshurst	Forest Road, between St Georges Road and Penshurst Street	Yes	17/10/2007	Retain
69	9644	Picnic Point	Henry Lawson Drive, between Carinya Road and The River Road	No	16/05/2001	Retain
70	9815	Randwick	Avoca Street, between Howard Street and Barker Road	Yes	29/06/2007	Retain
71	9586	Rankin Park	McCaffrey Drive, between Orara Street and Duval Street	No	29/04/2003	Retain and monitor
72	9839, 9840	Rydalmere	Victoria Road, between John Street and Park Road	Yes	28/01/2009	Retain and monitor
73	9554	Ryde	Blaxland Road, between Reservoir Lane and Melville Street	No	24/06/2002	Retain
74	9835, 9836	Ryde	Victoria Road, between Cressy Road and Margaret Street	Yes	14/11/2007	Retain
75	9580, 9581	Sandgate	Pacific Highway, between Old Maitland Road and Sparke Street	No	14/01/2003	Retain
76	9547	South Windsor	George Street, between Rickaby Street and Woods Road	No	30/11/2001	Retain
77	9652	Stokers Siding	Tweed Valley Way, between Blakeneys Road and Cooradilla Road	No	22/09/2000	Retain
78	9849	Strathfield	The Boulevarde, between Strathfield Avenue and Torrington Road	Yes	4/02/2009	Retain
79	9548	Sun Valley	Great Western Highway, between Green Parade and Sun Valley Road	No	29/04/2002	Retain
80	9568	Tenterfield	New England Highway, between Duncan Street and George Street	No	3/10/2002	Retain

#	Camera #	Suburb	Location	School zone	Installed	Review status
81	9802, 9803	Toongabbie	Fitzwilliam Road, between Binalong Road and Reynolds Street	Yes	16/05/2007	Retain
82	9670	Ulmarra	Big River Way, between River Street and George Street	No	16/11/2018	Insufficient data
83	9567	Valla	Giinagay Way, between Oyster Creek Road and Wenona Close	No	25/11/2002	Decommissioned
84	9538	Valla	Giinagay Way, between Oyster Drive and E W Road	No	5/02/2002	Decommissioned
85	9843, 9844	Wahroonga	Pacific Highway, between Gilda Avenue and Woodville Avenue	Yes	28/01/2009	Retain
86	9570	Wardell	Blackwall Drive, between Kays Road and Fitzroy Street	No	24/02/2003	Retain
87	9592	Warrawong	Northcliffe Drive, between Griffin Street and Kully Way	No	1/05/2003	Retain
88	9560	West Pennant Hills	Castle Hill Road, between Victoria Road and Cumberland Forest Way	No	18/07/2002	Retain
89	9571	Wollongbar	Bruxner Highway, between Cowlong Road and McLeans Ridges Road	No	24/02/2003	Retain
90	9610	Wollongong	Princes Highway, between Mount Keira Road and Highway Avenue	Yes	15/07/2003	Retain
91	9648	Woodburn	River Street, between Richmond Street and Sussex Street	No	20/03/2001	Retain
92	9542	Yagoona	Hume Highway, between Smith Road and Brennan Road	No	7/12/2001	Retain

Table 18: Summarised before and after road trauma and speeding fines (2022) for individual fixed speed camera locations

			Analysis length -	Da	ays		Fatalities			Injuries		С	asualty cras	hes	Speeding fines
#	Camera #	Suburb	(m)	Bef.	Aft.	Bef.	Aft.	^/↓	Bef.	Aft.	^/↓	Bef.	Aft.	^/↓	(2022)
1	9816, 9817	Alexandria, Rosebery	450	1,826	1,826	0	0	-	22	6	↓73%	20	6	↓70%	6,443
2	9820	Ashfield	440	1,826	1,826	0	0	-	19	9	↓53%	18	8	↓56%	2,203
3	9534	Auburn	1,000	1,826	1,826	0	1	↑	79	35	↓56%	57	30	↓47%	6,769
4	9818, 9819	Bankstown	670	1,826	1,826	0	0	-	73	25	↓66%	58	21	↓64%	9,120
5	9616	Bar Point	1,000	1,826	1,826	1	0	↓100%	18	5	↓72 %	16	5	↓69%	618
6	9643	Berkshire Park	1,000	1,552	1,826	1	2	↑70%	19	26	↑16%	14	15	↓9%	150
7	9822, 9823	Beverly Hills	1,050	1,826	1,826	1	0	↓100%	125	39	↓69%	86	35	↓69%	6,323
8	9617	Bexley North	1,000	1,826	1,826	1	0	↓100%	47	12	↓74 %	32	12	↓63%	653
9	9579	Blandford	1,000	1,826	1,826	0	0	-	3	4	↑33%	3	2	↓33%	523
10	9594	Bomaderry	1,000	1,826	1,826	1	0	↓100%	13	2	↓85%	10	2	↓80%	0
11	9832	Bonnyrigg	1,000	1,826	1,826	0	0	-	51	12	↓76 %	25	11	↓56%	6,888
12	9612	Brogo	1,000	1,826	1,826	0	0	-	3	1	↓67%	2	1	↓50%	75
13	9509	Bulli	1,000	1,826	1,826	1	0	↓100%	29	10	↓66%	26	10	↓62%	1,791
14	9522	Burwood Heights	1,000	1,826	1,826	0	0	-	51	17	↓67%	38	13	↓66%	567
15	9540	Camellia	1,000	1,826	1,826	1	1	-	55	14	↓75%	35	14	↓60%	1,812
16	9651	Canterbury	1,000	1,827	1,826	1	0	↓100%	93	31	↓67%	76	25	↓67%	1,038
17	9626	Caringbah	1,000	1,827	1,826	1	0	↓100%	21	10	↓52%	14	7	↓50%	249
18	9553	Carlingford	1,000	1,826	1,826	0	1	1	55	22	↓60%	42	20	↓52%	1,147
19	9804	Castle Hill	430	1,826	1,826	0	0	-	8	3	↓63%	7	2	↓71%	5,722
20	9622	Charmhaven	1,000	1,826	1,826	0	0	-	24	5	↓79%	18	3	↓83%	503
21	9625	Concord West	1,000	1,576	1,826	0	0	-	23	19	↓29%	18	14	↓33%	2,407
22	9851	Condell Park	240	1,826	1,826	1	0	↓100%	19	3	↓84%	17	2	↓88%	903
23	9811, 9812	Eastgardens, Maroubra	370	1,826	1,826	0	1	1	17	10	↓ 41%	13	9	↓31%	9,062
24	9549	Edgecliff	1,000	1,826	1,826	1	0	↓100%	88	42	↓52%	61	37	↓39%	1,012
25	9669	Engadine	1,000	1,826	1,826	0	0	-	24	4	↓83%	18	2	↓89%	1,484
26	9623	Ewingsdale	1,000	1,826	1,826	1	0	↓100%	22	0	↓100%	13	0	↓100%	9,069
27	9561	Fairfield East	1,000	1,826	1,826	1	0	↓100%	21	9	↓57%	16	8	↓50%	481
28	9637	Gateshead	820	1,521	1,826	0	0	-	4	5	↑4%	4	4	↓17%	5,526
29	9563	Glencoe	1,000	1,826	1,826	2	0	↓100%	8	0	↓100%	5	0	↓100%	202
30	9543	Greystanes	1,000	1,826	1,826	0	0	-	15	1	↓93%	13	1	↓92%	768
31	9806, 9807	Guildford	500	1,826	1,826	1	0	↓100%	43	37	↓14%	29	27	↓7%	4,485
32	9597	Gwynneville	1,000	1,826	1,826	1	0	↓100%	38	10	↓74 %	20	8	↓60%	6,511
33	9830	Hurstville	810	1,826	1,826	0	2	↑	31	5	↓84%	21	7	↓67%	3,446
34	9845, 9846	Kingswood	340	1,827	1,826	0	0	-	30	5	↓83%	16	5	↓69%	5,594

				D	ays		Fatalities			Injuries		C	asualty cras	shes	
#	Camera #	Suburb	Analysis length - (m)	Bef.	Aft.	Bef.	Aft.	^/↓	Bef.	Aft.		Bef.	Aft.		Speeding fines (2022)
35	9600, 9601	Kogarah	990	1,826	1,826	1	0	↓100%	69	26	↓62%	54	23	↓57%	10,231
36	9574	Korora	1,000	1,826	1,826	1	0	↓100%	4	0	↓100%	5	0	↓100%	1,847
37	9638	Kurrajong Heights	1,000	1,513	1,826	0	0	-	6	1	↓86%	4	1	↓79%	3,453
38	9550	Lane Cove	1,000	1,826	1,826	1	0	↓100%	21	13	↓38%	21	8	↓62%	3,029
39	9546	Lansvale	1,000	1,826	1,826	2	0	↓100%	65	23	↓65%	51	19	↓63%	1,352
40	9824, 9825	Lindfield	550	1,826	1,826	0	0	-	10	4	↓60%	9	4	↓56%	7,371
41	9821	Liverpool	360	1,826	1,826	0	0	-	33	10	↓70%	25	8	↓68%	25,368
42	9636	Lochinvar	1,080	1,500	1,826	1	0	↓100%	2	13	↑434 %	3	6	↑64%	3,156
43	9813, 9814	Maroubra	660	1,826	1,826	0	0	-	14	7	↓50%	11	7	↓36%	1,848
44	9582	Mayfield West	1,000	1,826	1,826	0	1	↑	52	17	↓67%	38	14	↓63%	1,138
45	9810	Merrylands	220	1,826	1,826	2	0	↓100%	16	12	↓25%	16	10	↓38%	3,151
46	9833, 9834	Miranda	400	1,826	1,826	0	0	-	19	14	↓26%	14	8	↓43%	4,931
47	9837, 9838	Moore Park	380	1,826	1,826	0	0	-	14	5	↓64%	10	4	↓60%	15,029
48	9602	Mosman	290	1,826	1,826	0	0	-	6	0	↓100%	4	0	↓100%	6,704
49	9645	Mount Pritchard	1,000	1,559	1,826	2	0	↓100%	20	16	↓32%	14	11	↓33%	4,754
50	9666	Mount Victoria	1,000	1,826	1,826	2	0	↓100%	24	5	↓79%	16	5	↓69%	26,736
51	9826, 9827	Narrabeen	300	1,826	1,826	2	0	↓100%	13	1	↓92%	11	1	↓91%	3,337
52	9667	Narraweena	1,000	1,826	1,826	1	0	↓100%	36	12	↓67%	23	10	↓57%	4,225
53	9583	Nords Wharf	1,000	1,826	1,826	0	0	-	2	6	↑200%	2	6	↑200%	524
54	9831	North Curl Curl	1,060	1,826	1,826	0	0	-	27	9	↓67%	22	9	↓59%	3,214
55	9606	North Gosford	380	1,826	1,826	0	0	-	21	5	↓76 %	13	5	↓62%	1,796
56	9665	North Macksville	1,000	1,826	1,826	0	0	-	12	0	↓100%	10	0	↓100%	839
57	9578	North Macksville	1,000	1,826	1,826	3	0	↓100%	12	1	↓92%	6	1	↓83%	58
58	9847, 9848	North Narrabeen	590	1,827	1,826	0	0	-	12	7	↓42%	9	6	↓33%	6,524
59	9541	North Parramatta	880	1,826	1,826	0	0	-	16	5	↓69%	13	4	↓69%	705
60	9657, 9658	North Parramatta, Oatlands	2,770	1,826	1,826	1	1	-	66	35	↓47%	47	28	↓40%	3,195
61	9639	North Wollongong	1,000	1,535	1,826	0	0	-	53	18	↓71%	34	16	↓60%	1,633
62	9662	North Wollongong	1,000	1,826	1,826	2	0	↓100%	13	16	↑23%	6	6	-	1,383
63	9841, 9842	Old Guildford, Chester Hill	370	1,827	1,826	0	0	-	24	12	↓50%	19	10	↓47%	9,282
64	9660, 9661	Ourimbah	360	1,826	1,826	0	0	-	2	0	↓100%	2	0	↓100%	7,078
65	9535	Ourimbah	1,000	1,826	1,826	1	0	↓100%	8	7	↓13%	8	4	↓50%	3,620
66	9646	Padstow	1,000	1,555	1,826	1	0	↓100%	15	6	↓66%	13	5	↓67%	344
67	9573	Peakhurst	1,000	1,826	1,826	0	2	↑	24	15	↓38%	17	9	↓47%	2,756
68	9829	Penshurst	620	1,826	1,826	0	0	-	21	9	↓57%	17	5	↓71%	1,905
69	9644	Picnic Point	1,000	1,827	1,826	0	0	-	6	0	↓100%	5	0	↓100%	1,743

			Analysis length -	Da	ays		Fatalities			Injuries		Ca	sualty crasi	nes	Speeding fines
#	Camera #	Suburb	(m)	Bef.	Aft.	Bef.	Aft.	1/↓	Bef.	Aft.	1/↓	Bef.	Aft.	^/↓	(2022)
70	9815	Randwick	560	1,826	1,826	0	0	-	31	13	↓58%	25	13	↓48%	12,621
71	9586	Rankin Park	1,000	1,826	1,826	0	0	-	8	7	↓13%	3	4	↑33%	587
72	9839, 9840	Rydalmere	440	1,827	1,826	0	0	-	3	7	↑133%	3	6	↑100%	2,292
73	9554	Ryde	1,000	1,826	1,826	1	0	↓100%	35	21	↓40%	26	17	↓35%	1,481
74	9835, 9836	Ryde	700	1,826	1,826	0	0	-	27	16	↓ 41%	23	13	↓43%	10,532
75	9580, 9581	Sandgate	1,000	1,826	1,826	1	0	↓100%	24	18	↓25%	23	13	↓43%	1,350
76	9547	South Windsor	1,000	1,826	1,826	0	0	-	23	12	↓48%	15	10	↓33%	2,119
77	9652	Stokers Siding	1,000	1,636	1,826	3	0	↓100%	6	1	↓85%	5	1	↓82%	81
78	9849	Strathfield	1,070	1,827	1,826	0	1	1	45	18	↓60%	36	17	↓53%	7,883
79	9548	Sun Valley	1,000	1,826	1,826	2	0	↓100%	18	4	↓78 %	13	4	↓69%	428
80	9568	Tenterfield	1,000	1,826	1,826	2	0	↓100%	9	2	↓78%	6	2	↓67%	2,333
81	9802, 9803	Toongabbie	590	1,826	1,826	0	0	-	9	4	↓56%	8	4	↓50%	930
82	9670	Ulmarra	1,000	1,826	1,507	0	0	-	10	6	↓27 %	6	2	↓60%	4,661
83	9567	Valla	1,000	1,826	1,826	1	0	↓100%	2	0	↓100%	2	0	↓100%	111
84	9538	Valla	1,000	1,826	1,826	1	0	↓100%	8	1	↓88%	6	1	↓83%	143
85	9843, 9844	Wahroonga	1,960	1,827	1,826	0	1	1	73	30	↓59%	53	26	↓51%	9,569
86	9570	Wardell	1,000	1,826	1,826	0	0	-	2	2	-	1	1	-	272
87	9592	Warrawong	1,000	1,826	1,826	0	0	-	15	5	↓67%	11	2	↓82%	747
88	9560	West Pennant Hills	1,000	1,826	1,826	2	0	↓100%	19	5	↓74 %	16	5	↓69%	3,778
89	9571	Wollongbar	1,000	1,826	1,826	1	0	↓100%	7	2	↓71 %	7	2	↓71%	910
90	9610	Wollongong	620	1,826	1,826	0	0	-	19	6	↓68%	15	5	↓67 %	5,404
91	9648	Woodburn	1,000	1,815	1,826	2	0	↓100%	8	0	↓100%	5	0	↓100%	1,192
92	9542	Yagoona	1,000	1,826	1,826	2	0	↓100%	74	33	↓55%	42	27	↓36%	610

Fixed speed camera locations operating in warning mode

For fixed speed camera locations operating in warning mode, warning letters are issued to most motorists detected speeding. If drivers exceed the speed limit by more than 30 km/h, a court attendance notice is issued, and drivers face significant speeding fines. A three-strikes system also applies, where, if a registered operator of a vehicle is issued two warning letters from the one warning mode camera, a speeding fine will be issued for a third offence and any further offences at that location.

Table 19 outlines the location details of all fixed speed camera locations operating in warning mode, while Table 19 provides road trauma and warning letter, speeding fine and court attendance notice statistics for the same camera locations.

Table 19: Location of cameras in warning mode

#	Camera #	Suburb	Location	School zone
1	9530	Clunes	Bangalow Road, between Johnson Road and Flatley Drive	No
2	9604	Epping	Carlingford Road, between Ryde Street and Ward Street	Yes
3	9640	Gordon	Eastern Arterial Road, between Montah Avenue and Nicholson Avenue	No
4	9603	Gymea	President Avenue, between Koorabel Avenue and Gymea Bay Road	Yes
5	9615, 9650	Mosman	Spit Road, between Central Avenue and Parriwi Road	No
6	9642	North Willoughby	Eastern Valley Way, between McClelland Street and Megalong Avenue	No
7	9632	Urunga	Giinagay Way, between Ranger Street and Hillside Drive	No

Table 20: Warning letters and speeding fines for cameras operating in permanent warning mode during 2022

	Location details	s		Road trauma		Warning lette	Speeding fine Warning letter issued issued			Court attendance notice issued			
#	Camera #	Suburb	Fatalities	Serious injuries	Casualty crashes	1st strike	2nd strike	3rd strike	>30 km/h over	>45 km/h over	Total speeding fines		
1	9530	Clunes	0	0	0	6,769	1,129	698	328	13	1,039		
2	9604	Epping	0	0	0	3,899	713	420	3	1	424		
3	9640	Gordon	0	0	0	415	33	16	1	0	17		
4	9603	Gymea	0	0	0	3,470	573	250	0	0	250		
5	9615, 9650	Mosman	0	0	0	2,624	324	176	11	7	194		
6	9642	North Willoughby	0	1	1	1,211	117	44	2	0	46		
7	9632	Urunga	0	0	0	2,527	389	254	18	2	274		
			0	1	1	20,915	3,278	1,858	363	23	2,244		

Fixed speed cameras in high-risk tunnels

These cameras were generally installed when the tunnel was constructed, therefore no pre-installation data are available for these high-risk locations. Recommendations are not provided for these high-risk locations. Crash and speeding fine data for 2022 are presented in Table 20.

Table 21: Road trauma and speeding fines for fixed speed cameras in high-risk tunnels during 2022

#	Camera #	Suburb	Road	Fatalities	Serious injuries	Casualty crashes	Speeding fines
1	6216, 6217	Homebush, Ashfield	WestConnex M4 Tunnel	0	1	2	20,326
2	9551, 9552	Kingsgrove, Arncliffe	M5 East Tunnel	0	0	4	22,686
3	9854, 9855	Kingsgrove, St Peters	WestConnex M8 Tunnel	0	0	0	7,421
4	9655, 9656	Lane Cove North, Artarmon	Lane Cove Tunnel	0	1	2	15,092
5	9635, 9641	Surry Hills, Woolloomooloo	Eastern Distributor Tunnel	0	4	4	20,047
6	9800, 9801	Sydney, Darlinghurst	Cross City Tunnel	0	0	1	4,072
7	9613, 9614	Sydney, North Sydney	Sydney Harbour Tunnel	0	0	0	7,323
8	9852, 9853	West Pennant Hills, Wahroonga	NorthConnex Tunnel	0	0	0	35,480
				0	6	13	132,447

Appendix D: Red-light speed camera locations

At the end of 2022, there were 245 red-light speed cameras, operating at 223 intersections across NSW. Of the 223 intersections, 21 featured two or more cameras operating on different legs of the intersection.

Summarised data for each individual red-light speed camera location can be found in Table 22 and Table 23. Table 22 contain location details and the review outcome status for 2022. Table 23 contains summarised before and after road trauma data, on which this automated enforcement camera review was based.

Table 22: Location details and review status for individual red-light speed camera locations

#	Camera #	Suburb	Intersection	Installed	Review status
1	7211	Adamstown	Park Avenue at Northcott Drive	23/05/2011	Retain
2	7225	Albury	Guinea Street at Young Street	29/05/2020	Insufficient data
3	7287	Alexandria	Collins Street at O'Riordan Street	22/10/2013	Retain
4	7180	Ashfield	Frederick Street at Hume Highway	16/03/2011	Retain and monitor
5	7250	Auburn	Chisholm Road at Mona Street	26/02/2013	Retain
6	7336	Auburn	Rawson Street at Northumberland Road	30/09/2016	Retain
7	7300	Auburn	Rawson Street at Station Road	25/07/2014	Retain
8	7112, 7223	Auburn, Lidcombe	Silverwater Road at M4 westbound on/off-ramps	16/07/2010	Retain and monitor
9	7323	Banksmeadow	Foreshore Road at Botany Road	6/07/2016	Retain and monitor
10	7272	Bankstown	Edgar Street at Marion Street	27/08/2013	Retain and monitor
11	7155	Bankstown	Meredith Street at Hume Highway	15/12/2010	Retain
12	7263	Bankstown	Rickard Road at Lady Cutler Avenue	31/08/2022	Insufficient data
13	7248	Bankstown	Stacey Street at Hume Highway	20/04/2013	Retain and monitor
14	7149	Bankstown Aerodrome	Newbridge Road at Henry Lawson Drive	9/09/2010	Retain
15	7348	Bass Hill	Hume Highway at Bass Hill	13/08/2018	Insufficient data
16	7227	Bathurst	Durham Street at Bentinck Street	29/04/2020	Insufficient data

#	Camera #	Suburb	Intersection	Installed	Review status
17	7226	Bathurst	Stewart Street at Keppel Street	29/04/2020	Insufficient data
18	7145, 7146	Baulkham Hills	Windsor Road at Old Northern Road, Seven Hills Road	2/09/2010	Retain
19	7277	Belfield	Burwood Road at Punchbowl Road	22/10/2013	Retain and monitor
20	7183	Bexley	Forest Road at Harrow Road	29/06/2011	Retain
21	7304	Bexley	Harrow Road at Watkin Street	25/07/2014	Retain
22	7160	Blacktown	Bungarribee Road at Balmoral Street	13/09/2010	Retain and monitor
23	7168	Blacktown	Great Western Highway at Reservoir Road	15/12/2010	Retain
24	7196	Blacktown	Lancaster Street at Kildare Street	11/11/2010	Retain
25	7170	Blacktown	Newton Road at Flushcombe Road	7/10/2010	Retain and monitor
26	7136	Blacktown	Prospect Highway at Blacktown Road	28/01/2020	Insufficient data
27	7193	Blacktown	Sunnyholt Road at Main Street	11/11/2010	Retain
28	7310	Blacktown	Third Avenue at Prince Street	25/07/2014	Retain and monitor
29	7327	Blacktown	Third Avenue at Richmond Road	28/07/2015	Retain
30	7313	Blakehurst	King Georges Road at Terry Street	27/08/2015	Retain
31	7192	Bondi Junction	Old South Head Road at Bondi Road	27/06/2011	Retain
32	7276	Bradbury	Oxley Street at The Parkway	18/10/2013	Retain
33	7293	Burwood	Railway Parade at Burwood Road	27/08/2015	Retain and monitor
34	7108, 7109	Cabramatta	Cumberland Highway at Cabramatta Road West	24/06/2010	Retain
35	7110, 7111	Campbelltown	Kellicar Road at Narellan Road	9/05/2011	Retain
36	7103, 7104	Campbelltown	Moore Street at Broughton Street	24/06/2010	Retain
37	7167	Campsie	Canterbury Road at Bexley Road	15/10/2010	Retain
38	7246	Campsie	Canterbury Road at Thorncraft Parade	6/04/2013	Retain
39	7324	Canley Heights	Cumberland Highway at Canley Vale Road	8/10/2015	Retain
40	7159	Canley Heights	Cumberland Highway at St Johns Road	18/12/2009	Retain
41	7209	Canley Vale	Sackville Street at Canley Vale Road	8/04/2011	Retain
42	7309	Castle Hill	Pennant Street at Castle Street	12/08/2014	Retain and monitor

#	Camera #	Suburb	Intersection	Installed	Review status
43	7150	Castle Hill	Showground Road at Victoria Avenue	29/08/2011	Retain and monitor
44	7340	Charlestown	Charlestown Road at Hillsborough Road	20/08/2018	Insufficient data
45	7256	Charlestown	Pacific Highway at Nioke Place	19/09/2022	Insufficient data
46	7124, 7125	Chester Hill, Sefton	Waldron Road at Hector Street	23/07/2010	Retain
47	7316	Chippendale	Abercrombie Street at Broadway	24/12/2015	Retain
48	7137	Claremont Meadows	Great Western Highway at Reserve Road	22/05/2020	Insufficient data
49	7343	Coffs Harbour	Pacific Highway at Bray Street	30/07/2018	Insufficient data
50	7344	Coffs Harbour	Pacific Highway at Combine Street	27/08/2018	Insufficient data
51	7252	Concord	Broughton Street at Crane Street	29/03/2013	Retain
52	7129, 7130	Concord, Burwood	Parramatta Road at Burwood Road	6/09/2010	Retain
53	7172	Corrimal	Memorial Drive at Railway Street	24/06/2020	Insufficient data
54	7174	Crows Nest	Pacific Highway at Hume Street	18/04/2011	Retain
55	7275	Croydon Park	Georges River Road at Croydon Avenue	27/08/2013	Retain
56	7257	Dapto	Princes Highway at Moombara Street	26/08/2022	Insufficient data
57	7139	Darlinghurst	New South Head Road at McLachlan Avenue	27/08/2010	Retain
58	7302, 7318	Darlinghurst	Oxford Street at Crown Street	30/09/2014	Retain
59	7296	Darlinghurst	William Street at Crown Street	16/10/2014	Retain
60	7312	Dean Park	Richmond Road at M7 southbound on-ramp	27/08/2014	Retain
61	7194	Dee Why	Pittwater Road at Harbord Road	27/06/2011	Retain
62	7330	Drummoyne	Victoria Road at Lyons Road	7/10/2016	Retain
63	7259	Dunolly	New England Highway at Bridgman Road	28/10/2022	Insufficient data
64	7319	Eastern Creek	Great Western Highway at Rooty Hill Road South	8/10/2015	Retain
65	7200	Eastwood	Blaxland Road at May Street	8/04/2011	Retain
66	7301	Eastwood	Rutledge Street at Shaftsbury Road	14/07/2014	Retain
67	7303	Epping	Carlingford Road at Rawson Street	27/08/2014	Retain

#	Camera #	Suburb	Intersection	Installed	Review status
68	7298	Ermington	Victoria Road at Spurway Street	27/08/2014	Retain
69	7166	Fairfield	Hamilton Road at The Boulevarde	11/10/2010	Retain
70	7314	Fairfield	Sackville Street at Hamilton Road	15/01/2016	Retain
71	7279	Fairfield	The Horsley Drive at Polding Street	26/09/2013	Retain
72	7219	Figtree	Princes Highway at O'Briens Road	18/04/2011	Retain and monitor
73	7186	Five Dock	Fairlight Street at Ramsay Road	11/11/2010	Retain
74	7241	Five Dock	Parramatta Road at Arlington Street	12/04/2013	Retain
75	7311	Glenwood	Old Windsor Road at Sunnyholt Road	16/08/2014	Retain and monitor
76	7242	Granville	Parramatta Road at Good Street	26/02/2013	Retain and monitor
77	7239	Greenacre	Hume Highway at Sherman Street	8/04/2022	Insufficien data
78	7322	Greenacre	Juno Parade at Roberts Road	30/06/2015	Retain
79	7235	Greenacre	Roberts Road at Wiley Avenue	3/06/2022	Insufficien data
80	7138	Greenacre	Waterloo Road at Rawson Road	14/02/2020	Insufficien data
81	7147	Greenfield Park	Smithfield Road at Myrtle Road	15/05/2020	Insufficien data
82	7335	Greystanes	Cumberland Highway at Merrylands Road	15/09/2016	Retain
83	7233	Guildford	Rawson Road at Blaxcell Street	17/06/2022	Insufficien data
84	7173	Guildford	Woodville Road at Guildford Road	11/11/2010	Retain and monitor
85	7171	Haberfield	City-West Link Road at Mortley Avenue	15/06/2011	Retain and monitor
86	7210	Haberfield	Parramatta Road at Sloane Street	27/06/2011	Retain
87	7240	Haberfield	Ramsay Street at Wattle Street	26/02/2013	Retain
88	7255	Hamilton	Donald Street at Beaumont Street	21/10/2022	Insufficien data
89	7215	Hamilton	Tudor Street at Beaumont Street	27/06/2011	Retain and monitor
90	7212	Hamilton East	Pacific Highway at Parry Street	29/06/2011	Retain
91	7243, 7244	Haymarket	George Street at Pitt Street, Quay Street	22/06/2013	Retain
92	7144	Holroyd	Woodville Road at M4 westbound on-ramp	9/09/2010	Retain

#	Camera #	Suburb	Intersection	Installed	Review status
93	7262	Homebush	Parramatta Road at Underwood Road	18/11/2022	Insufficient data
94	7135	Hoxton Park	Hoxton Park Road at Cowpasture Road	6/09/2019	Insufficient data
95	7204	Hunters Hill	Ryde Road at Pittwater Road	18/03/2011	Retain
96	7208	Kensington	Anzac Parade at Todman Avenue	29/06/2011	Retain
97	7206	Kingsgrove	Bexley Road at William Street	11/04/2011	Retain
98	7278	Kingsgrove	Kingsgrove Road at Forsyth Street	15/11/2013	Retain
99	7320	Kingsgrove	Stoney Creek Road at Patrick Street	19/12/2015	Retain
100	7198	Kirrawee	Acacia Road at President Avenue	27/06/2011	Retain
101	7195	Kogarah Bay	Park Road at Princes Highway	15/06/2011	Retain and monitor
102	7187	Kotara	Charlestown Road at Carnley Avenue	29/11/2019	Insufficient data
103	7258	Lake Munmorah	Pacific Highway at Elizabeth Bay Drive	9/09/2022	Insufficient data
104	7271	Lakemba	Punchbowl Road at Wangee Road	18/10/2013	Retain
105	7213	Lambton	Griffiths Road at Turton Road	2/06/2011	Retain
106	7297	Lane Cove	Epping Road at Centennial Avenue	12/08/2014	Retain
107	7133	Lane Cove	Fig Tree Street at Centennial Avenue	27/09/2019	Insufficient data
108	7127, 7128	Lansdowne, Villawood	Henry Lawson Drive, Woodville Road at Hume Highway	13/08/2010	Retain
109	7251	Leichhardt	City West Link Road at James Street	12/04/2013	Retain
110	7230	Leichhardt	Foster Street at Marion Street	20/05/2022	Insufficient data
111	7153	Lidcombe	Olympic Drive at Vaughan Street	13/09/2010	Retain
112	7232	Lindfield	Archbold Road at Tryon Road	24/06/2022	Insufficient data
113	7148	Liverpool	Hume Highway at Elizabeth Drive	14/10/2010	Retain
114	7315	Liverpool	Hume Highway at Macquarie Street	30/07/2016	Retain
115	7253	Liverpool	Memorial Avenue at Bathurst Street	30/04/2013	Retain
116	7338	Liverpool	Moore Street at Bathurst Street	6/09/2016	Retain
117	7308	Maroubra	Anzac Parade at Boyce Road	29/08/2014	Retain
118	7202	Marrickville	Sydenham Road at Victoria Road	15/06/2011	Retain and monitor
119	7234	Mascot	Coward Street at Bourke Road	10/06/2022	Insufficient data
120	7190	Mascot	O'Riordan Street at Coward Street	11/04/2011	Retain

#	Camera #	Suburb	Intersection	Installed	Review status
121	7158	Mascot	O'Riordan Street at Gardeners Road	28/10/2010	Retain
122	7116	Mascot	Wentworth Avenue at Sutherland Street	28/02/2020	Insufficient data
123	7214	Mayfield West	Pacific Highway at Maud Street	13/05/2011	Retain
124	7341	Merrylands	Woodville Road at Louis Street	23/07/2018	Insufficient data
125	7299	Merrylands West	Merrylands Road at Sherwood Road	17/10/2014	Retain
126	7236	Milperra	Henry Lawson Drive at M5 eastbound on-ramp	20/12/2021	Insufficient data
127	7267	Milperra	Henry Lawson Drive at Pozieres Avenue	11/11/2022	Insufficient data
128	7126	Miranda	Kingsway at Port Hacking Road	7/07/2010	Retain
129	7178	Moore Park	Anzac Parade at Lang Road	16/03/2011	Retain and monitor
130	7140, 7141	Moore Park, Paddington	Anzac Parade, Flinders Street at Fitzroy Street, Moore Park Road	18/08/2010	Retain
131	7181	Moorebank	Newbridge Road at Stockton Avenue	15/11/2010	Retain
132	7205	Mosman	Military Road at Cowles Road	15/12/2010	Retain
133	7143	Mount Druitt	George Street at Great Western Highway	2/09/2019	Insufficient data
134	7274	Mount Druitt	Great Western Highway at Carlisle Avenue	15/11/2013	Retain
135	7247	Naremburn	Willoughby Road at Chandos Street	26/02/2013	Retain
136	7305	Neutral Bay	Falcon Street at Merlin Street	21/07/2014	Retain
137	7254, 7269, 7270	North Ryde	Lane Cove Road at Coxs Road	24/04/2013	Retain
138	7185	North Ryde	Wicks Road at Epping Road	11/11/2010	Retain
139	7283	Northmead	Briens Road at Redbank Road	26/09/2013	Retain and monitor
140	7182	Northmead	Old Windsor Road at Cumberland Highway	15/12/2010	Retain
141	7347	Nowra	Princes Highway at Moss Street	17/09/2018	Insufficient data
142	7151	Paddington	Moore Park Road at Lang Road	20/10/2010	Retain
143	7333	Parramatta	Great Western Highway at Marsden Street	11/10/2016	Retain
144	7282	Parramatta	Macquarie Street at Marsden Street	13/02/2014	Retain
145	7249	Parramatta	O'Connell Street at Argyle Street	22/05/2013	Retain and monitor
146	7107	Parramatta	Victoria Road at Church Street	24/06/2010	Retain

#	Camera #	Suburb	Intersection	Installed	Review status
147	7161	Pennant Hills	Pennant Hills Road at Beecroft Road	1/09/2010	Retain
148	7157	Petersham	Gordon Street at New Canterbury Road	15/10/2010	Retain and monitor
149	7156	Petersham	Parramatta Road at West Street	23/09/2010	Retain
150	7142	Plumpton	Jersey Road at Hyatts Road	31/10/2019	Insufficient data
151	7224	Port Macquarie	Gordon Street at Grant Street	27/03/2020	Insufficient data
152	7237	Prestons	Camden Valley Way at M5/M7 northbound on-ramp	18/07/2022	Insufficient data
153	7334	Prospect	Great Western Highway at Clunies Ross Street	30/11/2016	Retain
154	7286	Ramsgate	Rocky Point Road at Ramsgate Road	27/09/2013	Retain
155	7285	Randwick	Alison Street at Avoca Street	29/11/2013	Retain
156	7199	Randwick	Avoca Street at Darley Road	21/06/2011	Retain
157	7207	Redfern	Chalmers Street at Cleveland Street	10/06/2011	Retain
158	7306	Richmond	March Street at East Market Street	27/08/2014	Retain
159	7175	Rockdale	Bestic Street at West Botany Street	11/11/2010	Retain
160	7131, 7132	Rockdale	Princes Highway at Bay Street, The Seven Ways	30/07/2010	Retain
161	7349	Rooty Hill	Sherbrooke Street at Railway Street	16/07/2018	Insufficient data
162	7328	Rooty Hill	Woodstock Avenue at M7 northbound off-ramp	28/07/2015	Retain
163	7169	Roselands	King Georges Road at Moorefields Road	1/10/2010	Retain
164	7260	Roseville	Archbold Road at Boundary Street	8/07/2022	Insufficient data
165	7264, 7265	Rouse Hill, Kellyville Ridge	Windsor Road at Rouse Hill Drive, Schofields Road	29/07/2022	Insufficient data
166	7163	Rozelle	Victoria Road at Evans Street	15/10/2010	Retain
167	7152	Rozelle	Wellington Street at Victoria Road	28/09/2010	Retain
168	7203	Ryde	Victoria Road at Devlin Street	27/06/2011	Retain
169	7273	Seven Hills	Abbott Road at Station Road	18/01/2014	Retain
170	7345	Silverwater	Silverwater Road at Holker Street	3/07/2018	Insufficient data
171	7113	Silverwater	Silverwater Road at M4 eastbound on-ramp	29/06/2010	Retain
172	7280	Smithfield	Cumberland Highway at The Horsley Drive	29/11/2013	Retain

#	Camera #	Suburb	Intersection	Installed	Review status
173	7337	Smithfield	Polding Street at The Boulevarde	18/11/2016	Retain
174	7281	Smithfield	The Horsley Drive at Gipps Street	27/08/2013	Retain
175	7201	Smithfield	Victoria Street at Hassall Street	11/11/2010	Retain
176	7191	South Penrith	Parker Street at Jamison Road	11/11/2010	Retain
177	7179	South Wentworthville	Cumberland Highway at Old Prospect Road	7/04/2011	Retain
178	7291, 7292	Spring Hill	Springhill Road at Masters Road	14/12/2013	Retain
179	7122, 7123	St Marys	Great Western Highway at Charles Hackett Drive, Pages Road	8/07/2010	Retain
180	7238	St Marys	Mamre Road at M4 eastbound on/ off-ramps	1/04/2022	Insufficient data
181	7284	St Marys	Mamre Road at Saddington Street	26/09/2013	Retain
182	7317	St Peters	Princes Highway at Sydney Park Road	8/10/2015	Retain
183	7154	Strathfield	Arthur Street at Centenary Drive	27/10/2010	Retain
184	7105	Surry Hills	Cleveland Street at South Dowling Street	30/06/2010	Retain
185	7332	Surry Hills	Crown Street at Albion Street	28/10/2016	Retain
186	7329	Surry Hills	Foveaux Street at Crown Street	28/10/2016	Retain
187	7120, 7121	Surry Hills	South Dowling Street at Fitzroy Street	30/06/2010	Retain
188	7266	Surry Hills	South Dowling Street at Sydney Light Rail Crossing	29/04/2022	Insufficient data
189	7295	Sydney	Elizabeth Street at Park Street	30/09/2014	Retain
190	7326	Sydney Olympic Park	Homebush Bay Drive at M4 eastbound on-ramp	13/04/2016	Retain
191	7177	Thornleigh	Pennant Hills Road at Parkes Street	15/12/2010	Retain and monitor
192	7346	Towradgi	Memorial Drive at Towradgi Road	24/06/2020	Insufficient data
193	7197	Tweed Heads South	Minjungbal Drive at Rivendell Drive	29/11/2019	Insufficient data
194	7189	Tweed Heads West	Gold Coast Highway at Cordyline Drive	10/12/2019	Insufficient data
195	7261	Ultimo	Harris Street at William Henry Street	16/12/2022	Insufficient data
196	7188	Ultimo	Wattle Street at William Henry Street	10/06/2011	Retain and monitor
197	7217	Unanderra	Princes Highway at Five Islands Road	12/04/2011	Retain
198	7307	Waitara	Pacific Highway at Romsey Street	30/09/2014	Retain

#	Camera #	Suburb	Intersection	Installed	Review status
199	7289	Wallsend	Thomas Street at Metcalfe Street	26/09/2013	Retain
200	7290	Warrawong	King Street at Cowper Street	22/10/2013	Retain and monitor
201	7176	Warwick Farm	Hume Highway at Bigge Street	15/11/2010	Retain
202	7342	Warwick Farm	Hume Highway at Mannix Parade	3/07/2018	Insufficient data
203	7331	Waterloo	McEvoy Street at Elizabeth Street	30/11/2016	Retain
204	7101, 7102	Waterloo, Alexandria	McEvoy Street at Botany Road	30/06/2010	Retain and monitor
205	7164	Wentworthville	Great Western Highway at Station Street	27/09/2010	Retain and monitor
206	7165	West Pennant Hills	Pennant Hills Road at Eaton Road	26/08/2010	Retain
207	7184	West Pymble	Ryde Road at Lady Game Drive	15/12/2010	Retain
208	7231	West Ryde	Victoria Road at Bowden Street	29/11/2021	Insufficient data
209	7118, 7119	Westmead, Merrylands	Great Western Highway at Coleman Street, Hawkesbury Road	1/07/2010	Retain
210	7117	Wiley Park	Lakemba Street at King Georges Road	28/01/2020	Insufficient data
211	7245	Wiley Park	The Boulevarde at King Georges Road	29/03/2013	Retain and monitor
212	7114, 7115	Wiley Park, Roselands	Canterbury Road at King Georges Road	29/06/2010	Retain
213	7220	Windang	Windang Road at Boronia Avenue	27/05/2011	Retain and monitor
214	7325	Windsor	Macquarie Street at Hawkesbury Valley Way	30/06/2015	Retain
215	7218	Wollongong	Corrimal Street at Burelli Street	19/04/2011	Retain
216	7216	Wollongong	Gladstone Avenue at Princes Highway	14/06/2011	Retain
217	7288	Woollahra	Queen Street at Ocean Street	18/10/2013	Retain
218	7134	Woolloomooloo	Bourke Street at William Street	25/10/2019	Insufficient data
219	7228, 7229	Woolooware	Captain Cook Drive at Foreshore Boulevard	31/05/2019	Insufficient data
220	7162	Woolooware	The Kingsway at Gannons Road	29/09/2010	Retain
221	7294	Yagoona	Rookwood Road at Brunker Road	25/07/2014	Retain
222	7321	Yagoona	Rookwood Road at Muir Road	28/07/2015	Retain
223	7106	Zetland	Bourke Street at Botany Road	30/06/2010	Retain and monitor

Table 23: Summarised before and after road trauma and fines (2022) for individual red-light speed camera locations

			Days			Fatalities		S	erious inju	ries		Injuries			FSI crashe	es	Speeding	Red-light
#	Camera #	Suburb	Bef.	Aft.	Bef.	Aft.	↑/ ↓	Bef.	Aft.	1/↓	Bef.	Aft.	↑/ ↓	Bef.	Aft.	↑/↓	fines (2022)	fines (2022)
1	7211	Adamstown	1,826	1,826	0	0	-	4	0	↓100%	27	2	↓93%	4	0	↓100%	51	832
2	7225	Albury	1,826	947	0	0	-	0	0	-	1	0	↓100%	0	0	-	1,474	983
3	7287	Alexandria	1,826	1,826	0	0	-	1	0	↓100%	11	0	↓100%	1	0	↓100%	43	898
4	7180	Ashfield	1,826	1,826	0	0	-	2	3	↑50%	15	14	↓7 %	2	3	↑50%	115	758
5	7250	Auburn	1,827	1,826	0	0	-	1	0	↓100%	20	2	↓90%	1	0	↓100%	6	44
6	7336	Auburn	1,827	1,826	0	0	-	5	1	↓80%	10	3	↓70%	5	1	↓80%	884	324
7	7300	Auburn	1,826	1,826	0	0	-	8	2	↓75 %	23	7	↓70%	7	2	↓71%	75	1,781
8	7112, 7223	Auburn, Lidcombe	1,826	1,826	0	0	-	1	2	↑100%	35	8	↓77%	1	2	↑100%	114	896
9	7323	Banksmeadow	1,827	1,826	0	0	-	1	2	↑100%	10	6	↓40%	1	2	↑100%	1,521	439
10	7272	Bankstown	1,826	1,826	0	0	-	1	5	↑400%	25	15	↓40%	1	3	↑200%	2	613
11	7155	Bankstown	1,826	1,826	0	0	-	6	3	↓50%	25	7	↓72 %	6	3	↓50%	0	593
12	7263	Bankstown	1,826	123	0	0	-	8	0	↓100%	24	0	↓100%	6	0	↓100%	84	333
13	7248	Bankstown	1,827	1,826	0	0	-	2	3	↑50%	26	10	↓62%	2	3	↑50%	116	3,754
14	7149	Bankstown Aerodrome	1,826	1,826	0	0	-	1	1	-	16	15	↓6%	1	1	-	209	544
15	7348	Bass Hill	1,826	1,602	0	0	-	3	0	↓100%	16	3	↓79 %	2	0	↓100%	82	432
16	7227	Bathurst	1,826	977	0	0	-	0	0	-	5	0	↓100%	0	0	-	1,082	821
17	7226	Bathurst	1,826	977	0	0	-	1	0	↓100%	10	6	↑12%	1	0	↓100%	352	137
18	7145, 7146	Baulkham Hills	1,826	1,826	1	0	↓100%	3	2	↓33%	28	8	↓71 %	4	2	↓50%	299	1,914
19	7277	Belfield	1,826	1,826	0	0	-	1	4	↑300%	27	9	↓67 %	1	2	↑100%	42	748
20	7183	Bexley	1,826	1,826	0	0	-	1	1	-	19	11	↓42%	1	1	-	15	608
21	7304	Bexley	1,826	1,826	0	0	-	5	1	↓80%	27	10	↓63%	5	1	↓80%	28	482
22	7160	Blacktown	1,826	1,826	0	1	1	1	3	↑200%	26	17	↓35%	1	3	↑200%	43	321
23	7168	Blacktown	1,826	1,826	0	0	-	2	1	↓50%	27	11	↓59%	2	1	↓50%	54	77
24	7196	Blacktown	1,826	1,826	0	0	-	1	0	↓100%	16	6	↓63%	1	0	↓100%	202	396
25	7170	Blacktown	1,826	1,826	0	0	-	0	1	↑	14	3	↓79 %	0	1	1	1,360	246
26	7136	Blacktown	1,826	1,069	0	0	-	2	0	↓100%	9	2	↓62%	1	0	↓100%	1,860	150
27	7193	Blacktown	1,826	1,826	0	0	-	5	0	↓100%	17	4	↓76 %	5	0	↓100%	128	1,254
28	7310	Blacktown	1,826	1,826	0	1	↑	3	3	-	34	9	↓74 %	3	4	↑33%	623	500
29	7327	Blacktown	1,826	1,826	0	0	-	3	2	↓33%	18	7	↓ 61%	3	2	↓33%	349	324
30	7313	Blakehurst	1,826	1,826	0	0	-	4	2	↓50%	19	8	↓58%	3	2	↓33%	265	234
31	7192	Bondi Junction	1,826	1,826	0	0	-	2	0	↓100%	14	4	↓71%	2	0	↓100%	38	1,140
32	7276	Bradbury	1,826	1,826	0	0	-	2	0	↓100%	9	5	↓44%	2	0	↓100%	367	1,028
33	7293	Burwood	1,826	1,826	0	0	-	0	2	1	12	5	↓58%	0	2	↑	62	104
34	7108, 7109	Cabramatta	1,826	1,826	0	0	-	9	1	↓89%	36	10	↓72 %	9	1	↓89%	142	625

			Days			Fatalities	6	S	erious inju	ries		Injuries		FSI crashes				
#	Camera #	Suburb	Bef.	Aft.	Bef.	Aft.	1/↓	Bef.	Aft.	^/↓	Bef.	Aft.	^/↓	Bef.	Aft.	↑/↓	- Speeding fines (2022)	Red-light fines (2022)
35	7110, 7111	Campbelltown	1,826	1,826	0	0	-	2	2	-	50	8	↓84%	2	1	↓50%	87	1,802
36	7103, 7104	Campbelltown	1,826	1,826	1	0	↓100%	4	4	-	41	10	↓76%	5	4	↓20%	1,451	852
37	7167	Campsie	1,826	1,826	0	0	-	6	2	↓67%	27	7	↓74 %	3	2	↓33%	51	783
38	7246	Campsie	1,827	1,826	0	0	-	3	0	↓100%	24	6	↓75%	3	0	↓100%	381	605
39	7324	Canley Heights	1,826	1,826	0	0	-	1	1	-	17	13	↓24%	1	1	-	416	226
40	7159	Canley Heights	1,826	1,826	0	0	-	4	0	↓100%	35	8	↓77%	4	0	↓100%	128	225
41	7209	Canley Vale	1,826	1,826	0	0	-	1	0	↓100%	10	4	↓60%	1	0	↓100%	76	191
42	7309	Castle Hill	1,826	1,826	0	0	-	1	3	↑200%	14	5	↓64%	1	3	↑200%	122	432
43	7150	Castle Hill	1,826	1,826	0	0	-	0	2	1	7	9	↑29%	0	2	↑	1,550	522
44	7340	Charlestown	1,826	1,595	0	0	-	1	1	↑14%	10	9	13%	1	1	↑14 %	1,041	1,392
45	7256	Charlestown	1,826	104	0	0	-	1	0	↓100%	2	0	↓100%	1	0	↓100%	3,321	175
46	7124, 7125	Chester Hill, Sefton	1,826	1,826	0	0	-	5	3	↓40%	25	11	↓56%	5	2	↓60%	50	376
47	7316	Chippendale	1,826	1,826	0	1	↑	5	2	↓60%	21	9	↓57%	4	3	↓25%	253	414
48	7137	Claremont Meadows	1,826	954	0	0	-	1	1	↑91%	12	2	↓68%	1	1	↑91%	78	311
49	7343	Coffs Harbour	1,826	1,616	0	0	-	5	3	↓32%	10	7	↓ 21%	4	3	↓15%	2,366	1,362
50	7344	Coffs Harbour	1,826	1,588	0	0	-	1	2	↑130%	7	7	↑15%	1	2	↑130%	954	276
51	7252	Concord	1,827	1,826	0	0	-	2	2	-	23	7	↓70 %	2	2	-	61	184
52	7129, 7130	Concord, Burwood	1,826	1,826	0	0	-	4	1	↓75 %	21	8	↓62%	3	1	↓67%	1,176	1,060
53	7172	Corrimal	1,827	921	0	0	-	2	1	↓1%	8	4	↓1%	2	1	↓1%	222	84
54	7174	Crows Nest	1,826	1,826	1	0	↓100%	1	0	↓100%	7	0	↓100%	2	0	↓100%	846	216
55	7275	Croydon Park	1,826	1,826	0	0	-	2	2	-	13	6	↓54%	2	2	-	106	316
56	7257	Dapto	1,826	128	0	0	-	2	0	↓100%	4	0	↓100%	2	0	↓100%	1,388	102
57	7139	Darlinghurst	1,826	1,826	0	0	-	5	1	↓80%	70	6	↓91%	5	1	↓80%	2,851	1,136
58	7302, 7318	Darlinghurst	1,826	1,826	0	0	-	7	2	↓71%	30	8	↓73%	7	2	↓71 %	18,974	887
59	7296	Darlinghurst	1,826	1,826	0	0	-	3	1	↓67%	16	5	↓69%	3	1	↓67%	3,071	434
60	7312	Dean Park	1,826	1,826	0	0	-	1	0	↓100%	17	3	↓82%	1	0	↓100%	0	1,985
61	7194	Dee Why	1,826	1,826	0	0	-	2	1	↓50%	14	6	↓57%	2	1	↓50%	312	919
62	7330	Drummoyne	1,827	1,826	0	0	-	5	1	↓80%	17	15	↓12%	5	1	↓80%	503	887
63	7259	Dunolly	1,826	65	0	0	-	2	0	↓100%	5	0	↓100%	2	0	↓100%	350	72
64	7319	Eastern Creek	1,826	1,826	0	0	-	4	2	↓50%	25	17	↓32%	4	2	↓50%	182	106
65	7200	Eastwood	1,826	1,826	0	0	-	2	0	↓100%	19	7	↓63%	2	0	↓100%	1,208	175
66	7301	Eastwood	1,826	1,826	1	0	↓100%	5	0	↓100%	14	10	↓29%	4	0	↓100%	2,226	369
67	7303	Epping	1,826	1,826	0	0	-	3	0	↓100%	15	2	↓87%	3	0	↓100%	13	412
68	7298	Ermington	1,826	1,826	0	0	-	3	1	↓67%	20	9	↓55%	3	1	↓67%	15	513
69	7166	Fairfield	1,826	1,826	0	0	-	2	2	-	29	6	↓79%	2	1	↓50%	214	297

			Days			Fatalities		S	erious inju	ries		Injuries	s FSI crashes				Connections	Ded light
#	Camera #	Suburb	Bef.	Aft.	Bef.	Aft.	↑/ ↓	Bef.	Aft.	^/↓	Bef.	Aft.	^/↓	Bef.	Aft.	↑/↓	Speeding fines (2022)	Red-light fines (2022)
70	7314	Fairfield	1,826	1,826	0	0	-	4	0	↓100%	26	1	↓96%	4	0	↓100%	12	588
71	7279	Fairfield	1,826	1,826	0	0	-	4	2	↓50%	37	12	↓68%	4	2	↓50%	468	1,301
72	7219	Figtree	1,826	1,826	0	0	-	0	2	↑	8	4	↓50%	0	2	↑	338	328
73	7186	Five Dock	1,826	1,826	0	0	-	2	0	↓100%	21	7	↓67%	2	0	↓100%	0	369
74	7241	Five Dock	1,827	1,826	0	0	-	0	0	-	14	5	↓64%	0	0	-	574	421
75	7311	Glenwood	1,826	1,826	0	0	-	3	6	↑100%	24	23	↓4%	3	6	↑100%	0	0
76	7242	Granville	1,827	1,826	0	0	-	1	4	↑300%	16	21	↑31%	1	4	↑300%	871	732
77	7239	Greenacre	1,826	268	0	0	-	5	0	↓100%	12	1	↓43%	4	0	↓100%	817	989
78	7322	Greenacre	1,826	1,826	0	0	-	3	0	↓100%	25	7	↓72 %	3	0	↓100%	86	381
79	7235	Greenacre	1,826	212	0	0	-	3	0	↓100%	10	2	↑72 %	3	0	↓100%	2,870	1,547
80	7138	Greenacre	1,826	1,052	0	0	-	9	0	↓100%	17	1	↓90%	4	0	↓100%	91	216
81	7147	Greenfield Park	1,826	961	0	0	-	2	0	↓100%	9	0	↓100%	1	0	↓100%	965	965
82	7335	Greystanes	1,827	1,826	0	1	1	6	1	↓83%	44	11	↓75 %	6	2	↓67%	94	265
83	7233	Guildford	1,826	198	0	0	-	3	0	↓100%	15	2	↑23 %	3	0	↓100%	99	614
84	7173	Guildford	1,826	1,826	0	0	-	0	6	↑	30	27	↓10%	0	6	↑	94	371
85	7171	Haberfield	1,826	1,826	0	0	-	1	2	↑100%	16	3	↓81%	1	2	↑100%	1,302	1,180
86	7210	Haberfield	1,826	1,826	0	0	-	1	1	-	7	7	-	1	1	-	2,030	477
87	7240	Haberfield	1,827	1,826	0	0	-	2	1	↓50%	22	10	↓55%	2	1	↓50%	15	359
88	7255	Hamilton	1,826	72	0	0	-	1	0	↓100%	4	0	↓100%	1	0	↓100%	70	69
89	7215	Hamilton	1,826	1,826	0	0	-	0	1	↑	7	1	↓86%	0	1	↑	113	521
90	7212	Hamilton East	1,826	1,826	0	0	-	2	1	↓50%	15	2	↓87%	2	1	↓50%	135	421
91	7243, 7244	Haymarket	1,826	1,826	0	0	-	5	1	↓80%	39	8	↓79 %	5	1	↓80%	189	5,226
92	7144	Holroyd	1,826	1,826	0	0	-	1	1	-	36	15	↓58%	1	1	-	0	0
93	7262	Homebush	1,826	44	0	0	-	5	1	↑730%	10	2	↑730%	5	1	↑730%	51	23
94	7135	Hoxton Park	1,826	1,213	0	0	-	3	2	↑0%	20	10	↓25%	2	2	↑51%	25	418
95	7204	Hunters Hill	1,826	1,826	0	0	-	2	0	↓100%	14	1	↓93%	2	0	↓100%	52	94
96	7208	Kensington	1,826	1,826	0	0	-	0	0	-	16	8	↓50%	0	0	-	6,477	2,033
97	7206	Kingsgrove	1,826	1,826	0	0	-	4	1	↓75 %	21	2	↓90%	4	1	↓75 %	541	228
98	7278	Kingsgrove	1,826	1,826	0	0	-	2	0	↓100%	14	4	↓71%	2	0	↓100%	235	553
99	7320	Kingsgrove	1,826	1,826	1	0	↓100%	3	0	↓100%	12	4	↓67%	3	0	↓100%	185	812
100	7198	Kirrawee	1,826	1,826	0	0	-	2	0	↓100%	17	8	↓53%	2	0	↓100%	84	155
101	7195	Kogarah Bay	1,826	1,826	0	0	-	1	2	↑100%	17	14	↓18%	1	2	↑100%	11	1,096
102	7187	Kotara	1,826	1,129	0	0	-	4	0	↓100%	18	2	↓82%	4	0	↓100%	1,518	1,227
103	7258	Lake Munmorah	1,826	114	1	0	↓100%	3	0	↓100%	6	0	↓100%	4	0	↓100%	463	72
104	7271	Lakemba	1,826	1,826	0	0	-	5	0	↓100%	21	4	↓81%	3	0	↓100%	292	284

			Days			Fatalities	5	Se	erious injur	ies		Injuries			FSI crashe	S		2
#	Camera #	Suburb	Bef.	Aft.	Bef.	Aft.	^/↓	Bef.	Aft.	1/↓	Bef.	Aft.	1/↓	Bef.	Aft.	↑/↓	- Speeding fines (2022)	Red-light fines (2022)
105	7213	Lambton	1,826	1,826	0	0	-	3	1	↓67%	27	3	↓89%	3	1	↓67%	10,522	338
106	7297	Lane Cove	1,826	1,826	0	0	-	5	2	↓60%	15	14	↓7%	4	2	↓50%	786	3,097
107	7133	Lane Cove	1,826	1,192	2	0	↓100%	1	1	↑53%	10	3	↓54%	2	1	↓23%	0	128
108	7127, 7128	Lansdowne, Villawood	1,826	1,826	0	0	-	3	2	↓33%	41	18	↓56%	3	2	↓33%	780	2,866
109	7251	Leichhardt	1,827	1,826	0	0	-	4	3	↓25%	39	11	↓72 %	3	3	-	974	1,229
110	7230	Leichhardt	1,826	226	0	0	-	4	0	↓100%	9	0	↓100%	4	0	↓100%	39	398
111	7153	Lidcombe	1,826	1,826	0	0	-	4	2	↓50%	26	13	↓50%	4	2	↓50%	33	579
112	7232	Lindfield	1,826	191	0	0	-	0	0	-	5	0	↓100%	0	0	-	1,028	314
113	7148	Liverpool	1,826	1,826	0	0	-	4	1	↓75 %	28	11	↓ 61%	4	1	↓75 %	976	2,274
114	7315	Liverpool	1,827	1,826	0	0	-	4	3	↓25%	33	17	↓48%	4	3	↓25%	569	2,146
115	7253	Liverpool	1,827	1,826	0	0	-	5	1	↓80%	31	7	↓77 %	5	1	↓80%	202	1,291
116	7338	Liverpool	1,827	1,826	0	0	-	4	1	↓75 %	16	4	↓75 %	4	1	↓75 %	9	121
117	7308	Maroubra	1,826	1,826	0	0	-	0	0	-	5	1	↓80%	0	0	-	808	666
118	7202	Marrickville	1,826	1,826	0	0	-	1	2	↑100%	15	13	↓13%	1	2	↑100%	26	251
119	7234	Mascot	1,826	205	1	0	↓100%	2	0	↓100%	4	0	↓100%	3	0	↓100%	87	116
120	7190	Mascot	1,826	1,826	0	0	-	2	1	↓50%	18	5	↓72 %	2	1	↓50%	4,317	138
121	7158	Mascot	1,826	1,826	0	0	-	6	3	↓50%	33	15	↓55%	6	3	↓50%	89	1,388
122	7116	Mascot	1,826	1,038	0	0	-	1	0	↓100%	6	3	↓12%	1	0	↓100%	2,699	508
123	7214	Mayfield West	1,826	1,826	0	0	-	1	0	↓100%	10	8	↓20%	1	0	↓100%	350	675
124	7341	Merrylands	1,826	1,623	0	0	-	4	1	↓72 %	29	11	↓57%	4	1	↓72 %	80	664
125	7299	Merrylands West	1,826	1,826	0	0	-	5	2	↓60%	37	11	↓70 %	5	2	↓60%	22	177
126	7236	Milperra	1,826	377	0	0	-	6	1	↓19%	20	1	↓76 %	5	1	↓3%	1,987	1,165
127	7267	Milperra	1,826	51	0	0	-	1	0	↓100%	1	0	↓100%	1	0	↓100%	159	21
128	7126	Miranda	1,826	1,826	0	0	-	2	0	↓100%	37	7	↓81%	2	0	↓100%	88	1,042
129	7178	Moore Park	1,826	1,826	0	0	-	0	2	1	15	9	↓40%	0	2	↑	386	549
130	7140, 7141	Moore Park, Paddington	1,826	1,826	0	0	-	7	0	↓100%	24	15	↓38%	6	0	↓100%	125	922
131	7181	Moorebank	1,826	1,826	0	0	-	4	1	↓75%	24	11	↓54%	4	1	↓75 %	359	298
132	7205	Mosman	1,826	1,826	0	0	-	1	0	↓100%	11	3	↓73%	1	0	↓100%	788	292
133	7143	Mount Druitt	1,826	1,217	0	0	-	3	1	↓50%	11	4	↓45%	3	1	↓50%	3	109
134	7274	Mount Druitt	1,826	1,826	0	0	-	4	5	↑25%	23	21	↓9%	3	3	-	17	1,027
135	7247	Naremburn	1,827	1,826	0	0	-	2	0	↓100%	15	0	↓100%	2	0	↓100%	97	647
136	7305	Neutral Bay	1,826	1,826	0	0	-	4	2	↓50%	31	10	↓68%	4	2	↓50%	551	2,586
137	7254, 7269, 7270	North Ryde	1,827	1,826	0	0	-	3	1	↓67%	9	6	↓33%	3	1	↓67%	7,566	1,473
138	7185	North Ryde	1,826	1,826	0	0	-	1	1	-	16	11	↓31%	1	1	-	6	659
139	7283	Northmead	1,826	1,826	0	0	-	2	4	↑100%	21	15	↓29%	2	4	↑100%	204	552

		Days			Fatalities	5	S	erious injui	ries		Injuries			FSI crashe	es	Cunnading	Pod liel
# Camera #	Suburb	Bef.	Aft.	Bef.	Aft.	^/↓	Bef.	Aft.	^/↓	Bef.	Aft.	^/↓	Bef.	Aft.	↑/↓	Speeding fines (2022)	Red-light fines (2022)
140 7182	Northmead	1,826	1,826	0	0	-	4	1	↓75%	16	9	↓44%	3	1	↓67%	1,081	1,009
141 7347	Nowra	1,826	1,567	0	0	-	1	1	↑17 %	19	1	↓94%	1	1	↑17 %	7,599	243
142 7151	Paddington	1,826	1,826	0	0	-	4	1	↓75 %	7	8	↑14 %	4	1	↓75 %	8,642	845
143 7333	Parramatta	1,827	1,826	0	0	-	3	1	↓67%	18	8	↓56%	3	1	↓67%	194	2,144
144 7282	Parramatta	1,826	1,826	0	0	-	2	0	↓100%	7	3	↓57%	2	0	↓100%	11	134
145 7249	Parramatta	1,827	1,826	0	1	↑	0	0	-	20	3	↓85%	0	1	↑	298	1,170
146 7107	Parramatta	1,826	1,826	0	0	-	3	0	↓100%	37	2	↓95%	3	0	↓100%	216	
147 7161	Pennant Hills	1,826	1,826	0	0	-	3	0	↓100%	25	4	↓84%	3	0	↓100%	4,875	137
148 7157	Petersham	1,826	1,826	0	0	-	0	2	1	10	12	↑20%	0	2	↑	0	85
149 7156	Petersham	1,826	1,826	0	0	-	1	1	-	21	9	↓57%	1	1	-	366	944
150 7142	Plumpton	1,826	1,158	0	0	-	1	1	↑58%	3	4	↑110%	1	1	↑58%	193	204
151 7224	Port Macquarie	1,826	1,010	0	0	-	0	0	-	1	0	↓100%	0	0	-	285	20
152 7237	Prestons	1,826	167	0	0	-	5	0	↓100%	15	0	↓100%	2	0	↓100%	1,838	225
153 7334	Prospect	1,827	1,826	0	0	-	5	2	↓60%	36	9	↓75 %	3	2	↓33%	209	265
154 7286	Ramsgate	1,826	1,826	0	0	-	0	0	-	11	3	↓73 %	0	0	-	82	96
155 7285	Randwick	1,826	1,826	0	0	-	3	0	↓100%	17	6	↓65%	3	0	↓100%	16	662
156 7199	Randwick	1,826	1,826	0	0	-	2	2	-	20	4	↓80%	2	2	-	1,039	95
157 7207	Redfern	1,826	1,826	0	1	↑	4	0	↓100%	15	7	↓53%	4	1	↓75 %	366	650
158 7306	Richmond	1,826	1,826	0	0	-	1	0	↓100%	8	2	↓75 %	1	0	↓100%	15	306
159 7175	Rockdale	1,826	1,826	0	0	-	7	2	↓71 %	30	6	↓80%	5	2	↓60%	2	603
160 7131, 7132	Rockdale	1,826	1,826	0	0	-	9	1	↓89%	34	8	↓76 %	9	1	↓89%	62	884
161 7349	Rooty Hill	1,826	1,630	0	0	-	2	1	↓44%	28	12	↓52%	2	1	↓44%	16	1,059
162 7328	Rooty Hill	1,826	1,826	0	0	-	4	1	↓75 %	30	6	↓80%	3	1	↓67 %	316	879
163 7169	Roselands	1,826	1,826	0	0	-	2	1	↓50%	22	4	↓82%	2	1	↓50%	1,924	68
164 7260	Roseville	1,826	177	0	0	-	2	0	↓100%	4	1	↑158%	2	0	↓100%	0	1,05
165 7264, 7265	Rouse Hill, Kellyville Ridge	1,826	156	1	0	↓100%	4	0	↓100%	13	0	↓100%	5	0	↓100%	397	273
166 7163	Rozelle	1,826	1,826	0	0	-	4	2	↓50%	21	4	↓81%	4	2	↓50%	2,105	574
167 7152	Rozelle	1,826	1,826	0	0	-	5	1	↓80%	37	9	↓76 %	5	1	↓80%	0	456
168 7203	Ryde	1,826	1,826	0	0	-	1	1	-	17	12	↓29%	1	1	-	272	369
169 7273	Seven Hills	1,826	1,826	0	0	-	1	1	-	13	4	↓69%	1	1	-	527	514
170 7345	Silverwater	1,826	1,643	0	0	-	6	4	↓26%	17	8	↓48%	5	4	↓11%	445	753
171 7113	Silverwater	1,826	1,826	0	0	-	3	1	↓67%	40	5	↓88%	3	1	↓67%	55	708
172 7280	Smithfield	1,826	1,826	0	0	-	2	0	↓100%	30	10	↓67%	2	0	↓100%	502	492
173 7337	Smithfield	1,827	1,826	0	0	-	9	3	↓67%	45	19	↓58%	9	3	↓67%	81	338

			Days			Fatalities	5	Se	erious injur	ries		Injuries			FSI crashe	es .		5
#	Camera #	Suburb	Bef.	Aft.	Bef.	Aft.	1/↓	Bef.	Aft.	↑/↓	Bef.	Aft.	↑/↓	Bef.	Aft.	↑/↓	- Speeding fines (2022)	Red-light fines (2022)
174	7281	Smithfield	1,826	1,826	0	0	-	3	2	↓33%	22	8	↓64%	3	2	↓33%	99	281
175	7201	Smithfield	1,826	1,826	0	0	-	4	1	↓75 %	16	6	↓63%	3	1	↓67%	184	489
176	7191	South Penrith	1,826	1,826	0	0	-	1	1	-	21	3	↓86%	1	1	-	0	0
177	7179	South Wentworthville	1,826	1,826	0	0	-	4	4	-	25	11	↓56%	3	3	-	0	396
178	7291, 7292	Spring Hill	1,826	1,826	0	0	-	3	0	↓100%	20	7	↓65%	3	0	↓100%	225	730
179	7122, 7123	St Marys	1,826	1,826	2	0	↓100%	3	2	↓33%	36	9	↓75 %	4	2	↓50%	4,017	385
180	7238	St Marys	1,826	275	0	0	-	3	0	↓100%	9	0	↓100%	3	0	↓100%	4,376	2,206
181	7284	St Marys	1,826	1,826	0	0	-	2	1	↓50%	22	3	↓86%	1	1	-	2,685	235
182	7317	St Peters	1,826	1,826	1	0	↓100%	2	0	↓100%	6	3	↓50%	3	0	↓100%	18,666	1,292
183	7154	Strathfield	1,826	1,826	1	0	↓100%	11	2	↓82%	39	18	↓54%	8	2	↓75 %	28	1,833
184	7105	Surry Hills	1,826	1,826	1	0	↓100%	3	2	↓33%	39	11	↓72 %	4	2	↓50%	209	353
185	7332	Surry Hills	1,827	1,826	0	0	-	5	0	↓100%	11	1	↓91%	3	0	↓100%	319	236
186	7329	Surry Hills	1,827	1,826	0	0	-	3	0	↓100%	13	1	↓92%	3	0	↓100%	3,298	550
187	7120, 7121	Surry Hills	1,826	1,826	0	0	-	12	1	↓92%	59	5	↓92%	10	1	↓90%	177	706
188	7266	Surry Hills	1,826	247	0	0	-	0	0	-	3	0	↓100%	0	0	-	1,081	1,018
189	7295	Sydney	1,826	1,826	0	0	-	6	1	↓83%	30	13	↓57%	6	1	↓83%	6,483	3,425
190	7326	Sydney Olympic Park	1,826	1,826	0	0	-	0	0	-	13	4	↓69%	0	0	-	925	277
191	7177	Thornleigh	1,826	1,826	0	0	-	0	1	1	17	10	↓ 41%	0	1	1	369	2,498
192	7346	Towradgi	1,827	921	0	1	1	2	1	↓1%	13	11	↑68%	2	2	↑98%	235	230
193	7197	Tweed Heads South	1,826	1,129	0	0	-	1	0	↓100%	7	4	↓8%	1	0	↓100%	1,634	1,118
194	7189	Tweed Heads West	1,826	1,118	0	0	-	6	1	↓73 %	19	3	↓74 %	5	1	↓67 %	34,922	627
195	7261	Ultimo	1,826	16	0	0	-	5	0	↓100%	13	0	↓100%	4	0	↓100%	18	0
196	7188	Ultimo	1,826	1,826	0	0	-	0	1	1	20	5	↓75 %	0	1	1	1,391	873
197	7217	Unanderra	1,826	1,826	0	0	-	1	1	-	24	8	↓67%	1	1	-	407	179
198	7307	Waitara	1,826	1,826	0	0	-	1	0	↓100%	7	1	↓86%	1	0	↓100%	2,484	637
199	7289	Wallsend	1,826	1,826	0	0	-	1	1	-	15	10	↓33%	1	1	-	1,644	1,047
200	7290	Warrawong	1,826	1,826	0	0	-	1	2	↑100%	16	5	↓69%	1	2	↑100%	697	313
201	7176	Warwick Farm	1,826	1,826	0	0	-	7	0	↓100%	34	10	↓71%	7	0	↓100%	600	572
202	7342	Warwick Farm	1,826	1,643	0	0	-	3	0	↓100%	11	11	↑11%	3	0	↓100%	243	661
203	7331	Waterloo	1,827	1,826	0	0	-	4	0	↓100%	24	1	↓96%	4	0	↓100%	4	177
204	7101, 7102	Waterloo, Alexandria	1,826	1,826	2	0	↓100%	1	4	↑300%	26	11	↓58%	2	4	↑100%	270	736
205	7164	Wentworthville	1,826	1,826	0	0	-	0	1	1	18	10	↓44%	0	1	1	39	188
206	7165	West Pennant Hills	1,826	1,826	1	0	↓100%	3	0	↓100%	13	2	↓85%	4	0	↓100%	291	135
207	7184	West Pymble	1,826	1,826	0	0	-	1	1	-	20	9	↓55%	1	1	-	1,228	28
208	7231	West Ryde	1,826	398	0	0	-	3	0	↓100%	10	5	↑129%	3	0	↓100%	1,494	1,029

		Days			Fatalities	i	Se	erious inju	ries		Injuries			FSI crashe	s	- Speeding	Red-light
# Camera #	Suburb	Bef.	Aft.	Bef.	Aft.	1/↓	Bef.	Aft.	1/↓	Bef.	Aft.	1/↓	Bef.	Aft.	1/↓	fines (2022)	fines (2022)
209 7118, 7119	Westmead, Merrylands	1,826	1,826	0	0	-	5	5	-	28	15	↓ 46%	5	4	↓20%	1,773	882
210 7117	Wiley Park	1,826	1,069	1	0	↓100%	6	1	↓72 %	16	4	↓57%	7	1	↓76 %	8	841
211 7245	Wiley Park	1,827	1,826	0	0	-	2	5	↑150%	28	12	↓57%	2	4	↑100%	252	156
212 7114, 7115	Wiley Park, Roselands	1,826	1,826	0	0	-	3	5	↑67%	31	22	↓29%	3	2	↓33%	0	0
213 7220	Windang	1,826	1,826	0	0	-	1	2	↑100%	7	6	↓14%	1	2	↑100%	3,952	705
214 7325	Windsor	1,826	1,826	0	0	-	8	2	↓75 %	26	16	↓38%	7	2	↓71%	187	639
215 7218	Wollongong	1,826	1,826	0	0	-	1	1	-	23	5	↓78 %	1	1	-	114	248
216 7216	Wollongong	1,826	1,826	0	0	-	3	2	↓33%	22	6	↓73 %	2	2	-	0	955
217 7288	Woollahra	1,826	1,826	0	0	-	1	1	-	11	4	↓64%	1	1	-	30	160
218 7134	Woolloomooloo	1,826	1,164	2	0	↓100%	0	1	1	10	4	↓37%	2	1	↓22%	0	472
219 7228, 7229	Woolooware	1,826	1,311	0	0	-	2	0	↓100%	4	1	↓65%	1	0	↓100%	280	275
220 7162	Woolooware	1,826	1,826	0	0	-	6	0	↓100%	33	5	↓85%	5	0	↓100%	61	221
221 7294	Yagoona	1,826	1,826	0	0	-	3	0	↓100%	24	12	↓50%	3	0	↓100%	514	629
222 7321	Yagoona	1,826	1,826	0	0	-	1	1	-	14	7	↓50%	1	1	-	219	148
223 7106	Zetland	1,826	1,826	0	0	-	3	6	↑100%	53	15	↓72 %	3	6	↑100%	786	1,619

Appendix E: Average speed camera locations

The average speed camera program only targets heavy vehicles.

The program included 29 enforcement lengths ranging from 4–94km and included most major NSW highways. Summarised data for 25 of the average speed camera locations can be found in Table 24 and Table 25. Table 24 contains location details and the review outcome status for 2022. Table 25 contains summarised before and after road trauma data on which this review was based.

Four of the average speed camera locations were installed at high-risk tunnel locations. These cameras were generally installed when the tunnel was constructed, therefore no pre-installation data are available.

Table 24: Location details and review status for individual average speed camera locations

#	Road	Location	Installed	Review status
1	Pacific Highway	Between Harwood and New Italy	31/03/2010	Retain
2	Great Western Highway	Between Meadow Flat and Raglan	31/05/2010	Retain
3	Federal Highway	Between Goulburn and Collector	30/05/2011	Retain
4	Blackwall Drive	Between Woodburn and Wardell	28/06/2011	Retain
5	Mitchell Highway	Between Molong and Cundumbul	5/08/2011	Retain
6	Pacific Highway	Between Nabiac and Taree	5/08/2011	Retain
7	Hume Highway	Between Coolac and Bowning	26/08/2011	Retain and monitor
8	Hume Highway	Between Gundagai and Coolac	26/08/2011	Retain and monitor
9	Monaro Highway	Between Bredbo and Cooma	17/09/2011	Retain
10	Gwydir Highway	Between Glen Innes and Inverell	25/10/2011	Retain and monitor
11	Oxley Highway	Between Gundedah and Tamworth	30/11/2011	Retain
12	Pacific Highway	Between Port Macquarie and Kempsey	14/12/2011	Retain
13	New England Highway	Between Muswellbrook and Aberdeen	16/12/2011	Retain
14	New England Highway	Between Muswellbrook and Singleton	20/12/2011	Retain
15	Newell Highway	Between Eumungerie and Gilgandra	22/12/2011	Retain
16	Newell Highway	Between Peak Hill and Tomingley	22/12/2011	Retain
17	Golden Highway	Between Sandy Hollow to Merriwa	1/03/2012	Retain
18	Pacific Highway	Between Kew and Port Macquarie	17/08/2012	Retain
19	Pacific Highway	Between Urunga and Valla	29/09/2012	Retain

#	Road	Location	Installed	Review status
20	Picton Road	Between Wilton and Cataract	17/10/2012	Retain
21	Newell Highway	Between Forbes and West Wyalong	22/03/2013	Retain and monitor
22	Mount Ousley Road	Between Bulli and North Wollongong	28/01/2014	Retain
23	Pacific Highway	Between Ballina and Wardell	5/02/2014	Retain
24	Pacific Highway, Blackwall Drive	Between Tyndale and Harwood	5/02/2014	Retain
25	Great Western Highway	Between Mt Victoria and Lithgow	19/01/2015	Retain

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Table 25: Summarised before and after road trauma involving a heavy vehicle and speeding fines (2022) for individual average speed camera locations

# Road 1 Pacific Highway	length (km)	Bef.	Aft.																
1 Pacific Highway	35		AIL.	Bef.	Aft.	↑/ ↓	Bef.	Aft.	↑/ ↓	Bef.	Aft.	↑/ ↓	Bef.	Aft.	↑/ ↓	Bef.	Aft.	↑/ ↓	Speeding fines (2022)
		1,826	1,826	4	0	↓100%	6	3	↓50%	20	21	↑5%	7	2	↓71%	18	15	↓17%	0
2 Great Western Highway	26	1,826	1,826	2	0	↓100%	1	2	↑100%	13	4	↓69%	2	2	-	11	4	↓64%	0
3 Federal Highway	20	1,826	1,826	0	1	↑	1	0	↓100%	2	0	↓100%	1	1	-	2	1	↓50%	254
4 Blackwall Drive	18	1,826	1,826	4	1	↓75 %	7	2	↓71%	19	6	↓68%	9	3	↓67 %	17	5	↓71 %	1
5 Mitchell Highway	28	1,826	1,826	0	0	-	3	2	↓33%	5	3	↓40%	2	2	-	3	3	-	8
6 Pacific Highway	17	1,826	1,826	1	0	↓100%	3	2	↓33%	10	7	↓30%	3	2	↓33%	8	6	↓25%	250
7 Hume Highway	72	1,826	1,826	2	3	↑50%	3	2	↓33%	23	20	↓13%	5	5	-	17	19	↑12 %	0
8 Hume Highway	16	1,826	1,826	0	0	-	2	2	-	3	4	↑33%	2	2	-	3	4	↑33%	12
9 Monaro Highway	28	1,826	1,826	1	0	↓100%	0	0	-	0	1	↑	1	0	↓100%	1	1	-	0
10 Gwydir Highway	57	1,826	1,826	0	2	1	0	1	1	2	3	↓50%	0	2	↑	2	3	↑50%	0
11 Oxley Highway	60	1,826	1,826	1	0	↓100%	0	1	↑	3	6	↑100%	1	1	-	3	3	-	18
12 Pacific Highway	36	1,826	1,826	0	0	-	6	2	↓67%	18	3	↓83%	4	2	↓50%	12	3	↓75%	789
13 New England Highway	7	1,826	1,826	0	1	1	3	0	↓100%	6	2	↓67%	2	1	↓50%	4	1	↓75%	0
14 New England Highway	36	1,826	1,826	1	1	-	2	1	↓50%	8	6	↓25%	2	2	-	8	6	↓25%	0
15 Newell Highway	30	1,826	1,826	2	1	↓50%	2	1	↓50%	10	4	↓60%	3	1	↓ 67%	6	2	↓67%	35
16 Newell Highway	10	1,826	1,826	2	0	↓100%	2	0	↓100%	3	0	↓100%	2	0	↓100%	2	0	↓100%	45
17 Golden Highway	28	1,826	1,826	0	0	-	2	1	↓50%	4	3	↓25%	2	1	↓50%	3	2	↓33%	3
18 Pacific Highway	15	1,827	1,826	1	3	1	7	2	↓71%	21	3	↓86%	7	3	↓57%	13	4	↓69%	19
19 Pacific Highway	13	1,827	1,826	4	0	↓100%	3	0	↓100%	17	0	↓100%	4	0	↓100%	10	0	↓100%	0
20 Picton Road	17	1,827	1,826	8	1	↓100%	1	0	↓100%	8	1	↓87%	4	1	↓75%	6	1	↓83%	0
21 Newell Highway	94	1,827	1,826	0	4	1	6	4	↓33%	13	14	↑8%	6	7	↑17 %	10	13	1 30%	6
22 Mount Ousley Road	15	1,826	1,826	0	1	1	13	9	↓31%	28	22	↓21%	10	10	-	23	19	↓17%	13
23 Pacific Highway	16	1,826	1,826	0	0	-	2	2	-	14	2	↓86%	2	2	-	7	2	↓71 %	0
24 Pacific Highway, Blackwall Drive	21	1,826	1,826	0	0	-	3	1	↓67%	11	6	↓ 45%	1	1	-	7	5	↓29%	4
25 Great Western Highway	11	1,826	1,826	4	0	↓100%	7	0	↓100%	19	1	↓95%	10	0	↓100%	19	1	↓95%	937

Average speed cameras in high-risk tunnels

These cameras were generally installed when the tunnel was constructed, therefore no pre-installation data are available for these high-risk locations. Recommendations are not provided for these high-risk locations. Crash and speeding fine data for 2022 are presented in Table 26.

Table 26: Road trauma involving a heavy vehicle (2022) and speeding fines (2022) for average speed cameras in high-risk tunnels

#	Camera #	Suburb	Road	Fatalities	Serious injuries	Casualty crashes	Speeding fines
1	6216, 6217	Homebush, Ashfield	WestConnex M4 Tunnel	0	0	0	49
2	9551, 9552	Kingsgrove, Arncliffe	M5 East Tunnel	0	0	0	155
3	9854, 9855	Kingsgrove, St Peters	WestConnex M8 Tunnel	0	0	0	50
4	9852, 9853	West Pennant Hills, Wahroonga	NorthConnex Tunnel	0	0	1	288
				0	0	1	542

Appendix F: Mobile speed camera locations

Program structure and periods of enforcement

During 2022, the mobile speed camera program delivered a target of 21,000 enforcement hours across 1,166 mobile speed camera locations. The entire NSW road network was analysed to review the network-wide deterrence effect of the mobile speed camera program.

Data from the 2022 annual speed survey are presented with comparison data from 2009-2021. Results are presented separately for light and heavy vehicles in Table 27 to Table 34, and show:

- mean speed
- 85th percentile speed (i.e., the 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 10 km/h
- percentage exceeding the speed limit by more than 10 km/h.

Table 27: Light vehicle mean speed (km/h) by speed zone, 2009-2022

Posted Speed Limit	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
40 km/h school zone	38.9	38.4	38.3	39.3	38.1	38.1	38.0	37.9	37.8	37.6	37.3	38.1	37.6	37.1
40 km/h	45.1	43.6	44.2	43.3	43.2	42.5	43.0	42.4	42.3	42.2	41.8	42.3	42.4	42.1
50 km/h	53.6	52.1	52.3	51.4	51.9	51.4	51.0	51.3	50.4	50.5	49.5	50.3	49.5	49.5
60km/h	58.7	57.7	57.4	58.1	57.1	56.5	55.9	55.9	55.5	55.8	55.3	55.3	55.6	55.1
70 km/h	69.6	67.9	67.8	67.6	67.9	67.8	67.6	67.9	66.6	66.5	64.9	66.0	65.4	64.7
80 km/h	77.8	76.1	76.4	77.2	75.4	74.3	74.0	74.2	73.8	74.0	72.9	73.0	73.1	71.5
90 km/h	88.1	91.1	90.9	86.5	86.9	86.3	87.2	85.3	84.8	86.1	85.4	86.3	85.0	84.7
100 km/h	98.8	98.6	99.1	98.4	97.2	98.1	98.3	98.3	98.0	95.7	94.7	96.2	94.9	98.3
110 km/h	109.9	108.8	109.2	109.8	107.9	108.3	108.6	107.8	107.7	107.6	108.4	110.0	110.7	110.6

Table 28: Light vehicle 85th percentile speed (km/h) by speed zone, 2009-2022

Posted Speed Limit	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
40 km/h school zone	44.6	44.0	43.8	44.7	43.5	43.5	43.3	43.3	43.1	42.7	42.2	43.2	42.6	41.8
40 km/h	52.7	50.9	51.4	50.2	50.2	48.9	49.7	48.8	48.7	48.8	48.0	48.4	48.6	48.1
50 km/h	61.1	59.1	59.4	58.5	58.6	58.1	57.6	57.8	56.9	56.9	55.8	56.7	55.6	55.3
60km/h	65.6	64.2	64.3	65.0	63.8	63.1	62.6	62.6	62.1	62.3	61.8	61.9	61.9	61.4
70 km/h	77.8	75.8	75.6	75.3	75.6	75.2	75.1	75.5	74.2	74.6	72.4	73.9	72.2	72.0
80 km/h	85.9	84.5	86.4	85.0	83.3	82.0	81.6	81.9	81.3	81.7	80.3	81.1	80.8	78.7
90 km/h	96.7	99.0	99.2	95.2	95.0	93.9	95.0	93.5	92.7	93.8	93.1	94.0	92.2	91.9
100 km/h	106.5	106.2	106.7	106.0	104.7	105.2	105.5	105.4	105.4	103.2	102.3	103.5	101.7	105.0
110 km/h	118.0	116.6	116.7	117.2	115.6	115.3	115.8	115.0	114.7	114.5	115.2	117.4	116.9	117.3

Table 29: Percentage of light vehicles exceeding the speed limit by 10 km/h or less, 2009-2022

Posted Speed Limit	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
40 km/h school zone	30.2%	27.8%	27.2%	32.6%	26.6%	26.8%	25.7%	25.5%	24.9%	23.4%	22.5%	25.9%	24.4%	20.5%
40 km/h	46.4%	44.0%	45.1%	44.0%	43.4%	45.0%	45.8%	44.3%	43.5%	43.9%	43.0%	45.3%	44.4%	41.3%
50 km/h	48.8%	46.4%	46.6%	44.9%	43.3%	45.3%	41.7%	41.0%	39.7%	39.9%	35.5%	39.8%	36.6%	37.4%
60km/h	32.3%	28.8%	28.2%	30.9%	25.9%	24.9%	22.9%	22.6%	21.1%	20.2%	20.2%	20.5%	20.1%	17.1%
70 km/h	35.9%	31.3%	30.2%	29.3%	29.5%	29.9%	28.6%	29.2%	25.4%	25.6%	19.6%	23.1%	20.2%	19.1%
80 km/h	29.8%	26.3%	26.1%	26.0%	21.1%	18.6%	18.0%	18.6%	17.5%	17.7%	15.2%	16.3%	17.7%	12.4%
90 km/h	29.6%	38.0%	38.5%	26.4%	24.8%	24.5%	25.8%	21.9%	21.3%	22.9%	23.9%	24.7%	25.6%	21.3%
100 km/h	34.5%	32.2%	34.4%	32.6%	27.6%	31.1%	32.3%	32.3%	30.5%	25.3%	25.0%	25.6%	24.8%	29.8%
110 km/h	40.8%	37.5%	38.9%	42.5%	33.9%	34.1%	36.1%	31.8%	32.2%	30.9%	33.5%	39.4%	39.4%	38.9%

Table 30: Percentage of light vehicles exceeding the speed limit by greater than 10 km/h, 2009-2022

Posted Speed Limit	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
40 km/h school zone	4.5%	3.4%	3.7%	5.4%	3.4%	3.0%	3.0%	2.7%	2.4%	2.7%	1.9%	3.1%	2.3%	1.8%
40 km/h	23.0%	17.5%	19.7%	16.4%	17.0%	12.3%	13.6%	12.3%	12.0%	11.3%	9.9%	11.3%	12.1%	12.2%
50 km/h	16.8%	12.6%	13.2%	11.8%	14.1%	9.7%	9.8%	12.4%	8.5%	8.4%	7.3%	7.8%	6.8%	5.9%
60km/h	7.3%	5.4%	5.8%	6.7%	6.3%	3.9%	3.9%	3.7%	3.5%	5.5%	4.5%	3.4%	5.6%	5.4%
70 km/h	10.4%	6.6%	6.3%	6.2%	8.2%	6.4%	6.1%	7.3%	5.8%	5.2%	3.9%	4.8%	3.3%	3.1%
80 km/h	8.8%	6.3%	6.6%	5.9%	6.2%	4.9%	3.8%	4.1%	4.0%	4.0%	2.9%	3.4%	5.3%	2.1%
90 km/h	9.0%	11.8%	13.4%	8.7%	10.1%	6.7%	8.8%	5.9%	6.8%	6.4%	6.8%	7.1%	7.5%	5.0%
100 km/h	8.2%	9.0%	8.9%	7.8%	7.9%	6.7%	7.6%	6.9%	8.1%	6.1%	6.5%	7.0%	4.9%	11.3%
110 km/h	9.3%	6.4%	7.0%	10.1%	6.0%	5.4%	5.9%	5.0%	5.3%	3.9%	5.4%	8.7%	10.3%	11.5%

Table 31: Heavy vehicle mean speed (km/h) by speed zone, 2009-2022

Posted Speed Limit	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
40 km/h school zone	38.6	37.7	37.3	39.1	37.3	37.5	37.4	37.4	37.3	37.2	36.8	37.3	37.8	36.9
40 km/h	41.9	41.2	42.4	40.8	41.0	40.6	41.2	40.8	40.6	40.5	40.8	41.5	41.4	41.9
50 km/h	53.2	51.8	51.2	50.3	50.2	50.5	50.2	50.7	50.2	49.3	49.1	50.1	49.5	49.6
60km/h	56.4	56.2	55.8	57.2	55.3	54.9	54.4	54.0	53.8	55.0	54.0	54.1	55.2	53.7
70 km/h	66.1	65.4	64.9	64.2	65.0	64.9	63.8	65.0	63.2	63.5	66.6	63.4	63.5	63.2
80 km/h	76.3	72.0	72.9	75.5	71.9	74.4	70.8	71.8	70.8	71.1	68.8	70.3	72.6	68.2
90 km/h	85.0	91.1	90.0	85.6	86.6	84.7	87.3	84.3	83.7	84.7	85.5	84.1	84.7	83.3
100 km/h	97.4	98.0	98.0	97.6	95.9	97.4	97.2	97.4	97.1	94.3	94.3	95.7	97.0	97.7
110 km/h	100.7	101.8	100.6	101.8	99.0	101.9	99.7	100.0	99.8	100.3	100.8	102.6	104.4	106.8

Table 32: Heavy vehicle 85th percentile speed (km/h) by speed zone, 2009-2022

Posted Speed Limit	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
40 km/h school zone	44.2	42.7	42.4	44.9	42.5	42.1	42.7	42.5	42.4	42.4	41.5	42.6	43.6	42.1
40 km/h	48.3	47.1	49.2	46.4	46.5	45.8	46.8	46.1	45.4	45.7	46.1	47.3	47.2	47.8
50 km/h	60.3	58.6	58.1	57.2	56.5	56.8	56.2	57.6	56.6	55.1	55.2	56.5	55.5	55.8
60km/h	63.6	63.2	63.0	65.0	62.6	62.0	61.5	61.4	61.0	62.8	61.1	61.2	62.3	60.7
70 km/h	75.5	74.4	73.4	72.9	73.6	73.8	72.8	73.0	72.1	73.1	76.5	72.1	71.2	71.4
80 km/h	89.6	81.6	81.9	83.9	8.08	84.4	79.6	80.7	79.8	80.1	77.5	79.7	81.5	76.4
90 km/h	94.5	99.4	98.9	95.5	95.0	93.1	95.8	92.8	92.0	93.1	93.7	92.6	92.8	91.1
100 km/h	103.5	104.4	104.4	104.0	102.1	102.9	103.2	103.5	102.8	100.5	100.6	101.6	104.4	103.7
110 km/h	106.4	109.0	106.8	107.4	105.1	108.9	106.2	105.4	105.7	104.9	106.4	110.3	110.1	114.6

Table 33: Percentage of heavy vehicles exceeding the speed limit by 10 km/h or less, 2009-2022

Posted Speed Limit	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
40 km/h school zone	26.6%	22.8%	21.0%	30.9%	21.0%	22.3%	21.5%	20.8%	20.6%	21.7%	18.7%	22.1%	20.7%	20.2%
40 km/h	42.2%	36.2%	43.3%	40.3%	39.7%	39.9%	44.0%	40.7%	39.8%	37.9%	41.8%	43.8%	41.6%	41.1%
50 km/h	45.6%	44.7%	42.5%	42.9%	38.3%	41.8%	40.6%	38.0%	37.2%	34.8%	35.7%	39.4%	35.7%	36.9%
60km/h	26.7%	25.8%	25.4%	27.3%	22.7%	21.3%	19.9%	18.6%	17.8%	18.6%	17.9%	18.7%	21.0%	15.9%
70 km/h	28.6%	27.3%	23.7%	21.8%	24.1%	25.1%	21.0%	22.0%	19.1%	21.2%	16.1%	19.8%	17.3%	17.3%
80 km/h	23.6%	21.2%	23.2%	20.8%	18.2%	17.1%	15.7%	17.6%	15.6%	16.8%	11.0%	15.0%	16.0%	9.3%
90 km/h	27.2%	41.3%	34.8%	30.7%	30.6%	23.5%	31.2%	24.1%	23.6%	22.5%	28.1%	20.7%	26.1%	19.9%
100 km/h	34.5%	34.1%	34.0%	34.3%	26.2%	32.1%	29.7%	29.6%	29.2%	20.9%	24.7%	26.9%	36.5%	28.8%
110 km/h*	48.1%	39.8%	44.9%	46.4%	44.0%	40.0%	36.5%	31.9%	31.8%	36.4%	43.2%	55.0%	43.6%	39.0%

^{*} The speed limit for heavy vehicles in NSW is 100 km/h

Table 34: Percentage of heavy vehicles exceeding the speed limit by greater than 10 km/h, 2009-2022

Posted Speed Limit	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
40 km/h school zone	5.4%	3.6%	3.0%	5.2%	7.1%	2.8%	2.8%	3.0%	2.4%	2.2%	1.8%	2.7%	5.1%	2.1%
40 km/h	10.1%	10.2%	12.6%	7.3%	2.6%	3.9%	6.8%	6.4%	5.8%	5.5%	6.0%	8.4%	9.5%	12.1%
50 km/h	16.7%	12.5%	10.7%	9.4%	7.8%	7.5%	6.9%	10.6%	8.4%	5.6%	6.5%	7.4%	7.6%	7.1%
60km/h	5.0%	3.9%	4.5%	7.4%	4.1%	3.2%	3.3%	2.8%	2.9%	6.0%	3.7%	3.2%	5.6%	3.7%
70 km/h	5.7%	4.2%	3.5%	3.2%	3.9%	4.2%	3.2%	4.6%	3.3%	3.5%	15.8%	2.9%	2.3%	2.9%
80 km/h	9.8%	5.1%	5.9%	4.8%	4.0%	13.1%	3.0%	3.8%	3.8%	4.1%	1.8%	3.1%	8.9%	1.7%
90 km/h	6.3%	14.0%	13.6%	9.3%	8.5%	4.8%	9.3%	5.4%	5.1%	4.9%	7.4%	5.3%	8.5%	4.2%
100 km/h	3.2%	4.8%	4.8%	4.9%	2.2%	2.7%	3.2%	3.7%	3.8%	2.2%	3.1%	2.9%	8.2%	7.2%
110 km/h*	8.1%	12.9%	8.8%	10.3%	6.7%	11.7%	8.7%	7.6%	8.5%	7.1%	10.5%	14.8%	20.0%	31.9%

 $^{^{\}star}$ The speed limit for heavy vehicles in NSW is 100 km/h $\,$

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TOWARDS ZERO