



NSW Road Safety Progress Report 2017



**The road is no
place for **excuses.****

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Minister's message



The NSW Government has a plan to reduce fatalities and serious injuries on NSW roads.

This report outlines the actions we took during 2017 to deliver the NSW Road Safety Strategy 2012-2021 and work towards our target of a 30 per cent reduction in fatalities and serious injuries by 2021.

We have made progress in reducing road trauma, with independent modelling by the Monash University Accident Research Centre showing that NSW's road safety actions have saved almost 600 lives and almost 16,000 serious injuries between 2011 and 2016.

In 2017, a key initiative was the development of the Road Safety Plan 2021. Extensive consultation was undertaken across the state with the community, road safety experts as well as the Road Safety Advisory Council. The Plan resets our road safety priorities and identifies the measures required to reduce the trauma on our roads.

We continued our investment in targeted road safety programs, with \$252.3 million committed to the Community Road Safety Fund and road safety initiatives during the 2016-17 financial year. This investment is part of our record \$9 billion budget for roads in the 2016-17 financial year.

The Community Road Safety Fund allows us to invest in road safety infrastructure upgrades across the state. In 2016-17, we invested over \$64 million in the Safer Roads Program to deliver 109 projects. These included projects to reduce run-off-road and head-on crashes, address blackspots and improve local government roads.

We reformed the Graduated Licensing Scheme to improve the way it prepares novice drivers to be safe on our roads while they develop their driving skills.

We also launched a number of road safety campaigns which focused on country drivers, as two thirds of fatalities occur on country roads.

The *Savings Lives on Country Roads* campaign, launched in December 2017, is the first-ever comprehensive road safety campaign targeting people living in regional NSW. The campaign is about starting a conversation with country drivers that it's a majority of locals dying on our regional roads.

In addition, we also joined forces with the National Rugby League, NSW Rugby League and Country Rugby League to launch the *Knock-on Effect* campaign, to spread the road safety message to the target audience of regional male drivers who make up 56 per cent of all drivers and riders in fatal crashes on country roads.

During 2017, we refined the tactical deployment of NSW Police through the Enhanced Enforcement Program, with operations such as Operation Towards Zero targeting areas with a high incidence of serious injuries, and Operation North Force and South Force targeting emerging crash locations in the state.

The Community Road Safety Fund delivered funding to these operations, resulting in more than 215,000 additional enforcement hours committed to road safety in NSW. We also achieved our 2015 commitment to triple the number of mobile drug tests each year by 2017.

To complement NSW Police operations, we consolidated our enforcement campaigns, with the new *Stop it... Or cop it* campaign. This new approach will better target our enforcement messages and increase the effectiveness of their deterrence effect.

Finally, legislation to support the introduction of a NSW Written-Off Heavy Vehicle Register was passed in November 2017 by the NSW Parliament. NSW is leading the country in the development of a register, which will improve road safety by preventing poorly repaired and unsafe heavy vehicles from being used on NSW roads, and provide a framework to support a national scheme.

While we continue to invest in dedicated road safety initiatives, it's important that every person who drives or rides on our road network takes responsibility for their behaviour. We all have a part to play in reducing the road toll.

The Honourable Melinda Pavey MP
Minister for Roads, Maritime and Freight

April 2018

Road Safety Targets and Outcomes

The NSW Government is committed to reducing the rates of fatalities and serious injuries resulting from road-related crashes in NSW. Achieving a 30 per cent reduction in the numbers of fatalities and serious injuries by 2021 were set by the NSW Government in the NSW Road Safety Strategy 2012-2021.

These targets have been set with an understanding that human error and vulnerability are key factors leading to road trauma, and providing a safe and protective road environment together with safe vehicles, speeds and behaviour are crucial ingredients to lowering the risk associated with road travel in NSW.

It is estimated that major road safety initiatives in NSW, such as the NSW Speed Camera Strategy, NSW Safer Roads Program, NSW Black Spot Program, drink and drug driving enforcement, and vehicle technology improvements such as Electronic Stability Control (ESC) and Autonomous Emergency Braking (AEB), saved almost 600 lives between 2011 and 2016.

However, since 2012 there have been growing upward pressures on road trauma including an expanding economy and population increases (7.6 per cent) which in turn has led to more vehicle registrations (12.4 per cent rise to 5,453,377 motor vehicles), more road users on our road network and an increase in the number of motor vehicle kilometres travelled (up by 8.4 per cent).¹

Of particular note is that one of our most at-risk age groups has grown by more than double the rate of the population overall. The number of people aged 70 years or more in NSW increased by 16.0 per cent between 2012 and 2017. Based on the current population projections, this older age group will continue to grow at a faster rate than the overall population through to the 2030.

The number of fatalities involving fatigue and speeding continue to grow, with fatigue crashes accounting for 19 per cent and excessive or inappropriate speed accounting for 43 per cent.

The presence of illegal drugs in crashes has been increasing since 2010, accounting for around 22 per cent of fatalities in 2016. Preliminary results for

January to September 2017 show some improvement with 16 per cent of fatalities from crashes involving a driver or rider with an illicit drug present in their system.

In NSW, there has also been strong growth in motor vehicle registrations, which are up 12.4 per cent between 2012 and 2017. The growth of some vehicle categories has been even greater.

- One of our most vulnerable road user groups, motorcyclists, have experienced a 23.8 per cent increase in motorcycle registrations in the five year period to 2017.
- There has also been a major shift from traditional passenger vehicles to twin cab/ utilities (light trucks), with a 23.9 per cent increase in light truck registrations between 2012 and 2017. A concern given that many of these new light trucks perform at less than 5 stars in ANCAP crash testing. Fatality crashes involving these vehicles have increased by 40% over the past 3 years.

Progress towards the targets outlined in the NSW Road Safety Strategy 2012-2021 is measured using historical fatality and serious injury trends, and data for 2017.

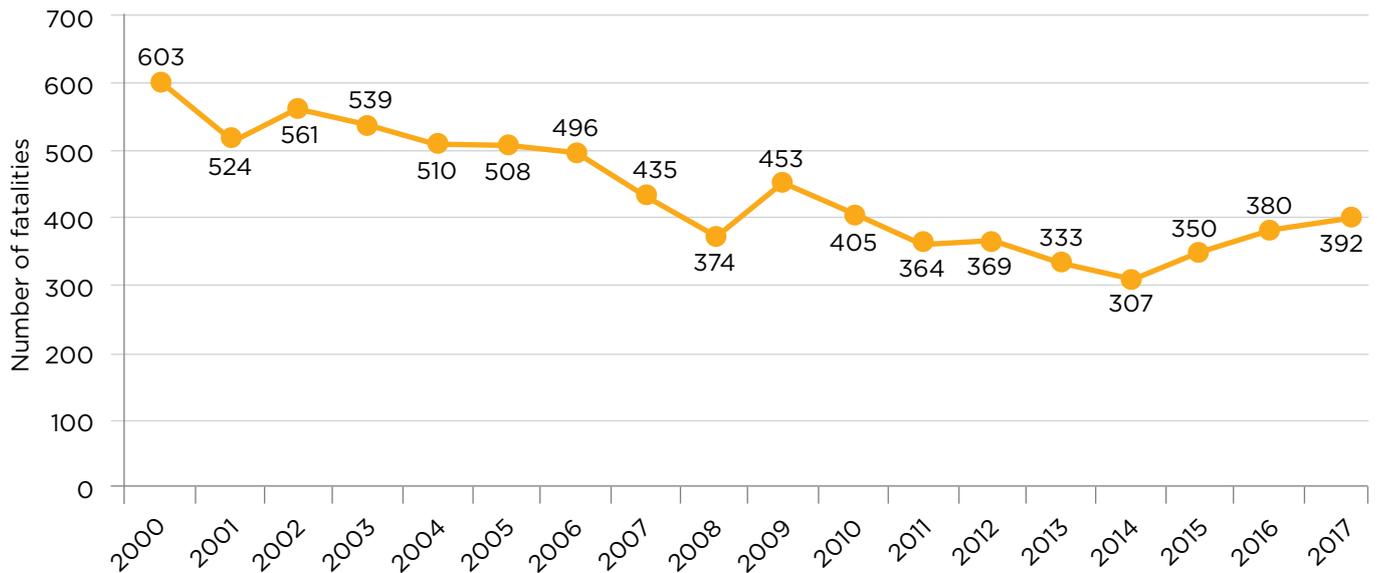
Fatalities²

The fatality rate for 2017 was 4.99 fatalities per 100,000 population. This represents an increase on the 2016 rate of 4.91; however, it is the fifth lowest since records began in 1908.

As at 1 January 2018, the provisional road toll for 2017 stood at 392 fatalities; 12 more than the final result for 2016 and the highest annual total since 2010 when there were 405 lives lost. While it is disappointing to see an increase in the road toll the number of fatalities represents a significant decrease from the beginning of the century when road fatalities exceeded 600.

¹ Vehicle kilometres travelled as at June 2016, Source: Australian Bureau of Statistics, 9208.0 – Survey of Motor Vehicle Use, Australia, 12 months ended 30 June 2016.
² All 2017 fatality data is preliminary.

Figure 1: Road and road related fatalities in NSW, 2000 - 2017p



Compared with 2016, the main increases in fatalities were:

- Passengers (up from 54 to 82)
- Drivers (up from 183 to 190)
- Females (up from 97 to 118)
- People aged 60 to 79 years (up from 74 to 92)
- South West Roads and Maritime Region (up from 27 to 46)
- High speed country roads (up from 158 to 180)
- Heavy truck crashes (up from 56 to 81)
- State highways (up from 100 to 123).

Compared with 2016, the main decreases in fatalities were:

- Pedestrians (down from 71 to 54)
- Non use of seat belt and child restraints (down from 43 to 30)
- People aged 40 to 49 years (down from 59 to 55)
- Young drivers aged 21 to 25 years (down from 57 to 42)
- Light trucks (down from 101 to 83), but remains a significant issue

The following key behavioural factors contributed to the 2017 road toll:

- Excessive or inappropriate speed – 167 fatalities (43 per cent)
- Fatigue – 75 fatalities (19 per cent)

- Illegal alcohol – at least 45 fatalities (11 per cent of all fatalities in 2017) (noting that there are a high proportion of blood samples yet to be processed for mid-November through to December)³
- Presence of an illicit drug for a driver or rider in the crash – at least 45 fatalities (16 per cent of fatalities for January to September only)
- Restraint non-usage – 30 fatalities (8 per cent).

Serious injuries

For the 12 months ending June 2017, there were 12,172 serious injuries. This was a 3 per cent increase since 2005. However, the preliminary 12-month data available to June 2017 shows a slight decrease in serious injuries compared to the 12 months ending June 2016, equating to a 2 per cent decrease in the rate of serious injuries to 156.1 per 100,000 population.

The linkage of crash data to hospital admission records in coordination with NSW Health, provides the community with a more accurate picture of injury severity and type. The number of serious injuries from road crashes in NSW as derived from both hospital admission records and Police reports is now available from 2005 to June 2017 with quarterly updates throughout the year. Data is available on the Centre for Road Safety website – roadsafety.transport.nsw.gov.au.

³ Data is updated monthly, with finalised information available by June 2018.

Figure 2: Road and road related fatalities in NSW, key areas that have increased from 2016 to 2017p⁴

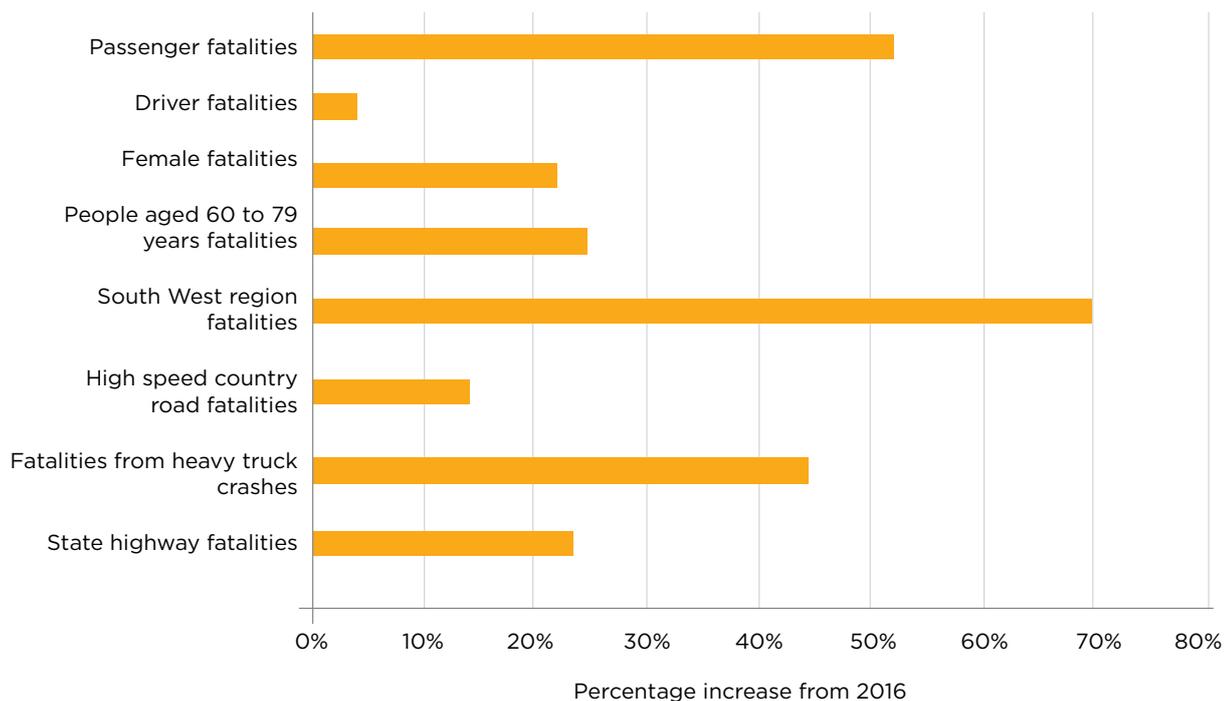
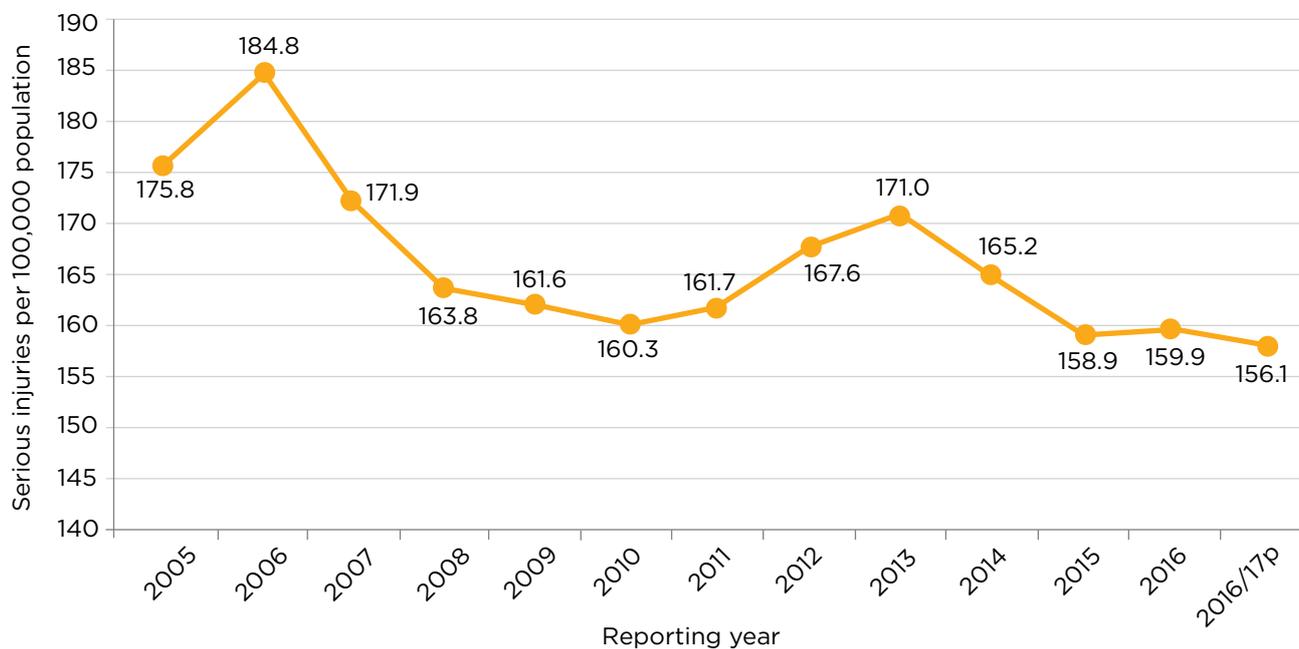


Figure 3: Serious injuries per 100,000 population, NSW



⁴ Not mutually exclusive

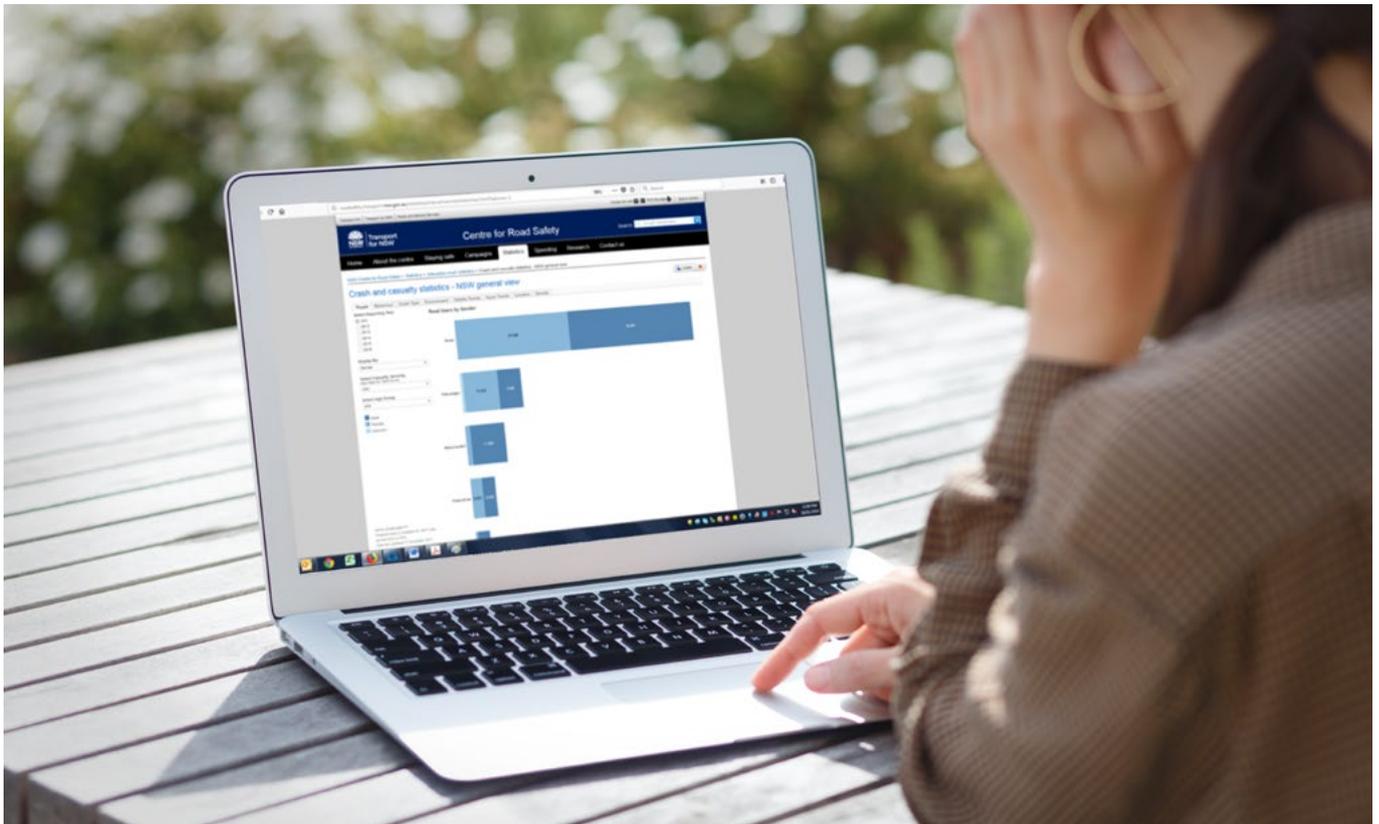
The road safety evidence base

NSW has one of the most comprehensive crash data information resources in the world. It draws on a range of sources including NSW Police Force crash information, Roads and Maritime Services licensing, vehicle registration and other information, NSW Health hospital data, State Insurance Regulatory Authority (SIRA) Compulsory Third Party claims information, vehicle safety features and other data.

This information helps us design and evaluate initiatives to reduce fatalities and serious injuries.

During 2017 the quality, breadth and availability of NSW crash data continued to be improved through:

- Quarterly publication of serious injuries data on the Centre for Road Safety website and promotion through the NSW Road Safety Facebook page – facebook.com/nswroadsafety.
- Better access to information for road safety decision makers through development of data analytics tools which allow on demand analysis of crash and casualty data.
- Development of a dedicated portal for providing customised data visualisations on crash data to the NSW Police Force and Local Government road safety practitioners.
- Agreement with the Ambulance Service of NSW to access ambulance data, and approval from ethics committees to add this data to the data linkage program to improve the completeness, accuracy and richness of NSW crash data.
- Publication of interactive data visualisations on serious injuries and Aboriginal road users' trauma on the Centre for Road Safety website.
- Updating the Vehicle Specifications Database (VSD) Program which contains information about registered light vehicles and light vehicles involved in crashes. These data assist road safety practitioners to investigate the role of vehicle design in crashes and their outcomes.



NSW Road Safety Strategy 2012-2021

The NSW Road Safety Strategy 2012-2021 and a suite of complementary Action Plans set out how the NSW Government and its road safety partners will deliver reductions in road trauma in NSW. This Progress Report outlines the range of actions and achievements during 2017 to implement the NSW Road Safety Strategy 2012-2021 and Action Plans.

Development of the Road Safety Plan 2021

Having reached the halfway point in implementing the NSW Road Safety Strategy 2012-2021, and to support the development of the Future Transport 2056 strategy, Transport for NSW undertook a review of road safety measures to address the upward pressures on the road toll and reset new road safety priorities. These priorities will help NSW work toward the aspirational target of zero trauma on the transport system by 2056, which starts with a 30 per cent reduction in road deaths by 2021.

A draft Road Safety Plan 2021 was released for consultation in October 2017 along with the draft Future Transport 2056 strategy.

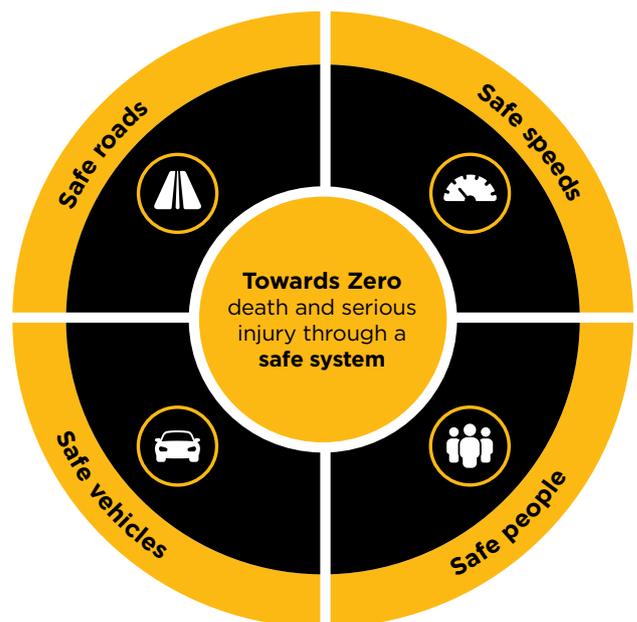
The development of the Road Safety Plan 2021 was based on:

- A detailed review of current road trauma statistics and evidence in NSW.
- A review of best practice to identify initiatives to achieve a 30 per cent reduction in deaths by 2021 and Towards Zero in the long term.
- Consultation with the NSW Government's Road Safety Advisory Council.
- Consultation with expert researchers and practitioners, and key stakeholders.
- Consultation through community forums across the state.

Over 20,000 people engaged in the process, with around 4,000 people participating in consultations and more than 16,000 others engaging online through social media (Facebook, Twitter and LinkedIn).

A Safe System approach

The NSW Road Safety Strategy 2012-2021 and the Road Safety Plan 2021 are underpinned by the 'Safe System' approach, which takes a holistic view of the road transport system and the interactions among the key components of that system – the road users, the roads and roadsides, the vehicles and travel speeds. It recognises that all components of the system have a role to play in helping to keep road users safe.





Some of the key achievements

Throughout 2017, Transport for NSW, the NSW Police Force, Roads and Maritime Services, SIRA, the education sector, local councils, other organisations and community partners worked closely to implement road safety measures. Key achievements for 2017 included:

- Commitment over 10 years of \$700 million to safety infrastructure via the Safer Roads Program. In 2016-17, an investment of \$64.7 million delivered 109 road safety projects from the whole program, with an estimated saving of 990 fatalities and serious injuries over the 10 years of the program, and an estimated 3,510 fatalities and serious injuries by 2039. In 2017-18, the Program aims to complete 169 projects with an estimated investment of \$70 million.
- An evaluation of 40 km/h speed limits implemented in high pedestrian activity areas (HPAAs) found a clear and significant safety benefit – a 38 per cent reduction in casualty crashes since the HPAAs program was introduced.
- The launch of several significant new road safety education campaigns, including *Saving Lives on Country Roads* which was the first-ever comprehensive road safety campaign to target country drivers; *Be Truck Aware* to improve the safety of vulnerable road users around large trucks; *Your Last Text* targeting mobile phone distraction; and the *Stop it...Or cop it* enforcement campaign.
- Continued upgrading of traffic signals to improve pedestrian safety to protect pedestrians from turning vehicles (green on green program), with more than 378 sites completed by December 2017 by Roads and Maritime Services.
- Changes to improve the Graduated Licensing Scheme for new drivers, including moving the Hazard Perception Test from the P1 to Learners phase, the removal of the Driver Qualification Test for P1 drivers, and P2 drivers staying on their licence for an extra six months if they receive a suspension for unsafe driving behaviour.
- Continued investment in high visibility enforcement, with double demerit points in place at key travel times throughout the year; an increase in mobile speed camera locations to over 1,000; tripling of mobile drug tests each year to over 97,000; and targeted Police enforcement operations throughout the year to address trends in specific regions.
- Focus on heavy vehicle safety through enforcement operations targeting heavy vehicle safety and compliance, as well as allowing cameras to enforce over-length and over-height heavy vehicle offences. In 2016-17, Roads and Maritime Services continued to monitor and enforce requirements on heavy vehicles, and worked closely with the NSW Police Joint Traffic Task Force to conduct 27 joint operations targeting heavy vehicle safety in which 5,008 units were inspected. In addition, as part of Enhanced Enforcement operations there were four heavy vehicle targeted operations, along with general heavy vehicle enforcement.

- Increases to the maximum fines that a court can issue for road transport offences, and increases to penalties for parking offences that impact pedestrian safety.
- Commencement of a new safety regime for taxis, hire cars and rideshare vehicles, which included specified safety standards, safety management system, vehicle standards including maintenance requirements, and offences that disqualified drivers from these transport modes.
- Legislative changes to support future innovation including to support the trial of automated vehicles and electronic learner driver logbooks through mobile apps.
- Legislative changes to driver disqualification rules to better target serious offenders and introduce vehicle sanctions (for example, seizure of vehicle or number plates) for repeated driving while disqualified.
- The establishment of a Written-Off Heavy Vehicle Register was initiated by the NSW Minister for Roads, Maritime and Freight in mid-2017. This was expanded to a national project at the Transport and Infrastructure Council. NSW is leading the way with legislation to support the introduction of a NSW Written-Off Heavy Vehicle Register was passed on 23 November by the NSW Parliament. The Register will improve road safety by preventing poorly repaired and unsafe heavy vehicles from being used on NSW roads, and provide a framework to support a national scheme.
- Completion of a \$5 million program to roll-out a second set of school zone flashing lights at more than 500 schools across NSW, warning motorists when they enter a 40 km/h school zone to protect children travelling to and from school.
- Release of the Used Car Safety Ratings Buyer's Guide 2017-18 with the latest safety ratings for second-hand vehicles.
- Publication and promotion of the crash test results for 30 motorcycle helmets.



Safe people – key actions

Older road users

On the road 65Plus continued to be a comprehensive community education resource for older road users. The guide is available in 10 languages and explains how health changes can affect a person's abilities as a road user and provides information on safe driving habits, walking and using public transport safely, licensing options, how to plan for retirement from full-time driving, choosing a safe vehicle, other transport options and using mobility scooters safely.

More than 50,000 copies of *On the road 65Plus* have been distributed since it was launched in 2015.

The resource was promoted and shared during Seniors Week and 237 *65Plus* older driver workshops were delivered to almost 5,300 people through Roads and Maritime Services and the Local Government Road Safety Program. A variety of groups were targeted including the Country Women's Association, retirement villages, garden clubs, Probus and retirement support groups.

In April 2017, more than 400 people from culturally and linguistically diverse backgrounds attended Senior Pedestrian workshops across the Sydney Region.

A recent independent evaluation of the licensing system confirmed the findings of the Older Driver Taskforce which the NSW Government established in 2011, indicating that overall the current NSW approach continues to balance the quality of life for older drivers while promoting road safety for the community.

This was further reinforced by the 2017 Staysafe Inquiry into Driver Education, Training and Road Safety which found that the current older driver assessment regime in NSW is a reasonable balance between the rights of individual drivers and the community.

Pedestrian safety

Look Out Before You Step Out

In 2017, there was a significant reduction in pedestrian fatalities, down from 71 in 2016 to 54. The *Look Out Before You Step Out* campaign continued to roll-out in 2017 to highlight the need for pedestrians to be present and alert when crossing the road. Research to evaluate the effectiveness of the advertising found that 74 per cent of respondents agreed that the statistics featured in the campaign emphasised the importance of looking out before you step out when crossing the road – as well as finding it easy to understand (70 per cent), informative (65 per cent) and believable (66 per cent). The campaign leveraged large outdoor events to achieve greater awareness at sites and times where the message was relevant.

Across the Roads and Maritime Services regions of Sydney, Southern and the Hunter, over 1,500 *Look Out Before You Step Out* pavement markers were installed to support the campaign.



Trial of in-ground pedestrian lights

In May 2016, the NSW Government announced a trial of in-ground pedestrian lights at key crossings in the Sydney CBD, in response to an increase in pedestrian fatalities in NSW.

During 2016 and 2017 in-ground pedestrian lights were installed and trialled at two locations in Sydney CBD (at Dixon/Hay Street and Goulburn/Pitt Street). Transport for NSW is undertaking an evaluation of the trial involving pedestrian observations and interviews to assess safety benefits of the in-ground lights.

Stepping On

Almost 130 *Stepping On* presentations were delivered to around 1,800 people in the South West and Sydney Regions. This NSW Health initiative is an eight-week program where participants aged 65 and over learn to do exercises to aid recovery from falls. Roads and Maritime Services provided input on how to be a safe pedestrian, such as choosing a safe route and using pedestrian crossings and refuges, and use *On the road 65Plus* materials to cover other issues including driving and cycling.

Penalties for parking offences

Changes were made to penalties for parking offences to deter unsafe parking which may put pedestrians at risk. These came into effect in January 2018 and included the creation of seven new school zone offences and the allocation of two demerit points for seven crossing offences.

Driver fatigue

Driver fatigue is one of the top three contributors to the road toll. Research has shown that fatigue can be as dangerous as other road safety issues, such as drink driving.

The *Don't Trust Your Tired Self* campaign continued in 2017 to improve awareness of fatigue, the dangers of driving while tired, and to inform drivers that fatigue can occur on any drive. The campaign encouraged drivers to assess their levels of fatigue and consider alternatives to driving.

The campaign highlighted the need for self-assessment prior to and during driving. Drivers were encouraged to visit the website testyourtiredself.com.au to use a simple tool to test how tired they might be before driving, and find out what to do before getting behind the wheel to avoid driving while tired.

The campaign achieved strong main message awareness, with 73 per cent of people surveyed indicating awareness and 74 per cent of people reporting that they recognised the campaign. The website had over 35,000 test completions (January to December 2017), and the amount of time people spent on the website was up 69 per cent compared to the previous year.

Roads and Maritime Services' Road User Safety teams across NSW worked with employers and industry to raise awareness and encourage good fatigue management practices in their organisations.

They also worked with community groups to support 80 'Driver Reviver' sites that open during peak travel times over long weekends and school holiday periods to encourage drivers to stop and take a break. A permanent Driver Reviver building/site was opened at Cowra in March 2017.

To address fatigue crashes in metropolitan areas in the early morning, in partnership with Nova 96.9 *The Late Shift* is a dedicated radio program targeting those who are on the roads at this time such as shift workers and trades people. The result is a format that encouraged listeners to think about the risks of driving tired, whilst helping them make smarter choices to avoid doing so in the future. The *Late Shift* was the overall winner for the Best Content campaign of 2017 at the Festival of Media North America in New York City.



Speed

Inappropriate speed remains the greatest contributing factor to fatalities and injuries on NSW roads, contributing to 43 per cent of road fatalities in 2017.

Slow Down campaign

The *Slow Down* campaign encourages drivers to reduce their speed because they cannot control all the risks faced on the road. Research into the effectiveness of the campaign showed that 70 per cent of respondents found it easy to understand, 59 per cent thought it was informative, 67 per cent thought it was believable, and there was 67 per cent campaign recognition.

A unique feature of the campaign during 2017 was the development and promotion of localised video content on social media featuring local community members answering the question “Who do you slow down for?” The videos were filmed at locations across NSW, including Grafton, Dubbo and Sydney.

Western Sydney Wanderers (Slow down speeding campaign)

Speeding is the biggest known contributor to the NSW road toll, and is a particularly significant issue in Western Sydney. In September 2015, the NSW Government became a partner of the Western Sydney Wanderers (WSW) A-League soccer team to raise awareness of the dangers of speeding.

In 2017, a new approach of integrating Tristan Kennedy, a road trauma survivor and ambassador with the Western Sydney Wanderers, delivered highly emotive and engaging content via digital and social channels, and at matches with an audience reach of more than one million and over 500,000 video views.



Slow Down and Give Us Space campaign

In 2017, Transport for NSW relaunched the *Slow Down and Give Us Space* campaign to help improve the safety of those who work on the roadside responding to crashes, breakdowns and other emergency situations. The social media led campaign ran in the lead up to the December holiday period through the Centre for Road Safety’s Facebook page and was supported by emergency services partners’ social pages and roadside messaging on key routes.



Speed management

Annual speed compliance data is collected each year with speed surveys conducted at 175 sites. The data is used to inform targeted Police enforcement operations and public education campaigns.

Speed zones are regularly reviewed to ensure speeds listed are appropriate to the road design and use, and the public can make suggestions about speed limits, speed limit signs and the locations of speed cameras via the Safer Roads website – saferroadsnsw.com.au.

Transport for NSW published the results of the 2016 speed camera review, which found that speed cameras continue to deliver positive road safety benefits.

For example:

- Results at **red-light speed camera locations** show there has been a 42 per cent reduction in fatalities, a 30 per cent reduction in the number of fatal and serious injury crashes, a 31 per cent reduction in serious injuries, and a 39 per cent reduction in pedestrian casualties.
- For the **mobile speed camera program**, NSW speed survey data for the last seven years shows a reduced number of light vehicles exceeding the speed limit, across all speed zones.
- Analysis of **heavy vehicle average speed enforcement** lengths has identified a low number of crashes, a high level of compliance and a low number of infringements.

To assist drivers with complying with speed limits, the Speed Adviser app provides free access to accurate speed zone information and warnings across the NSW road network. The app was released in February 2014 and had been downloaded over 162,000 times by December 2017.

Fixed digital speed cameras and red light cameras

Fixed digital speed cameras operate at 110 locations across NSW, to detect and deter speeding at specific locations with a demonstrated crash history or a high crash risk.

Red-light speed cameras are installed at signalised intersections with a history of right angle and pedestrian crashes. These cameras detect and deter both speeding and red-light running, both of which can result in severe injuries even in lower speed crashes. Red-light speed cameras are currently in force at 171 locations across NSW, and Transport for NSW is working to expand the program to 200 locations, with regional areas prioritised for the expansion. Results at fixed speed camera locations show there has been a 92 per cent reduction in fatalities, a 31 per cent reduction in casualty crashes, and a 36 per cent reduction in injuries.

Mobile speed cameras

To deter and reduce speeding, the number of mobile speed camera locations increased to 1,024 in 2017. Mobile speed cameras are speed cameras that are

moved in vehicles from location to location. They are effective because they are unpredictable, and their operation creates a general deterrence against speeding, leading to a crash reduction across the whole network, not just at camera locations. Annual speed camera reviews have consistently shown the benefits of speed cameras in reducing trauma where they operate.

Saving Lives on Country Roads campaign

While country residents make up only one-third of the NSW population, two-thirds of all fatalities occur on country roads.

Launched in December 2017, the *Saving Lives on Country Roads* campaign targets people living in country areas and encourages them to re-think the common excuses used for unsafe driving. The campaign is the first comprehensive campaign targeted specifically at country residents and reinforces the message that ultimately there is no excuse for unsafe behaviour on the road because it can have tragic and life-changing consequences.

The campaign includes television advertisements, radio, print, digital and social advertising in regional NSW. It was supported by public relations and community and stakeholder engagement activities and will continue in 2018.



NRL, NSW Rugby League and Country Rugby League

In April 2017, the NSW Government commenced a partnership with the National Rugby League, NSW Rugby League and Country Rugby League. The partnership promoted the *Knock-On Effect* campaign, highlighting the trauma of those left behind in rural communities when lives are lost and people are seriously injured on the road.

The partnership developed a strong ambassador program with rugby league legends Brad Fittler, Laurie Daley and Steve Menzies, as well as people affected by road trauma within the rugby league

community. These ambassadors delivered road safety messages to the target audience of regional male drivers aged 30 to 59 years old. Ambassador social content reached more than one million people.

As part of the partnership, a Wellbeing Program was delivered to over 5,000 rugby league staff and elite and pathway players to educate them on road safety.



Child safety

NSW has adopted a safe system approach to child safety, not only educating children and parents on how to stay safe on our roads, but also ensuring that children are safe in vehicles by using appropriate child restraints. This approach also extends to ensuring that road infrastructure around schools protects children as they travel to and from school.

This approach has been very effective, with no school aged pedestrian fatalities in school active zones since 2013.

Road Safety Education Program

During 2017, the Road Safety Education Program continued to provide educational resources for schools and professional development to teachers and childhood educators throughout NSW.

The program is a partnership between the Centre for Road Safety, Department of Education, Catholic Education Commission NSW, Association of Independent Schools NSW and the Kids and Traffic Early Childhood Road Safety Education Program.

Road safety is taught as part of the school curriculum in the learning area of Personal Development, Health and Physical Education (PDHPE), with all students in NSW required to study PDHPE from Kindergarten to Year 10.

The program also provides professional development support and resources for educators in more than 3,000 early childhood services across NSW.

Online resources for schools

The Safety Town website – safetytown.com.au – for primary school students continued to grow in popularity following its relaunch in July 2016. A new pedestrian activity was added to Safety Town in 2017 and more than 48,000 users visited the site during the year, viewing about 680,000 pages. The average session duration of more than nine minutes is high by website browsing standards, showing that users are taking the time to view Safety Town’s activities and learning experiences.

Drug Driving Education Program

In partnership with the NSW education sector and the NSW Police Force, Transport for NSW developed and launched a new mobile drug testing school resource aimed at students in Years 10-12. The resource, which was published on the On The Move website – onthemove.nsw.edu.au – for high schools, helps teach students about NSW Police mobile drug testing, and the consequences of drug driving.

School Crossing Supervisor Program

There was continued support for school crossing supervisors protecting around 800 crossings at about 700 schools across NSW, with an annual investment of \$14 million in the school crossing supervisors service.

In 2017, additional resources were targeted to high-risk locations with large numbers of unaccompanied children crossing.

School zones campaign – Slow Down to 40 km/h

The *Slow Down to 40 km/h* campaign maintained community awareness of school zones, and highlighted the need to comply with the 40 km/h school zone speed limit and avoid undertaking dangerous moves such as U-turns and double parking in school precincts.

A total of 80 per cent of people surveyed indicated that they found the campaign easy to understand, 65 per cent found it informative, 74 per cent said they found the campaign believable, and 64 per cent recognised the campaign.

The school zones page on the Centre for Road Safety website – roadsafety.transport.nsw.gov.au – which provides details of operational times and school term dates, was updated during the year and was viewed more than 40,000 times in 2017, up from around 22,000 in 2016.

Social media posts relating to school zones have consistently achieved high average engagement rates of 5 per cent.

School zone flashing lights and pedestrian infrastructure

In 2017, Transport for NSW and Roads and Maritime Services completed the \$5 million program to roll-out a second set of school zone flashing lights at more than 500 schools across NSW, to warn motorists when they enter a 40 km/h school zone to protect children travelling to and from school.

The school zone flashing lights installation program ensures that every school in the State has at least one set of school zone flashing lights. When newly built schools are opened they also receive a set of school zone flashing lights. Since 2011, more than 6,000 flashing lights have been installed across NSW, with additional sets installed outside schools with multiple entrances.

In addition, almost half of the \$5 million school zone pedestrian infrastructure program was completed by the end of 2017, delivering 68 School Zone Pedestrian Infrastructure projects. The program aims to improve pedestrian safety infrastructure around schools, such as raised zebra crossings and pedestrian refuges, as well as improved signage to enhance drop-off zones and visibility.



Younger drivers

Graduated Licensing Scheme

While the number of young drivers killed on NSW roads has halved since the introduction of the Graduated Licensing Scheme (GLS) in 2000, P-plate holders continue to be over-represented in road crashes, with P1 or P2 licence holders making up 9 per cent of all licence holders but representing 14 per cent of all fatalities on NSW roads in 2017p.

In November 2017, further changes were made to the GLS to continue to improve the way it prepares novice drivers to be safe on our roads while they develop their driving skills. The changes for new drivers involved:

- Learner drivers having to complete the Hazard Perception Test before they can take the driving test;
- P1 drivers will no longer have to complete the Hazard Perception Test to get their P2 licence, as it will now be done at the Learner stage; and
- The Driver Qualification Test has been removed for P2 Drivers. In its place, P2 drivers will have to stay on their licence for an extra six months if they receive a suspension for unsafe driving behaviour.

Safer Drivers Course

The Safer Drivers Course helps young drivers on their L-plates prepare for driving solo when they graduate to provisional licences. It teaches learners how to reduce road risks. It also helps them understand more speed management, gap selection, hazard awareness and safe following distances.

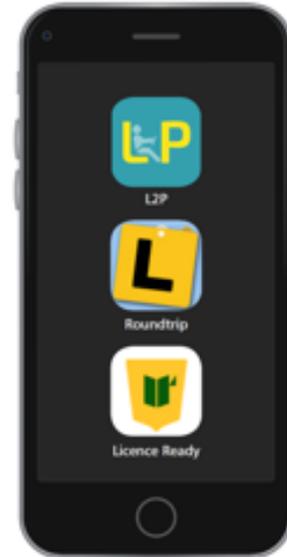
During 2017, the Safer Drivers Course was delivered in around 250 locations across NSW. By the end of November 2017, almost 86,400 course participants had progressed to their Provisional licence since the course began in July 2013.

Learner log books

Changes were introduced in October 2017 to enable all learner drivers to use a digital learner driver logbook in one of three apps – Licence Ready, Roundtrip and L2P – to log the required 120 hours of driving practice and then submit their logbook electronically with Roads and Maritime Services.

As a result, parents and learner drivers no longer have to manually enter their hours of driving, making the process simpler and easier, as well as avoiding

potential errors or forging of log book hours. In addition to logging hours and verifying details, the apps make use of GPS tracking, automated weather conditions, profile set up as well as summary dashboards.



TAFE Towards Zero partnership

A Roads and Maritime Services partnership with TAFE NSW provides road safety education to apprentices who are at high risk of crashes due to their age, inexperience and the need to travel long distances.

In February 2017, delivery of the workshops expanded from the Dubbo and Orange campuses to the whole of NSW, with 40 workshops delivered to more than 740 students in 2016-17.

The initiative was recognised with an Australian Road Safety Award in March 2017 and 3M-Australiasain College of Road Safety Diamond Road Safety Award – Highly Commended in October 2017.

Helping parents teach learner drivers

To assist the parents of learner drivers, Roads and Maritime Services employees ran *Helping Learner Drivers Become Safer Drivers* workshops across NSW as well as to tailored workshops for culturally and linguistically diverse communities and remote Aboriginal communities.

Funding in 2016-17 delivered over 250 workshops which were attended by more than 3,100 people.

Local Government Road Safety Program

The vast majority of roads in NSW are managed by Local Government, some 160,000 out of the total 180,000 kilometres of road.

The Local Government Road Safety Program is a partnership between Transport for NSW, Roads and Maritime Services and participating local councils. Under the program, Road Safety Officers support state-wide road safety initiatives and deliver projects to improve road safety for their local residents.

Councils develop a three-year action plan outlining all the programs, projects and activities they will deliver to address local road safety issues. Local projects are developed to target problems identified by councils through crash data, NSW Police Force information, council staff, community groups, businesses, schools and target groups.

During 2016-17, a total of 288 projects were completed through the program with 77 participating councils.

Enhanced police presence

Through the Enhanced Enforcement Program, Transport for NSW partners with and funds the NSW Police Force to enhance the level of high visibility police enforcement in addition to normal operations.

Operations targeted dangerous behaviours such as speeding, drink driving, drug driving and not wearing a seatbelt. Enforcement operations such as Safe Arrival, Operation Slow Down, Operation North Force and South Force targeted emerging crash locations, while the Towards Zero Operations targeted areas with a high incidence of serious injuries.

The 2016-17 funding program resulted in the NSW Police Force carrying out over 100 additional operations, 21 major route and 8 state-wide operations. The operations resulted in more than 215,700 additional enforcement hours being committed to road safety in NSW.

Local operations were supported by roadside banners, static signage and Variable Message Signs.

NSW Police enforcement campaign Stop it...Or cop it

The *Stop it...Or cop it* campaign is part of Transport for NSW's partnership with the NSW Police Force, and was designed to increase the perceived certainty of road safety enforcement and immediacy of penalties.

The campaign launched in December 2017 with television advertisements, radio, print, digital and social advertising running across NSW throughout the holiday period.



Drug driving – Mobile Drug Testing Program

The increased scope and enhanced flexibility of roadside drug testing continued to provide opportunities to challenge and deter illicit drug users from driving. Roadside Mobile Drug Testing (MDT) by NSW Police operates alongside Random Breath Testing (RBT) for alcohol.

In March 2015, the then Premier announced that mobile drug testing of drivers would expand from approximately 30,000 tests a year to over 97,000 tests a year by 2017. This has been achieved, with 97,400 tests completed by NSW Police during 2016-17.

The *Mobile Drug Testing – MDT* campaign supported NSW Police Force operations by increasing the perception of the likelihood of being tested and caught by NSW Police. There was very strong recall of the *MDT* campaign, with four out of five drug users recalling at least one element of the campaign.

In measuring the effectiveness of the campaign, 67 per cent of respondents said they found it easy to understand, 51 per cent found it informative, 59 per cent found it believable and 79 per cent recognised the campaign.

The campaign was successful in influencing the behaviours and attitudes of motorists, with those exposed to the campaign reporting they would adopt safer road behaviours in future. Personal beliefs about the unacceptability of drug driving were also stronger among those exposed to the campaign.

Drink driving - What's Your Plan B?

The *What's Your Plan B?* campaign promoted positive choices for getting home safely after a night out and reinforced the idea that if a person drinks, they should not drive.

Recognition of the campaign was strong, with the primary target audience of males aged 17-39 aware of outdoor and in-venue messaging. Effectiveness research found 78 per cent of respondents thought it was easy to understand the campaign, 62 per cent of people found the campaign believable, 40 per cent of people said the campaign was informative and there was 70 per cent of people who reported recognising the campaign. The campaign also continued to create a perception among drivers of the likelihood of getting caught if they had an illegal blood alcohol concentration.

Tailored *Plan B* campaign materials were developed for culturally and linguistically diverse (CALD) audiences to reinforce that drink driving is illegal and to reflect more diverse social settings. These campaign communications were highly effective at engaging specific CALD audience groups, with engagement rates of up to 9 per cent on social media. Transport for NSW was shortlisted in the 2017 Australian Multicultural Marketing Awards for this initiative.

Cricket NSW (Plan B drink driving campaign)

The NSW Government has been a major sponsor of Cricket NSW and naming rights sponsor of the NSW Blues since 2002. It has also been a community sponsor of the Big Bash League for four years and a naming rights sponsor for the Plan B Regional Bash for two years.

The focus of the sponsorship is to promote Plan B drink driving messages to the cricket fan base, which aligns to core Plan B target audience, to deliver meaningful community engagement initiatives to key demographic groups such as young men.

The integrated Plan B video achieved more than one million views and on-ground activations at cricket matches reached 420,000 fans across NSW.

Distraction

NSW Police charged over 37,000 people in 2017 (to the end of November) for illegally using their mobile phone while driving. One of several educational initiatives undertaken during the year to complement the enforcement activity was the *Your Last Text - Is it worth dying for?* mobile phone distraction campaign launched in November 2017 with high profile radio broadcaster, Ray Hadley.

Sydney Swans (mobile phone distraction campaign)

The NSW Government became a premier partner of the Sydney Swans in September 2014 to raise awareness of the dangers of illegally using a mobile phone through the *Get Your Hand Off It* campaign. The Sydney Swans players are ambassadors advocating solutions to help drivers break the habit of looking at their phone while driving.

In 2017, the campaign included new video content entitled 'Very Zen' that identified mobile phone habits of young adult drivers. The content provided the simple solution of removing the temptation to use your phone while driving by storing it in the glovebox of the car. Very Zen became the most watched video content produced by any of the Sydney Swans' partners.



Aboriginal people and disadvantaged drivers

Implementation of the NSW Aboriginal Road Safety Action Plan 2014-17 continued. Safe and legal driving was supported by the Driver Licensing Access Program (DLAP) and the Safer Drivers Course.

The DLAP assists Aboriginal people and disadvantaged people to obtain and retain their driver licence and remain safe and legal drivers. Obtaining a driver licence contributes to improved access to education, employment, health and other community participation services.

Transport for NSW provided \$1.49 million in funding across 13 providers in 2016-17, which helped almost 1,000 people obtain their learner licence, and more than 600 their provisional licence. The program also provided access to supervised driving assistance with the driver knowledge test and proof of identity.

From January to November 2017, over 300 participants who identified as Aboriginal progressed to their Provisional licence.

As part of the development of the Road Safety Plan 2021 an Aboriginal Stakeholder and Community Consultation forum was held in June 2017 to discuss priorities for Aboriginal people. A wide range of issues were raised including but not limited to transport disadvantage and the need for more options, the importance of a strong evidence base and data, options for supporting safe and legal driving, the need for improved roads in Aboriginal communities, and access to safer vehicles and equipment.

Transport for NSW and Roads and Maritime Services staff engaged with Aboriginal people from across NSW at a number of events to share information on safe behaviours on the road. These events included the Yabun Festival in January, the NSW Aboriginal Koori Knockout competition held over the October long weekend and the Adam Goodes Talent Camp for young Aboriginal AFL players.



Heavy vehicle safety⁵

Heavy vehicles make up less than 3 per cent of NSW motor vehicle registrations and only 8 per cent of kilometres travelled by all NSW vehicles, but were involved in around 22 per cent of road fatalities in 2017p.

Of the fatal crashes involving a heavy truck, the truck was deemed to be the key vehicle in 38 per cent of the crashes.

A new campaign called *Be Truck Aware* was introduced to help address the risks from increased truck movements as a result of construction work across Greater Metropolitan Sydney. The campaign encouraged a better understanding of the trucks, promoting awareness of the fact that trucks have blind spots and drivers may not be able to see you, and that trucks can't stop as quickly as some other vehicles. The campaign also highlighted what road users (including pedestrians, bicycle riders and motorcycle riders) could do to be safe around trucks.

⁵ The design safety of the heavy vehicles themselves is covered in the Safer Vehicles section of this report.

The *Be Truck Aware* video was overwhelmingly positively received by the community reaching an estimated 4.4 million people, and achieving over 36,000 shares on the NSW Road Safety Facebook page.

While the campaign is still relatively new, initial effectiveness research showed that 61 per cent of respondents reported the campaign was easy to understand, 52 per cent found the campaign informative, 56 per cent found the campaign believable, and 60 per cent of respondents recognised the campaign.



Transport for NSW also utilised social media and roadside signage to encourage people to take extra care around trucks and raise awareness of the safety risks of heavy vehicles.

Roads and Maritime Services conducted transport and fleet operator visits, encouraging operators to update driver induction manuals and implement safe driving policies to encourage drivers to comply with regulations.

Transport for NSW continued to work with heavy vehicle operators on ways to improve vehicle standards, and promoted key safety features on heavy vehicles.

Other actions to improve heavy vehicle safety in 2017 included joint NSW Police Force and Roads and Maritime Services enforcement operations to identify and remove dangerous trucks from the network.

NSW also continued to operate the largest average speed camera program in Australia, with 25 lengths monitoring speed on key trucking routes across the state. This equates to 726 km of enforcement lengths, which is around 6 times more than any other state or territory.

In addition, the Road Transport Act 2013 was amended to allow cameras to enforce over-length and over-height heavy vehicle offences and to support the introduction of a NSW Written-Off Heavy Vehicle Register.

Bus safety

In November 2017, Transport for NSW hosted Bus Safety Week for the third year under the *Be Bus Aware* banner. The week was designed to improve safety on and around buses by reinforcing relevant road rules and promoting safer on-road interactions between pedestrians, motorists, bicycle riders and buses.

The initiative included advertising on buses and in train stations, radio, web content, Facebook posts (featuring a number of bus safety animations and new bus driver videos), and local activities run by NSW Police, State Transit, BusNSW and private bus operators. The campaign reached more than 1,400,000 customers in 2017.

Bicycle safety

The *Go Together* bicycle safety campaign continued to raise awareness of the minimum passing distance and other bicycling-related road rules, while encouraging all road users to share the road safely. The campaign successfully engaged a large cross-section of the community, reaching over 350,000 people through social media posts with an average of over two and a half minutes spent on the Centre for Road Safety website campaign page - roadsafety.transport.nsw.gov.au. The *Going Together* social content series, which documents the safe on-road behaviours of members of the Sydney cycling community, generated more than 490,000 video views in 2017.

Roads and Maritime Services and local councils implemented a number of other initiatives to support safe cycling. For example, as part of the Newcastle City Council Active Transport Bicycle Project, the Council has taken up a suggestion to provide beginner classes and refresher skills for older members of the community.

Motorcycle safety

The *Ride to Live* campaign continued to be rolled out in 2017 and promoted safer riding behaviours to motorcyclists, raising awareness of motorcyclists sharing the road with drivers.

The campaign achieved very high awareness with 78 per cent of the motorcycle rider audience being aware of it. A total of 71 per cent of respondents reported the campaign was easy to understand, 64 per cent said it was informative, 68 per cent said the campaign was believable, and 68 per cent of respondents recognised the campaign.

The *Roads We Ride* social content series reached over 2.8 million people and delivered more than 1 million video views of safe riding behaviours.

Other activities to improve motorcycle safety in 2017 included:

- The *Roads We Ride* series of videos for motorcycle riders.
- Motorcycle hazard mapping, route investigations and treatments.
- Stakeholder engagement and events.

Transport for NSW sponsored Motorcycle Awareness Month in October 2017 as part of a partnership with the Motorcycle Council of NSW. The month included a range of events aimed at educating drivers and riders to drive and ride safely and be aware of their surroundings.

Road Rules Awareness Week

Road Rules Awareness Week aims to help road users improve their knowledge of the road rules, including any new road rules or regulations. In 2017, the week ran from 27 February until 5 March and included promotion on train station 'xtracks', web content, Facebook posts (featuring a suite of new infographics and road-rule related polls), media, and for the first time a Facebook Live event where the public were able to have road-rule related queries answered in real time.

The Road Rules page on the Centre for Road Safety website - roadsafety.transport.nsw.gov.au - received 1,860 views during the period and the campaign also generated numerous news articles and radio segments, and reached over 2 million people on Facebook.



Point to Point – taxis, hire cars and rideshare vehicles

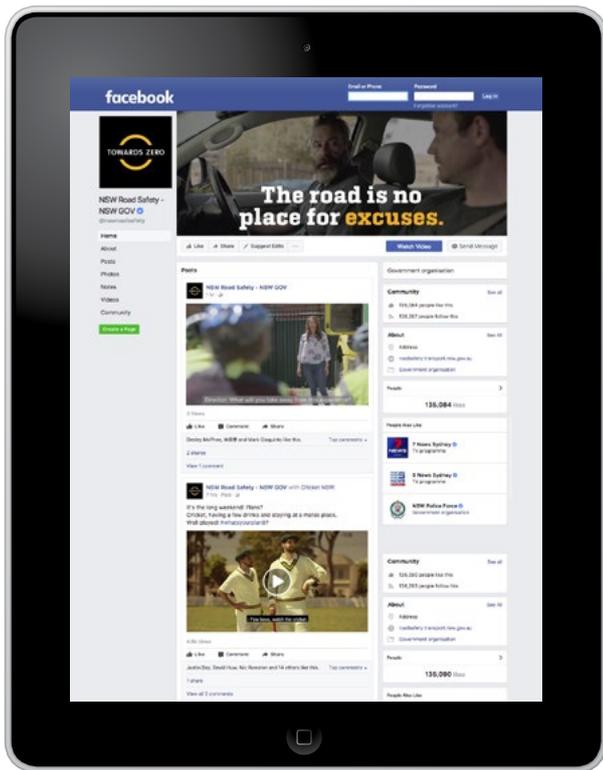
A new regulatory framework for taxis, hire cars and rideshare commenced on 1 November 2017. This included a range of safety related requirements including specified safety standards, a safety management system, vehicle standards including maintenance requirements, and offences that disqualified drivers from these transport modes.

NSW Road Safety Facebook page

The NSW Road Safety Facebook page continued to grow in popularity over 2017, achieving more than 131,000 page likes by the end of the year, a 63 per cent since 2016, and reaching an average of 1.4 million people a week.

Video content remained the most popular content on the page with over 23.9 million video views during the year, up 7.6 per cent on 2016. A 'Feet on the dash' – Crashlab test was the most successful video content of the year, reaching a combined 1.4 million people.

The page had an average daily reach of almost 94,000 people, an increase of over 16 per cent compared to 2016. While the audience breakdown shifted slightly with 65 per cent of followers being male (down from 72 per cent), female followers were up slightly to 35 per cent. The largest demographic was males aged 25-34, making up 27 per cent of all followers.



Community Road Safety Grants

The Community Road Safety Grants program provides community groups across NSW with the opportunity to implement small-scale, local road safety programs within their communities consistent with the NSW Road Safety Strategy 2012-2021.

Grants of up to \$5,000 are available for road safety projects that involve community engagement and aim to improve road safety awareness. Larger grants of up to \$30,000 are also available.

Thirty-nine projects across NSW received funding under the program in 2017, including initiatives for older road users, young drivers, people disabilities and Aboriginal and culturally and linguistically diverse communities.



Safe vehicles – key actions

Occupant restraints

Child Restraints Evaluation Program

The Child Restraints Evaluation Program (CREP) provided ratings for an additional 12 child car seats. These included more child seats that can be secured using the system known as ISOFIX (without using seatbelts), as well as child seats that can be used in forward facing mode with in-built harnesses for children aged from six months to eight years.



Choosing and using child restraints

The Child Car Seats website – childcarseats.com.au – allows parents and carers to compare the price and safety ratings of over 250 different types of seats, and to find Authorised Restraint Fitting Stations.

During 2017, more than 413,000 visitors viewed 1.3 million pages on the website, and since its 2014 launch there have been more than 1.37 million visitors to the site. New ratings for 12 child car seats were added in April 2017, including three booster seats (for children aged from 4 years up to 8 years) that scored the top protection rating of five stars.

At local child car seat checking days Roads and Maritime Services employees, in partnership with Local Council road safety officers and the NSW Police Force, raised awareness about fitting and using child restraints correctly and fitting stations.

In total, 119 child restraint checking days were held across the State: 112 in Sydney with 4,245 restraints checked, five in South West Region with 64 restraints checked, and two in Western Region with 46 restraints checked. Over 1,000 educational resources were distributed to community members at these days.

The multicultural child restraint program was extended to include Mandarin, Cantonese, Hindi and Punjabi speaking families with children 0 to 7 years old.

Australasian New Car Safety Ratings (ANCAP)

Transport for NSW is a key contributor to and member of the ANCAP Board, Council and Technical Group.

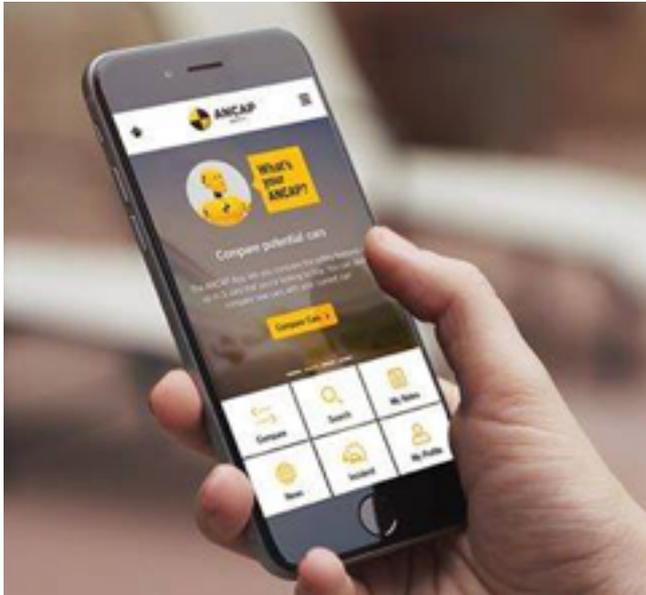
In 2017, ANCAP released safety ratings for 69 light vehicles, with 57 receiving the maximum five star safety rating, while seven were awarded four stars. Overall, 95 per cent of the 1.15 million new light vehicles sold in Australia had an ANCAP safety rating, with 91 per cent having the maximum five stars.

Two vehicles, the Ford Mustang and the Great Wall Motors Steed, received only a two-star rating. For the first time Chinese made vehicles from MG, Haval and LDV received the maximum five star rating, which indicates optimum safety is being provided even in vehicles at the cheapest end of the market.

Last year was a significant year for ANCAP as it prepared to adopt the Euro NCAP protocols from 2018, which will increase the requirements needed to achieve a five star rating. NSW will play an important role in ensuring the transition is successful, and during the year Transport for NSW purchased new crash test dummies (at a cost of \$1.1 million) necessary for the amended crash-test protocols, and the NSW Government committed a further \$1.6 million to the advanced tests for crash-avoidance technologies.

The proportion of NSW registered passenger vehicles with a five star ANCAP rating continues to increase, and in 2016,⁶ 43 per cent of metropolitan and 35 per cent of regional registered passenger vehicles had a five star rating.

In 2017, ANCAP released the ANCAP Safety Ratings app that allows users to compare the safety ratings of cars.



Crashlab – our safety research laboratory

Crashlab provides national research and commercial vehicle crash testing services using the latest technologies in a world-class facility. It also includes a laboratory that carries out tests on child restraints and motorcycle and bicycle helmets.

Crashlab is accredited as a testing laboratory by the National Association of Testing Authorities.

In addition to commercial testing, Crashlab works with Transport for NSW to develop tests that can deliver strategic road safety messages. For example, during the year Crashlab carried out tests to:

- Simulate a vehicle clipping a cyclist to support the minimum passing distance rule (February).
- Demonstrate the risks to a front seat passenger if they put their feet on the dashboard and the passenger airbag is deployed (June).
- Demonstrate the benefits of electronic stability control were undertaken to support the launch of the Used Car Safety Ratings (August).

During 2017, Crashlab conducted 38 crash tests – 18 for ANCAP, five for vehicle manufacturers and 15 for Transport for NSW. A total of 18 roadside barrier and other infrastructure tests were also carried out for a range of clients as well as over 400 child restraint tests and more than 50 helmet tests.

Crashlab continues to play an important role in informing road safety research, with a notable project developed using world-first procedures to investigate the injury risk to motorcyclists created by attaching devices to their helmets.



Used Car Safety Ratings

The annual Used Car Safety Ratings, which are supported by the NSW Government, were released in August 2017 and included 389 vehicles, a 12 per cent increase compared to 2015. The ratings help buyers make smart and informed decisions when purchasing used cars.

For the first time, a 'primary safety index', which estimates how well a vehicle can avoid a crash, was used to determine the 'Safer Pick' options. The 2017 release was supported by video footage prepared by Transport for NSW that demonstrated the considerable safety benefits that electronic stability control provides in light commercial vehicles.

Safety technologies for heavy vehicles and combinations

Improvements to heavy vehicle design and safety features have made a proven contribution to reducing the number and severity of crashes.

The 3rd edition of *Safety Technologies for Heavy Vehicles and Combinations* was released in June 2017 by Transport for NSW and promoted to industry stakeholders. Crash avoidance, protection systems

⁶ Latest figures available.

and harm minimising technologies available in the market were reviewed with every technology in the publication offering a safety benefit.

Some technologies have additional benefits such as improving driver and passenger comfort. The cost of some of the more advanced technologies can be significant, but many are very inexpensive and practical to install. About half of the recommended features can be retro-fitted to a heavy vehicle.

Driver fatigue prediction pilot

In June 2017, Transport for NSW commenced a trial of a new wearable technology with a bus company and a group of emergency services personnel. The device is similar to a wearable fitness tracker and provides information to drivers about their predicted level of driver fatigue up to 18 hours in advance. Its algorithm is based on the SAFTE Fatigue Model (Sleep, Activity, Fatigue, and Task Effectiveness) bio mathematical model developed by the US Army Research Laboratory. Drivers can then use this information to better plan their driving times. Results of the pilot will be available in 2018.

Motorcycle safety

Helmets

The Consumer Rating and Assessment of Safety Helmets (CRASH), a consortium of government agencies, tested 30 helmets against a range of criteria including protection and comfort. The testing protocol was revised in 2017 to include a new safety test component, to test a helmet's oblique impact management capability. The rating system was also revised to reflect the relevance of each test component to protect the wearer's head, and to indicate relative comfort levels.

The latest CRASH results were released in October 2017, giving riders a guide to the safest and best helmets available.

The tests found that even with revised ratings, full face helmets in general provide better safety protection compared to open face helmets, with one full face helmet achieving a five star safety rating for the first time in the program.

A series of tests using updated testing technologies and a new test rig were carried out to further investigate the effect of fitting devices to motorcycle helmets. Previous research using dated methodology identified that some devices can affect a helmet's compliance with mandatory design standards, but this research will determine how this translates to actual injury risk to the wearer. The tests were completed in late 2017 and the findings are currently undergoing rigorous independent review.



Protective clothing (Moto-CAP)

Transport for NSW continued to administer the national program to assess the comparative levels of protection provided by different types of motorcycle clothing. The program aims to raise consumer awareness of safer products and influence manufacturers to supply them to the market.

Considerable progress was made, with the name 'Moto-CAP' and associated website URLs protected by copyright, and the program partners (road safety authorities, motoring clubs, compulsory third party insurance providers and users) expanding to include representatives from every Australian jurisdiction and a number of New Zealand stakeholders.

Assessments were conducted with the first series of assessments completed in June 2017. The results of these tests will be provided to the manufacturers and suppliers, and subsequent results will be published on a dedicated website in 2018.

Bicycle helmets

The review of the Australian Standard AS/NZS 2063 Bicycle Helmets progressed in 2017 and the scope was expanded to include specifications for helmets intended to be used with skateboards, scooters and other wheeled recreation devices. This was in response to research carried out by Transport for NSW in 2016 to determine the characteristics of a helmet that provides the best protection to people who fall off these types of recreation devices.

Connected and automated vehicles (CAV)

The NSW Government encourages vehicle technology innovations where they contribute to road safety, assist with managing congestion, increase network efficiency and productivity, align with environmental sustainability, and improve customer experience and mobility.

Connected and automated vehicles (CAVs) are a key area of innovation, and in May 2017, the Transport and Infrastructure Council endorsed national guidelines for CAV trials, which the NSW Government adopted as part of its new regulatory framework for CAV trials in NSW.

The Transport Legislation Amendment (Automated Vehicle Trials and Innovation) Bill 2017 was passed in the NSW Parliament in August 2017. This removes regulatory barriers and enables on-road trials of more highly-automated CAVs, including driverless vehicles, and will ensure trials are undertaken consistently and in conditions to ensure the safety of vehicle occupants, other road users and the public.

Cooperative Intelligent Transport Initiative project

The innovative Cooperative Intelligent Transport Initiative (CITI) project is building Australia's first long term cooperative intelligent transport systems test bed. Cooperative Intelligent Transport Systems (C-ITS) use wireless radio technology to share information between vehicles and roadside infrastructure such as traffic signals. The information is used to alert drivers about safety critical situations.

In January 2017, the CITI project was expanded from the Illawarra region and now encompasses more than 20,000 km of the NSW road network. The scientific licence approved by the Australian Communications and Media Authority will allow Transport for NSW to conduct testing of C-ITS as far north as Sydney's Northern Beaches, west to Penrith and south to Kiama.

So far, 59 heavy freight vehicles and 11 route buses have been fitted with C-ITS devices along with two light research vehicles and a motorcycle (the first one in Australia). Seven signalised intersections are now broadcasting signal phase and timing information and a roadside trailer at the top of Mount Ousley transmits speed zone information directly to trucks descending the mountain.

Around three billion records have been collected as part of the CITI project to date. A data project is currently underway to develop analytical tools to interrogate this rich data source, the only such data set in Australia.

Safe roads – key actions

Safer Roads Program

The Safer Roads Program is a targeted infrastructure initiative to reduce the number of casualties and severity of injuries when a crash occurs.

With 2016-17 funding, Roads and Maritime Services delivered projects across NSW, many of them in partnership with local councils. The 2016-2017 funding program invested \$64.7 million in 151 projects which saw 109 projects completed in 2016-17 and the remaining 42 projects on schedule for completion in 2017-18 (as two-year projects). The range of projects included:

- NSW State Black Spot Program – \$18 million allocated across 44 projects to address black spots.
- Run-off-road and head-on crashes – 9 projects were funded, valued at \$8.9 million.
- Safer Local Government Roads – 31 projects were completed, with \$9.4 million invested. This included one project worth \$0.7m for pedestrian facility upgrades on local roads.
- Aboriginal Community Safety Programs – 12 projects worth \$1.1 million were completed.
- Fatal crash response – \$0.3 million was spent on five projects to address immediate actions at fatal crash locations.
- High Risk Curves Program – \$5.2 million was committed to five projects to improve safety through improved line marking, signage, road alignment and surfacing.
- Fatigue Program – \$1.6 million was spent on projects including 3 completed.
- Motorcycle safety infrastructure – a total of seven projects were completed, with \$2.1 million invested.
- Intersections Safety Program – delivered 11 projects, with \$4.5 million invested.
- Cycling Safety Program – three new projects were delivered, with \$0.8 million invested.

- Pedestrian protection at signalised intersection program (green on green) – with an expected completion date of July 2019, 378 of 541 intersections across NSW have been completed (December 2017). The program improves protection for pedestrians from turning vehicles.
- More than \$5 million spent on highway route review related projects to improve safety at high risk locations.
- The trial of lights in the pavement was conducted, with installations at two signalised sites.

In 2017-18, the Safer Roads Program is investing \$70 million in safety infrastructure upgrades through 172 projects.

Some of the highlights from 2016-17 Safer Roads Program funded projects include:

Oxley Highway (Northern Region)

A total of \$3.5 million was allocated for a works project to improve road safety along the Oxley Highway. This project represented the third year of a four-year program of safety works on the highway. Works included intersection improvements, adjustments to line marking, shoulder widening and guardrail improvements between Port Macquarie and the Mitchell Highway. Works are expected to be finalised in June 2018.



Stacey Street, between Rickard Road and Wattle Street, Bankstown (Sydney Region)

This project was funded through the Safe Systems Pedestrian Program in response to a number of crashes involving pedestrians at this location. Stacey Street is a high volume State Road, and this particular area comprises three pedestrian access points to Bankstown Central Shopping Centre. The reported crash data indicated a strong pedestrian 'desire line' across the existing painted median. A raised concrete median and pedestrian fencing were installed on Stacey Street, between Rickard Road and Wattle Street, Bankstown. As a result of the project, which was completed in June 2017, pedestrians are directed to the nearest controlled crossing facilities to safely cross the intersection.



Londonderry, intersection of The Driftway and Londonderry Road (Sydney Region)

This project was funded through the Safer Local Government Roads Program. The intersection of Londonderry Road (State Road) and The Driftway (Local Road) is a rural intersection with a posted speed limit of 80 km/h.

Roads and Maritime Services worked with Hawkesbury City Council to prepare a nomination to install vehicle activated signage to warn drivers they were approaching the Londonderry Road intersection. The project was completed in March 2017.



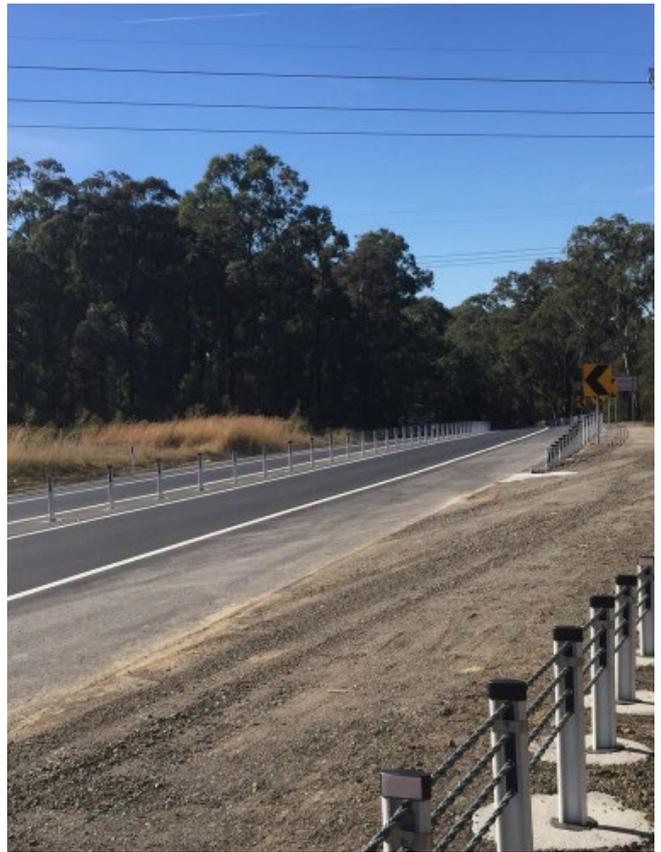
Snowy Mountains Highway: East of the turnoff from the south bound carriageway of the Hume Highway (South West Region)

The Snowy Mountains Highway is a popular freight and commuter route between the Hume Highway and Tumut, and includes sections of substandard road geometry. The project was designed to reduce the likelihood and severity of crashes at this location. It involved widening shoulders to create a recoverable area for errant vehicles, flattening of any roadside slopes, removing hazards from within the clear zone and installing barriers where hazards could not be removed. Additional delineation was installed to improve readability of the road and road geometry was addressed with an overlay to improve super elevation. Drainage improvements were made to ensure the road's future integrity. The project was completed in May 2017.



Snowy Mountains Highway (South West Region)

The Snowy Mountains Highway is a popular motorcycle route and this section of the road near Talbingo is mountainous, with terrain that includes several “C” small radii curves at steep grades, with limited safe run off opportunity. The Safer Roads project improved the road environment at a known blackspot by providing widened sealed shoulders to improve recoverable road space, upgrading the safety barrier to include motorcycle underrun protection (to reduce the severity of a crash) and installing vehicle activated signage on both approaches to the site (to advise motorists to slow down to an appropriate speed). The project was completed in April 2017.



John Renshaw Drive, Cessnock (Hunter Region)

This project was designed to reduce the risk of crashes on a curve on John Renshaw Drive, a high speed State Road.

The \$1.17 million upgrade was undertaken 250 metres west of Avery’s Lane and included road widening, an improved road surface, a wider painted median and installation of roadside and median safety barriers to prevent vehicles veering off the road or crossing to the wrong side. The project was completed in June 2017.

Intersection of Pacific Highway and Johns Road, Wyong (Hunter Region)

This project was designed to reduce crashes at an existing two lane roundabout. It involved improving deflection and resurfacing of one approach to the roundabout, and improving the medians. The safety upgrade cost \$641,000 in 2016-17, with some minor completion works totalling \$59,000 in 2017-18.



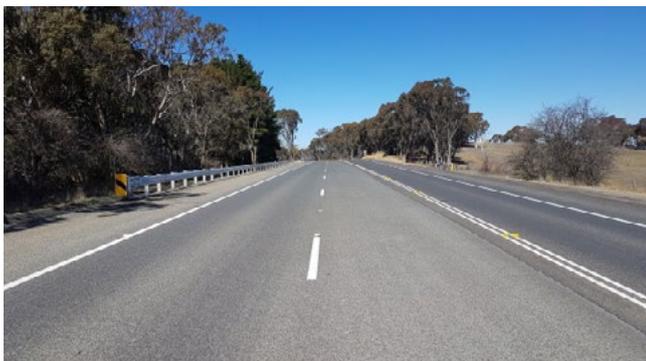
Skennars Head, the intersection of The Coast Road and Skennars Head Road (Northern Region).

Ballina Shire Council received funding to upgrade the intersection of The Coast Road and Skennars Head Road under the Intersection Safety Program. The upgrade involved the construction of a two lane roundabout located on the popular Tourist Route 30. The work was completed in July 2017, before the peak tourist season and improved road safety for visitor and local traffic by encouraging lower intersection speeds.



Mitchell Highway, Vittoria (Western Region)

Roads and Maritime Services completed this project on the Mitchell Highway at Vittoria under the State Black Spot Program. The work included shoulder widening and installation of safety barrier to improve safety in a high crash area. The project was completed in August 2017.



Kings Highway, River Forest Road (Southern Region)

A 4.2 kilometre realignment of the Kings Highway between River Forest Road and the Mongarlowe River was opened to traffic in October 2017. Work started in July 2015 and was carried out by Queanbeyan-Palerang Regional Council on behalf of Roads and Maritime Services. The project was the largest of the Kings Highway Safety Program, with an estimated total cost of \$17.9 million and provided a westbound overtaking lane, shoulder widening and roadside safety barriers. The project was funded through various State Government programs including the NSW Route Review sub program.



Kings Highway - overtaking lane



Kings Highway - shoulder widening

Some other examples of Safer Roads activities in 2016-17 include:



Empire Bay Drive/Greenfield Road, Empire Bay – Hunter Region, June 2017. Improved safety for right turn out of Greenfield Road.



Brisbane Water Drive, Tascott – Hunter Region, May 2017. Safety project to install low level concrete barrier and handrail between road and shared use path.



Golden Highway, Merriwa – Hunter Region, February 2017. Provided improved pedestrian facilities in Merriwa township.

Community Road Safety Fund Expenditure 2016-17

The Community Road Safety Fund was established in 2012 and includes (but is not limited to) all speed camera detected and red light running fines. The total Community Road Safety Fund expenditure for the 2016-17 financial year was \$252.3 million, of which \$161.5 million came from camera revenue. The table below details the allocation of funding.

Community Road Safety Fund	2016-17 \$'000
NSW Safer Roads Program	
• State Black Spot Program	18.0
• Curve Treatment Program	5.2
• Fatigue Treatments	1.6
• Route Review Program	5.1
• Local Government Infrastructure	9.4
• Motorcycle Safety Infrastructure	2.1
• Intersections Safety Program	4.5
• Pedestrian Safety	4.6
• Aboriginal Communities Road Safety Program	1.1
• Cycling Safety Program	0.8
• Fatal Crash and Serious Injury Response Program	0.3
• Regional Projects Allocation	2.6
• Run Off Road/Head On crash treatment	8.9
• In Ground Traffic Lights (Trial)	0.3
• Vehicle Activated Signs	0.2
SAFER ROADS PROGRAM TOTAL	64.7
Other Road Safety Programs	
Enhanced Enforcement Program (Police Operations)	27.4
Road safety education campaigns, awareness and sponsorship	25.1
NSW Speed Camera Program	44
Speed Zone Management	5.2
Safety Around Schools (Infrastructure treatments, supervisors)	24.5
School road safety education	6.1
Safer Drivers Course	3.9
State-wide and national safety projects (resourcing & research)	26.5
Roads and Maritime Services operations and programs	19.3
Local Government Road Safety Program	5.6
GRAND TOTAL (EXCLUDES FEDERAL AND STATE DIRECT FUNDING ON PROJECTS)	252.3

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