

Northern Territory Speed Management Strategy

2023 - 2027

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1. Introduction

The Northern Territory Towards Zero Road Safety Action Plan identifies safer road use as a priority area and includes a number of key actions to address speeding on the road network.

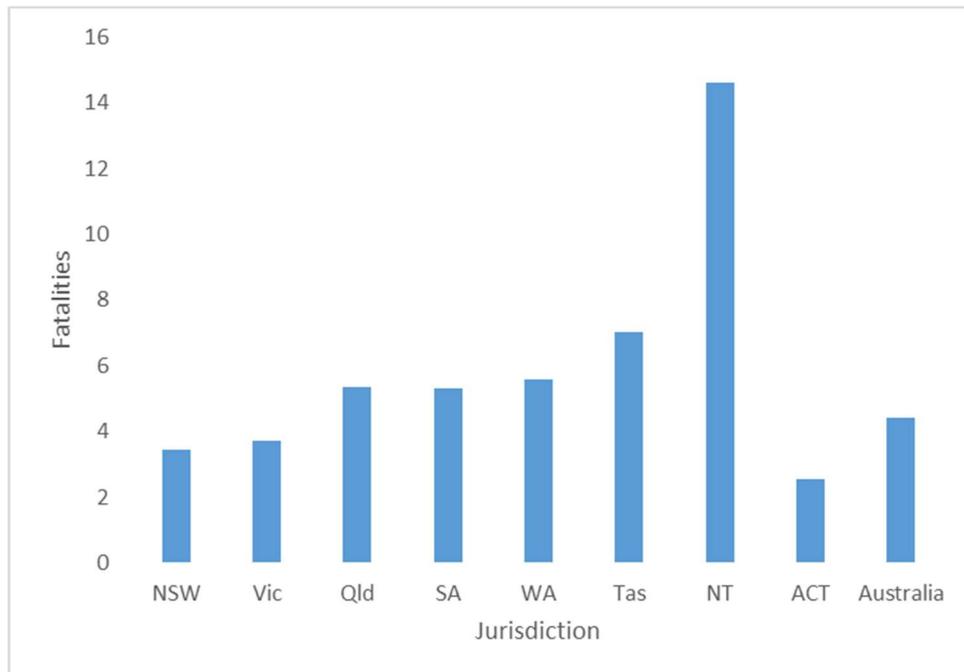
These key actions include implementing new technology, the ongoing delivery of education and awareness campaigns and the continued investment in road safety infrastructure improvements.

This Northern Territory Speed Management Strategy supports these actions and provides a high level overview of the Northern Territory Government's approach to the management of speed on the Northern Territory road network.

2. Speed and the Northern Territory context

The Northern Territory has the highest rate of road deaths per 100 000 population, per 10 000 vehicles registered and per 100 million vehicle kilometres travelled in Australia (Chart 1).

Chart 1: Annual deaths per 100 000 population (year to Feb 2022)

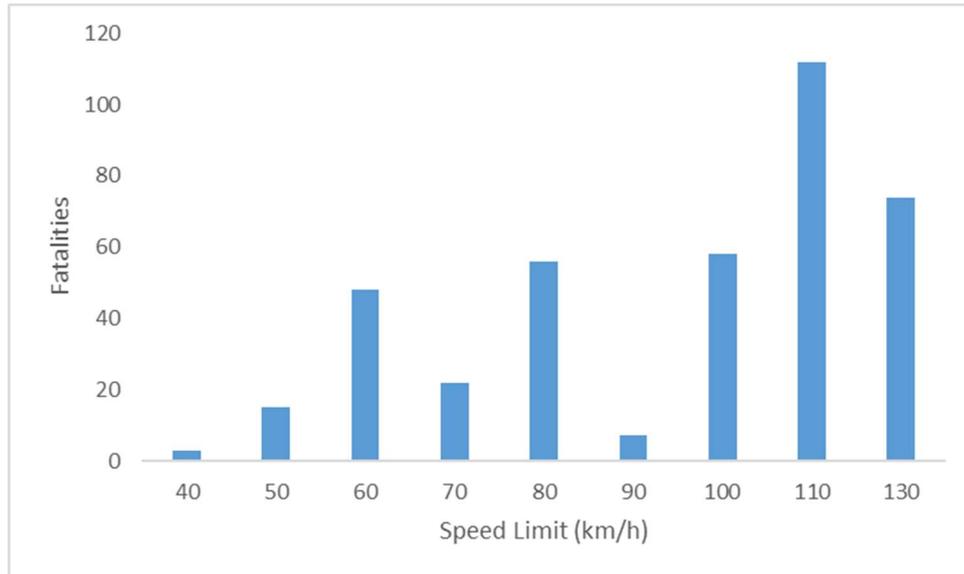


Excess speed is a contributing factor in more than 30 percent of fatal crashes and 20 percent of serious injuries in the Northern Territory. It is widely accepted that there is a strong relationship between speed and poor road safety outcomes.

There is extensive and consistent research highlighting the positive and exponential relationship between vehicle speed and crash risk, as well as the increased severity of crashes (Chart 2). Increases in travel speed can increase both the likelihood of a casualty crash occurring and the severity of injuries.

However, speeding is not consistently viewed by the public as unacceptable behaviour and low level speeding is considered acceptable by some in the community. Alarming, attitudinal behavioural research shows that almost half of Territorians believe it is acceptable to exceed the speed limit if you are driving safely. This is significantly higher than the national average.

Chart 2: Northern Territory, fatalities by speed limit (ten years to 2021)



The Northern Territory Government has implemented several reforms to mitigate the impacts of excessive speed on the Territory road network. This includes:

- ongoing improvements to road infrastructure
- the removal of open speed limits
- the introduction of fixed speed and red light cameras at high risk intersections
- the introduction of speed and Automatic Number Plate Recognition cameras on police vehicles, and
- ongoing education and awareness campaigns.

In the Northern Territory, speed limits are set by the relevant road manager, with default limits set by the Minister for Infrastructure, Planning and Logistics. Speed limits in Northern Territory include:

- Default speed limits
- Posted speed limits (including variable speed limits)
- Advisory speed limits, and
- Specific vehicle limits.

More recently, speed limits have been reduced on major highways at roadhouses throughout the Northern Territory, on the Kakadu Highway, and at the intersection of Tiger Brennan Drive and Berrimah Road, where speed and red-light cameras were also installed.

Case study – Trialling a new speed limit review tool

The Northern Territory Government is trialling a new speed limit review tool, developed by Queensland, which undertakes an evidence based approach to setting speed limits.

The tool evaluates road risks, hazards and operational speed, and determines a safe speed limit. The tool focuses on setting speeds for sections of road corridor, rather than small sections of road, to create consistency in network speeds.

The Northern Territory Government is continuing to refine the tool and has been conducting tests on a number of corridors on the Northern Territory road network.

3. The safe system approach to road safety

The Northern Territory Towards Zero Road Safety Action Plan adopts the proven and internationally accepted Safe System approach to road safety, which provides a holistic view of the road transport system to deliver initiatives that lead to safer road use, safer roads and safer vehicles.

The human body is fragile and cannot tolerate the impact of motor vehicle crashes, particularly in higher speed crashes.

Safe speeds are a key pillar of the Safe System approach and underpin all three priority areas, highlighting the importance of speed management in reducing fatalities and serious injury.



4. An integrated approach to speed management

An integrated approach to speed management is applied in the Northern Territory. This involves applying a combination of measures including:

- Road design and road treatments
- Enforcing speed limits, including speed management and digital enforcement technologies
- Influencing behaviour and education
- Workplace road safety policies, and
- Setting appropriate regulatory speed limits, including legislative reform.

The setting of safe speed limits is an integral part of protecting road user safety. The principles below shape the setting of speed limits on Northern Territory roads.

5. Speed limit management principles

Regulatory speed limits are the enforceable speed limits applied to a road by signage or legislation. It is the maximum speed at which road users are legally permitted to travel. Regardless of the speed limit, drivers in the Northern Territory must always drive to the conditions.

Speed zones are set so that drivers and riders travelling at the speed limit can safely respond to risks on the road. By setting speed limits using the movement and place approach, lower speed limits apply in built up areas where there are more people, while higher speed limits can apply on roads such as highways where people and freight need to move over long distances.

A number of principles inform speed limit management in the Northern Territory:

- Speeds need to promote safety and efficiency (movement and place)
- Speeds need to suit the Northern Territory context (volume, distance, conditions)
- Speed limit changes are to be based on evidence and assessments
- Speed limits are to be appropriate for the road infrastructure and consider the Safe System approach
- Speed limits are to be understandable and consistent
- Changes in speeds on road corridors need to be consistent.

Case study - Rural road speed limit reduction - Kakadu Highway

The speed limit on the Kakadu Highway was reduced from 110 km/h to 100 km/h on a 67 km of the Kakadu Highway section (from the Stuart Highway intersection to the Mary River) in August 2019.

Traffic data shows that following the speed limit reduction, there was a reasonable level of compliance to the lower speed limit. The average operational inbound speed was found to be 100.1 km/h and average outbound speed 92.3 km/h.

On this section of road, a total of 22 crashes were recorded during 2011-2021, primarily run-off the road crashes. During this period, the average crash rate was 2.5 crashes per year and the average casualty crash rate was 1.625 crashes per year.

Since the speed limit change in August 2019, the average crash rate has reduced to 1 crash per year, with an even lower average causality crash rate of 0.5 crashes per year.

While this data was captured during the COVID-19 period and only provides a small sample size, the results are encouraging. Further, other factors have contributed to achieving better outcomes on this stretch of road, including infrastructure and traffic management upgrades.

6. Priority areas for addressing speed management in the NT

Setting and reviewing speed limits

Travelling at speeds that are set to accommodate the mix of vehicles and people movements on the road network allows drivers and riders to avoid crashes and if a crash does occur, to reduce the associated trauma, especially in areas of high pedestrian activity.

When reviewing and assessing speed limits, the key areas of focus are outlined below:

6.1. High speed / high use intersections

There is currently no national standard regarding the speed limit through a signalised intersection in Australia.

In Victoria for example, the maximum speed limit through an intersection where traffic signals exist is 80 km/h. Where traffic signals have been installed on a road with a prevailing speed limit of 90 km/h or greater, the speed limit is reduced to the lower limit, applying a minimum approach and departure distance to the traffic signals.¹

In the Northern Territory there are eleven signalised intersections where the passing speed is greater than 80 km/h. These intersections vary in the volume of traffic that passes through and the prevailing accident rate, as outlined below.

Intersection		Annual Average Daily Traffic	Number of crashes 2012-2021	Number of fatalities or serious injuries 2012-2021
Stuart Highway	Howard Springs Road	39982	85	1 fatality 20 serious injuries
Stuart Highway	McMillans Road	35513	53	8 serious injuries
Stuart Highway	Vanderlin Drive	31780	77	9 serious injuries
Tiger Brennan Drive	Bowen Street	26963	36	5 serious injuries
Tiger Brennan Drive	Amy Johnson Avenue	26643	32	2 fatalities 7 serious injuries
Stuart Highway	Mountbatten Avenue	26308	9	2 serious injuries
Stuart Highway	Amy Johnson Avenue	25937	32	2 fatalities 7 serious injuries
Tiger Brennan Drive	Tivendale Road	25206	78	12 serious injuries
Stuart Highway	Lagoon Road	21282	12	3 fatalities 4 serious injuries
Stuart Highway	Arnhem Highway	13743	18	3 serious injuries
Stuart Highway	Jenkins Road	6070	5	No injuries

¹ Victoria Department of Transport - Speed Zoning Technical Guidelines Edition 2, December 2021

Case study - Urban arterial road speed limit reduction - Stuart Highway between Tiger Brennan Drive and Temple Terrace

To improve pedestrian safety on this 2.3 km section of road, the speed limit was reduced from 100 km/h to 80 km/h in March 2020.

Data showed an average crash rate of 11.25 crashes per year and an average casualty crash rate of 3.5 crashes per year, during the years 2016-2020.

Following the speed limit reduction, the average inbound operational speed was 85.4 km/h, the average outbound speed was 81.2 km/h, and the crash rate decreased significantly.

In December 2021, data showed that the average crash rate reduced to 6.5 crashes per year, and the average causality crash rate also reduced to 1.5 crashes per year.

We will focus on:

- Continuing to undertake risk assessments of high speed (>90 km/h) signalised intersections on the Northern Territory road network.
- Reviewing the passing speed limit at all high risk signalised intersections in response to the outcomes of the risk assessments, where required.

6.2. Rural / unsealed roads

Due to the clear differences between the function and standard of regional and urban roads, the speed limits on these roads vary. The default speed limit on regional and remote roads in Australia is 100 km/h in all states and territories, except the Northern Territory and Western Australia where the default speed limit is 110 km/h.

Generally speaking, lower volume roads with larger distances between communities have higher regulated speed limits based on movement and place principles.

Excess speeding by drivers and riders in regional and remote areas involves considerable risks, largely because of the typically higher speed limits in these areas and the significant risk of injury associated with higher speed collisions in these locations.²

Over the last ten years, over 70 percent of fatalities in the Northern Territory occurred on regional and remote roads, and 18 percent of all fatalities occurred on unsealed roads. Over the same period, 48 percent were single vehicle run-off road accidents.

We will focus on:

- Continuing to monitor fatalities by road type and location, to inform speed limit changes.
- Undertaking enforcement of speed limits across the rural road network.
- Working with Local Governments across the Northern Territory to consider the implementation of lower speed limits on rural roads.

² Austroads Guide to Road Safety Part 3: Safe Speed

6.3. Pedestrian areas

Pedestrians are the most vulnerable road users and comprise 13 percent of all road fatalities in Australia. Pedestrians have no protection when involved in collisions and, unlike bike and motorcycle riders, they do not wear safety equipment. The majority of pedestrian fatalities involve a collision with a light vehicle.³

Pedestrians represent 19 percent of Northern Territory fatalities over the last ten years, which is significantly higher than the national rate. While a significant number of pedestrian fatalities in the Northern Territory also have other contributing factors such as alcohol use, lowering speed limits in known pedestrian areas may assist a driver's ability to avoid crashes.

In the Northern Territory over the last ten years, less than one percent of all road fatalities occurred on roads with speed limits up to 40 km/h, highlighting that a reduced speed limit is likely to have contributed to better safety outcomes. While this includes all fatalities, generally roads with 40 km/h or less are generally higher pedestrian areas.

Case study - Speed management and land use planning

The importance of considering movement and place principles in ongoing land use activity is critical. A number of developments in the greater Darwin area have required post-development road safety actions to be undertaken, including at the Gateway Shopping Centre development in Palmerston, for example.

Gateway is bounded by the Stuart Highway and Roystonea Avenue, with pedestrians crossing these high-speed, high volume roads to access the shopping centre.

To mitigate road safety risks, infrastructure was installed to formalise crossing areas and a lower speed limit was introduced.

We will focus on:

- Ensuring that appropriate speed limits are implemented and pedestrian safety is considered, when assessing and approving developments.
- Continuing to monitor pedestrian fatality and serious injury data to inform the planning for future investment in pedestrian infrastructure.
- Exploring the expanded use of variable speed and time-based speed limits at high pedestrian areas and events.
- Continuing to put in place infrastructure to improve pedestrian safety.

6.4. Local roads

Generally across Australia, the default speed limit in urban areas is 50 km/h. The Northern Territory *Traffic Regulations 1999* state the default speed limit which applies to a driver/rider for a length of road in a built-up area within the Northern Territory is 60 km/h. However, on application by a local

³ Fact sheet: Vulnerable road users | National Road Safety Strategy

government authority, the Minister may specify by Gazette notice, that the default speed within a local government area is 50 km/h.⁴

Reducing local road speed limits results in less road trauma. In Victoria a 50 km/h default speed limit in built-up areas (formerly 60 km/h) was introduced on 22 January 2001, resulting in a 41 percent reduction in fatal and serious injury crashes involving pedestrians.⁵

Some local government areas across the Northern Territory have chosen to implement a default speed limit of 50 km/h. Where a default speed limit applies to a built-up area, a speed limit sign is placed on each road approaching that locality.

The following is a breakdown the 78 pedestrian fatalities, by speed zone, in the Northern Territory over the last ten years to the end of 2021:

- A total of 17 fatalities occurred in 60 km/h zones - with seven in Alice Springs and three in Darwin
- A total of seven fatalities occurred in 50 km/h zones - with five in Darwin
- A total of four fatalities occurred in 20 km/h and under zones (for example: carparks), and
- There were no pedestrian fatalities in 40 km/h zones.

Many road authorities across Australia and in the Northern Territory have implemented lower speed limits in high pedestrian areas, such as the 40 km/h limit which applies to some roads within the central business district area of Darwin and Alice Springs.

We will focus on:

- Working with Local Governments across the Northern Territory to consider the implementation of lower speed limits on urban roads.
- Working with Local Governments to consider the implementation of lower speed limits below 50 km/h in high pedestrian and traffic areas.
- Continuing to monitor the national approach to speed management in urban areas.

6.5. School zones

The potential for harm caused by collisions between vehicles and children has led to a reduced speed limit of 40 km/h in school zones throughout Australia, with a lower limit of 25 km/h applied in South Australia. These lower speed zones around schools have been widely accepted in Australia.

To reduce the crash risk during school times, school zones are installed around pre-primary, primary and secondary schools in the Northern Territory. All school zones have a posted speed limit of 40 km/h, except for rural roads where school zones have been adopted at a higher posted speed value.

School zones are not applied on limited access highways, primary distributor roads, multi-lane roads, or roads where the carriageway width is greater than ten metres, where direct access is restricted via infrastructure or where crossing a road is enabled through other infrastructure.

⁴ Northern Territory, TRAFFIC REGULATIONS 1999 (As in force at 4 May 2022)

⁵ Austroads Guide to Road Safety Part 3: Safe Speed

Case study – Infrastructure providing solutions

There are two examples of schools within the greater Darwin area where infrastructure has been installed to accommodate a higher speed limit without the need for the establishment of a school zone:

Ludmilla Primary School – Pedestrian overpass

Ludmilla Primary School in Darwin is adjacent to Bagot Road, a main arterial road linking Darwin to the northern suburbs. While the current speed limit along this road is signposted at 70 km/h, safety infrastructure in the form of a pedestrian overpass is in place to ensure the safe travel of students across Bagot Road. This has meant that a school zone has not been required.

Marrara Christian School – Signalised crossing

Marrara Christian School is situated at the intersection of Amy Johnson Avenue and McMillans Road. While a school zone is not currently in place on these arterial roads, traffic lights at the intersection includes pedestrian facilities to assist with the safe movement of students.

Over the past four years, the Northern Territory Government has invested approximately \$2 million in electronic signage at school zones across the Northern Territory. The Northern Territory Government has also provided considerable grant funding to City of Darwin and the City of Palmerston for infrastructure solutions.

We will focus on:

- Continuing to assess speeds in school zones across the road network and, where speeds are set at greater than 40 km/h such as high volume roads, ensuring alternate safety measures are in place.
- Continuing to invest in speed management infrastructure at school areas, including electronic signage.
- Continuing enforcement of speed limits in school zones.
- Continuing to monitor the national approach to speed management in school zones.

7. Infrastructure

Safe road design and the provision of road treatments is a key element in an integrated approach to managing speed on the road network.

Many Australian roads do not conform to newer road design guidelines as traffic volumes on roads has increased over time as populations have grown and the urban environment has developed. Therefore, speed limit adjustments may be required to manage risk where roads do not have infrastructure treatments to assist with preventing crashes or reducing their severity. There are also limitations in funding the network-wide improved safety features required to facilitate higher speed limits.

Significant investment is now underway through the Australian Government's [Road Safety Program](#), which provides funding for road safety related infrastructure improvements across the road network, such as guard rails, shoulder widening, and intersection upgrades.

Under the program, the Australian Government has committed significant funding to the Northern Territory for road upgrading projects.

We will focus on:

- Continuing to invest in road safety infrastructure across the road network.

8. Education and awareness

Changing community understanding and perceptions about speeding and associated risk is an important priority.

Travelling speed reductions and consequent reductions in road trauma can be achieved immediately when a speed limit is changed. This contrasts with a reliance on safe infrastructure treatments that can take considerable time to plan, design and implement.⁶ Speed limit reductions by as little as 10 km/h have provided the lowest cost and greatest value for reducing fatalities and serious injuries.⁷

Evidence has shown that speeding increases both the risk of crash involvement as well as the severity of a crash when one occurs, and that for every 5 km/h that a driver or rider travels over 60 km/h, their relative risk of crashing doubles.⁸

A key challenge is the task of changing driver and rider attitudes. Evidence, including qualitative and quantitative research, suggests that speeding is not consistently viewed as an illegal, harmful, or socially unacceptable behaviour in the same way, for example, that drink driving is viewed.⁹

Creating demand for behavioural and social change of driving behaviours among adults is difficult, likely due to the fact that attitudes towards road user behaviours develop during childhood and adolescence, and thus are engrained and more resistant to change by the time an individual learns to drive.¹⁰

Innovative programs, such as *Street Smart High*, which aims to educate young people about driving and passenger risks, encourages changes in young people's attitudes to road safety. Broader public awareness strategies such as Road Safety Week continue to highlight the importance of behaviour change. It is recognised that more needs to be done to continue to change the community perception and attitude to speeding on roads.

We will focus on:

- Continuing to prioritise initiatives that aim to change the community's attitude and awareness of speeding and the associated risk.
- Continuing to deliver speed-related education and awareness road safety campaigns.

9. Enforcement

⁶ Austroads Guide to Road Safety Part 3: Safe Speed

⁷ Fact sheet: Evidence supporting the priority focus areas | National Road Safety Strategy

⁸ Austroads Public Demand for Safer Speeds

⁹ Austroads Driver Attitudes to Speed Enforcement

¹⁰ Austroads Public Demand for Safer Speeds

Drivers and riders can be fined or receive demerit points if caught speeding. For excessive speeding, harsher penalties apply in the Northern Territory.

Enforcing vehicle speeds to the posted limit contributes to uniform travel speeds and reduces the risk of trauma. Speeding in regional and remote areas is riskier due to the higher speed limits and escalating serious injury outcomes associated with high speeds.

While speeding has been identified as a significant contributing factor in crashes, particularly in regional and remote areas, enforcing speed limits, particularly in non-urban areas, is resource-intensive and operationally challenging due to the large size of the road network.

Unique deterrent measures in regional and remote areas are required to address these challenges. A number of technological countermeasures are available which are appropriate for targeting speeding on remote roads, including average speed cameras or point-to-point speed cameras. The use of average speed camera systems in other jurisdictions have been shown to reduce travel speeds and crash risk.

Case study – Digital enforcement technology can assist in changing behaviour

Following a number of fatalities at the Tiger Brennan Drive and Berrimah Road intersection, the speed limit was lowered to 80 km/h in all directions through this high volume intersection. To support compliance with the speed limit change, three red-light speed road safety cameras were also installed.

The installation of road safety cameras has highlighted the changing driver/rider behaviour through this intersection as there has been a reduction in infringements between 2020 and 2021.

We will focus on:

- Continuing to implement a program of speed and red light cameras at high risk intersections.
- Continuing to implement other speed awareness and enforcement infrastructure and technology across the road network.
- Continuing enforcement of speed limits across the road network.

10. Implementation

This Strategy will be implemented through ongoing speed management programs and delivery of the 2023-2027 Towards Zero Road Safety Action Plan. Priority and focus areas will be regularly monitored and reviewed.