

# Rural Intersection Activated Warning Signs (RIAWS)

## What is the RIAWS trial?

The NZ Transport Agency's trial of Rural Intersection Activated Warning Signs (RIAWS) is based on a concept successfully developed in Sweden to reduce trauma at high-risk intersections in rural areas.

*Safer Journeys - New Zealand's Road Safety Strategy to 2020* (Ministry of Transport 2010) envisions a safe road system increasingly free of death and serious injury and introduces the Safe System approach to New Zealand. The RIAWS trial contributes to three of the four Safe System cornerstones - safe roads and roadsides, safe speeds and safe road use.

Safety improvements on high-risk rural roads and at high-risk intersections are key areas of focus for *Safer Journeys*. A *High-risk intersection guide* is currently being developed, which will help road controlling authorities identify and improve the safety of high-risk intersections within their jurisdictions. The Safe System approach

means that wherever possible an inherently safe environment should be designed. The greatest proportion of intersection crashes within high-speed environments are crossing or turning crashes between two vehicles. We know that the risk of serious injury or death for side impact crashes increases significantly above 50km/h, and therefore in order to create a safe system at intersections, travel speeds through intersections where the potential for a collision exists should be no more than 70km/h, to achieve impact speeds of 50km/h with some braking. Accordingly, active signs that aim to slow major approach vehicles when a side road vehicle is present are proposed.

## Layout of signs

The proposed signs for the trial will look like this:



**Sign 1** combines an existing intersection warning sign (PW-9) with an active LED sign that displays the words 'Slow Down', which would flash at an appropriate frequency (for example, 1-second cycle time)



**Sign 2** combines an LED active sign unit as used for 40km/h school signs (including flashing amber beacons) modified to display 70km/h with an existing intersection warning sign (PW-9).

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## Safety benefits

**Sign 1** alerts passing motorists to the fact that a vehicle is approaching from the side road, which enables them to take evasive action, if necessary.

**Sign 2** reduces the speed limit to 70km/h near rural intersections, which will reduce the risk of high-severity crashes involving turning traffic. The reduced speed limits will only operate at times when traffic is approaching from the side road or turning right into the side road.

## Procedures for determining sites

These procedures are based on the requirements contained in the draft *High-risk intersection guide*. The methodology will be enhanced by other criteria determined by the evaluation team, such as speed limits at the site and traffic volumes.

## Where will the trials take place?

Two pilots for the trial will be installed in the near future. One will be at the intersection of State Highway 1 and Route 56 at Himatangi and the other will be at the intersection of State Highway 73 and Buchanan's Road, near Christchurch.

## Timeframe

Trials will be installed during 2012 and 2013.

## Monitoring

Before-and-after speed surveys will be carried out and crash statistics will be monitored and evaluated after the trial period to determine if there has been an improvement.

Results of the monitoring will be made available in the first instance to all road controlling authorities and ultimately a manual will be made available for use when contemplating such installations.



### More information

For more information, please contact Ken Holst, Traffic & Safety Engineer, on (06) 974 6507 or [ken.holst@nzta.govt.nz](mailto:ken.holst@nzta.govt.nz), or go to [www.nzta.govt.nz](http://www.nzta.govt.nz).