

Painting a different picture of managing speed: the effectiveness of street murals

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Abstract

The Roopena Street, Ingle Farm South Australia road murals were developed in partnership with community, Salisbury Council and the Department of Planning, Transport and Infrastructure as a 'Living Neighbourhoods' project, in response to speeding issues identified on the local street. Road murals are intended to modify driver behaviour by creating visual cues that alert the driver they are entering a different precinct. A longitudinal study has considered skid resistance, lessons learned, findings and recommendations. This alternative approach to managing speed was found to reduce both the speeds travelled and the number of vehicles exceeding the speed limit on Roopena Street.

Background

Excessive speeds are a major concern in residential streets. They negatively impact on safety and amenity and therefore liveability¹. Reducing vehicle speeds is acknowledged as having a beneficial effect for all road users, reducing the likelihood of crashes occurring and their severity when they do occur².

Roopena Street in Ingle Farm was identified as the type of street that could benefit from a creative community project³ that sought to improve the local environment and deliver traffic speed reduction to make the street safer and more people-friendly. Roopena Street has a speed limit of 50kph and a 7-day average of between 3,000 and 3,200 vehicles per day.

The Roopena Street road murals were developed in partnership with residents and businesses, through numerous engagements and with the assistance of a local artist, to capture ideas, designs and refine concepts. Over 40 community members participated in the painting of five road murals.

Method

The City of Salisbury conducted traffic surveys in three locations along Roopena Street before the road mural installations, immediately after, and three years after installation. The degree of wear field assessment of AS 404934-2006 was used to assess the degree of wear of the road murals.

Results and conclusions

The data shows that immediately after the installation, in two of the three sites the 85th percentile speeds dropped by between 1.4 km/h and 2.6 km/h in the location of the murals, and the percentage of vehicles speeding reduced by 3.2% and 6.7%.

Three years on, and the 85th percentile speeds of vehicles within the mural area remain lower when compared to pre-installation speeds. The 85th percentile speed reduced further, to 50.4 km/h (from 52.2km/h pre installation) and the percentage of vehicles speeding also reduced from 24.8% (pre installation) to 16.6%, recorded at Site 2 which is outside of the influence of the roundabout and Montague Road intersection.

Three years after the installation the condition of the Roopena Street murals has deteriorated (refer to images 1 and 2). The skid resistance was also tested with two small areas not meeting the requirement but identified as low risk.



(Image 1: Murals freshly painted - June 2015)



(Image 2: Murals three years on - July 2018)

The findings of the longitudinal evaluation indicate that the road murals do reduce vehicle speeds by creating a visual cue, to a level typical of the lower impact type of physical traffic calming measures⁴. Given the continued reduction in speed, the murals have been effective as a traffic calming device, notwithstanding the issues of familiarity and wear on the paint surface.

Since the installation of the road murals the Department of Planning, Transport and Infrastructure (DPTI) has produced the Technical Note 'Artwork on Roads' (July 2016), and in April 2017 updated The Code to refer to the technical note and to provide some additional requirements. Following the longitudinal evaluation, a number of suggestions have been made to further update the technical requirements.

References

1. Major Cities Unit, Infrastructure Australia. (2012) *State of Australian Cities 2012*. Canberra; ACT: Department of Infrastructure and Transport
2. Johnston, I. (2004). Reducing injury from speed related road crashes. Victoria: Monash University Accident Research Centre online at <https://injuryprevention.bmj.com/content/10/5/257>
3. Intermethod. (2015). *Roopena St Murals Project Report*. Adelaide, SA: Department of Planning, Transport and Infrastructure.
4. Tonkin Consulting. (2018). *Roopena St Road Murals Evaluation Report*. Adelaide, SA: Department of Planning, Transport and Infrastructure.