

Applying safe systems and increasing stakeholder engagement in a community speed education program in Local Government

Joanne Wilson-Ridley^a, Thomas Hogg^a, Edward Rzesnicki^a

^aQueanbeyan-Palerang Regional Council (QPRC)

Abstract

Analysis of crash data for QPRC network from 2013-2017 identified speed as the top contributing crash factor in 30.9% casualty crashes. QPRC revitalized its speed education program in 2016. A methodical and evidence-based process was adopted for site identifications for courtesy speed checks, a regime of data collection was deployed to evaluate the results and safe systems reviews were implemented for assessing and treating speed locations. Results consistently achieved reductions in 85th speed percentiles on urban roads with the program expanding to country roads. Increased community engagement has been noted along with enhanced involvement of local stakeholders including NSW Police.

Background

QPRC covers 5,319 km² including 1,059km sealed road and 752km unsealed roads. The CBD is a concentrated urban area (175 km²) with Council's roads majority in country areas. Crash analysis identified speed as top crash factor in 30.9% casualty crashes. Further analysis highlighted speed as a significant factor in FSI crashes contributing to 38.9%. Where FSI crash occurred on LG country roads speed was present in 59% of crashes.

Speed is the compelling road safety reason residents contact Council. Requests to address speeding with enforcement, speed humps and speed reductions are commonly received.

In 2015 Council's Size-B VMS trailer broke. Council used this opportunity to revitalise its speed program implementing an evidence-based safe systems approach with a new Size-C VMS trailer. Adopting a targeted process enabled Council to maximise its efforts in addressing speeding on local roads. Collecting meaningful data for evaluating impact has led to enhanced education with residents and increased sharing of important speed data with NSW Police. With the improved campaign achieving consistent reductions in 85th speeds over two-year period Council applied for funding to expand the program with a second VMS trailer. Council is now extending the speed program to country roads where speed's a significant presence in nearly 60% of FSI crashes.

Method

Sites were selected considering traffic counter results, speed crash history, known roads for speeding, road hierarchy, traffic volumes and community requests. Traffic data was collected for every speed site prior to deployment. VMS deployment was scheduled to maximize impact considering other causal factors such as school holiday speeding, commuter traffic, school zone traffic, time of year for crash history or environment impacts such roads experiencing large animal activity. Every site was inspected for trailer suitability and road crash history was reviewed to maximize location positioning. All sites had a safe systems assessment to identify possible treatments in other safe systems pillars.

Results

Between October 2016-December 2018 the VMS trailer had 29 deployments to 26 locations. All sites achieved a reduction in the 85th speed percentile from 3km/h up to 12km/h. On average 5-6km/h reductions were achieved at deployed sites. Reductions were also achieved for the percentage of vehicles exceeding the speed limit from 15% with some sites achieving 40-50% reductions. While most sites featured one deployment one site featured three deployments for successive school holiday periods. It saw an increased reduction on each deployment indicating an accumulative impact and benefit of repeat deployment. Safe Systems reviews resulted in additional speed treatments such as blackspot application, speed zone reviews, adjustment to traffic light phasing, give-way sign upgrades to stop-signs and installation of stop signs to improve intersection safety.

Conclusions

QPRC's community embraced the speed program lodging increasing requests for site locations. NSW Police are involved coordinating taskings and providing site suggestions. With the speed program's methodology and results proven for urban streets Council is expanding the program to rural areas and engaging with rural communities to tackle the significant road trauma from speeding on Council's country roads.

Table 1. Analysing speed as a contributing crash factor in QPRC crashes from 2013-2017

Severity Crash Type	All Crashes	Number of crashes with speed as a contributing factor	Percentage of crashes with
All crashes	1055	301	28.5%
Casualty crashes	618	191	30.9%
Fatal & Serious Injury (FSI) Only	93	37	39.8%
Fatality and Serious Injury Crashes (FSI) on just country and state road	62	34	54.8%
Fatality and Serious Injury Crashes (FSI) on local country roads	32	19	59%

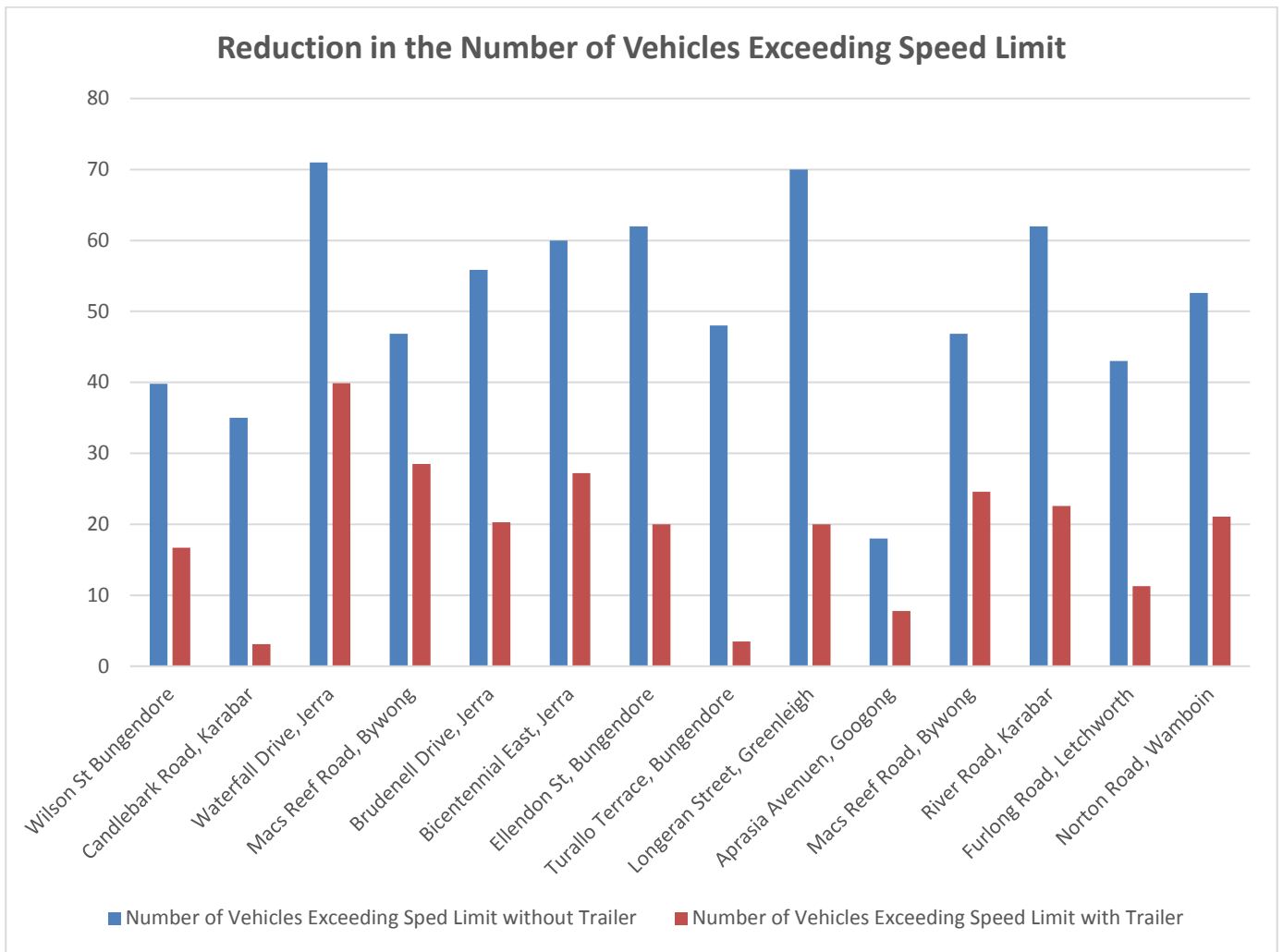


Figure 1. Reduction Results in Number of Vehicles Exceeding Speed Limit

References

Transport for NSW Crash Data – Detailed Crash Report for QPRC from 2013-2017.