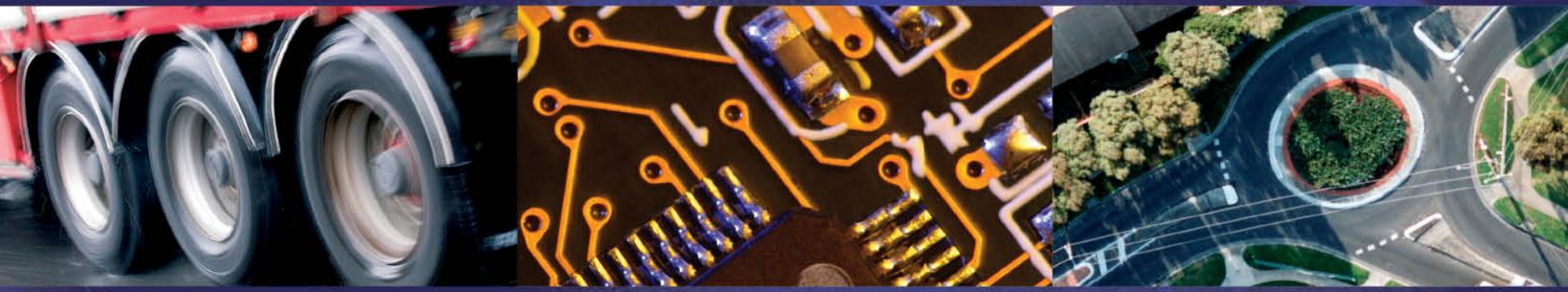

Vehicle Activated Signs: an emerging treatment at high risk rural intersections

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arrb GROUP

Contents

- Background
- Introduction
- Method
- Findings
- Conclusions and next steps

Background

- VicRoads Safer Road Infrastructure Program (SRIP)

- What is a vehicle activated sign (VAS)?
  - Alerts drivers
  - The alert is activated by a specific trigger
    - vehicle presence

Background

Key aims of VAS

- Improve safety via forewarning
- Increase awareness
- Reduce travel speed

Pre-treatment

Sites (Source: Copyright Melway Publishing 2010, adapted from Melway Edition 38)

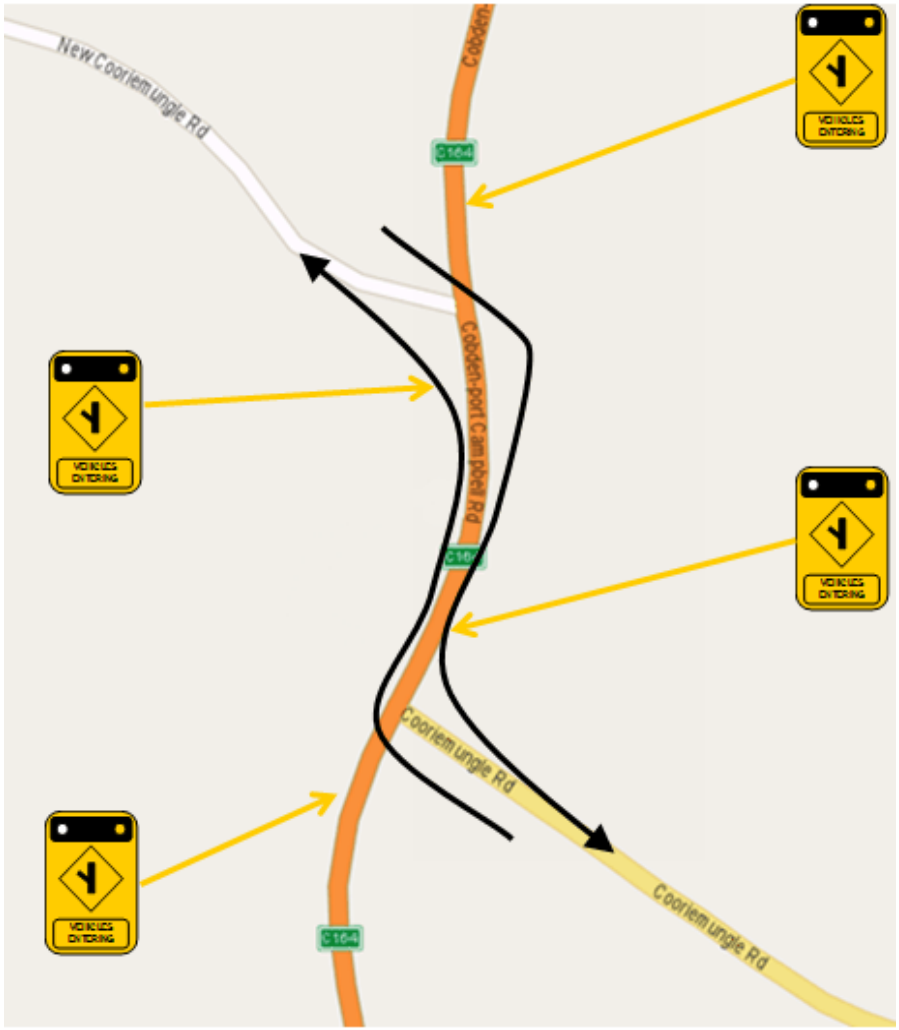
Site configuration

Method


VEHICLES ENTERING
Yarringa Rd
Cowan Av
Sensor zone
Great Ocean Rd
B100
Great Ocean Rd
B100
Traffic counter
Sensor

Cooriemungle location

(Source: Copyright Melway Publishing 2010, adapted from Melway Edition 38)



Data collection

- Baseline data - May 2010
- Treatment installation - Dec 2010
- After treatment - Oct/Nov 2011

Comparisons

- 1. A standard static vs active (flashing lights) VAS:

- 2. A standard static vs inactive VAS (large static sign):

Comparisons

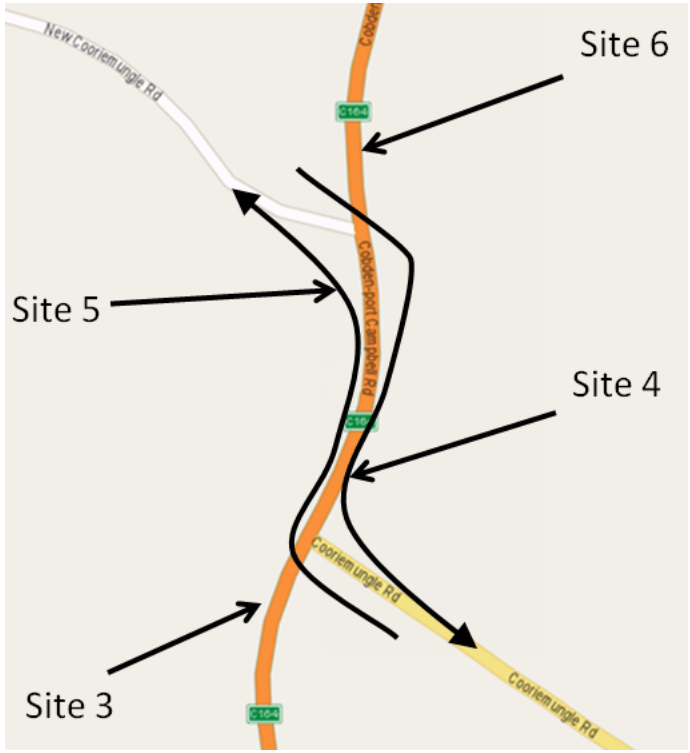
- 3. Inactive VAS (large static) vs active VAS:

Statistically significant findings - 1

- 1. A standard static vs active (flashing lights) VAS

- Lower speeds - active VAS (4/6 sites)
  - Fairhaven
  - Murgheboluc
  - Cooriemungle sites 3 & 6

- Higher speed – active VAS
  - Cooriemungle site 4



Statistically significant findings - 2

- 2. A standard static vs inactive VAS (large static sign)

- Lower speeds – inactive VAS (4/6 sites)
  - Murgheboluc
  - Cooriemungle Sites 3, 5, 6

- Higher speed – inactive VAS (1/6 sites)
  - Cooriemungle Site 4

Statistically significant findings - 3

- 3. Inactive VAS (large static) vs active VAS

- Lower speeds – active VAS (3/6 sites)
  - Fairhaven
  - Murgheboluc
  - Cooriemungle Site 3

Practical effect on speeds

- Standard static sign and active VAS

  - Speed reductions
    - 4.85 km/h mean speed average across 4 independent VAS sites (mean speeds)

Crash reduction factors (Elvik's model)

- Potential to reduce:
  - fatal crashes by an average of 18%
  - serious injury crashes by an average of 12%
  - other injury crashes by an average of 8%

Limitations

- Differences between treatment and comparison sites
- Road maintenance activities unaccounted for
- Pneumatic tubes
  - accuracy
  - functionality with slow driver speeds

Conclusions

- Largest total speed reduction from standard to active VAS

- VAS most effective in ‘simpler’ environments
  - flatter grade
  - no nearby intersections (or dog-leg manoeuvers)

- Driver alertness

Thank you

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