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# Innovative low cost safety works, Median wire rope safety barriers and narrow centrelines

## **A vision to achieve low cost road safety results**

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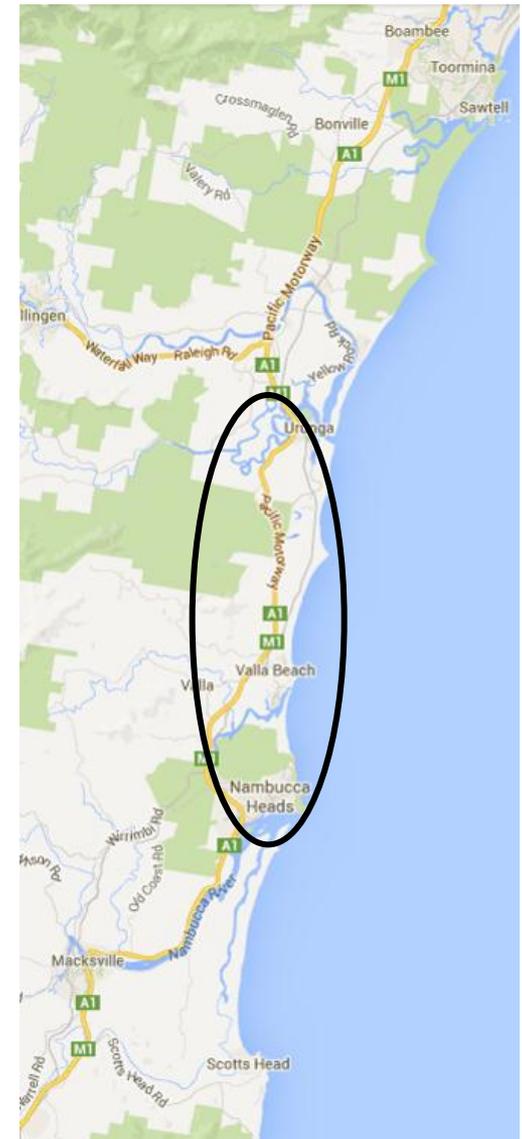
# Introduction

November 2010, Roads and Maritime Services (RMS) and the NSW Centre for Road Safety, started a road safety and speed zone review.

In the six years to the end of 2012 there were a total of 112 recorded crashes.

33 crashes in 80km/h zone north of Hungry Head.

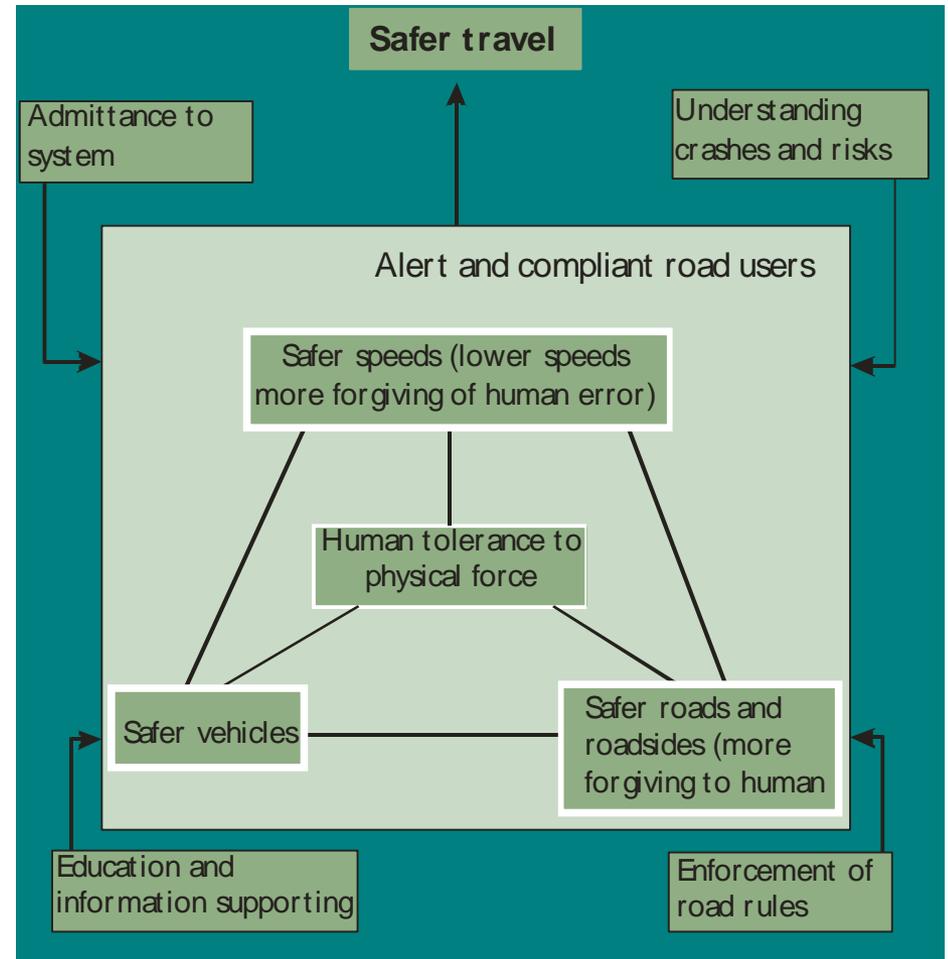
79 crashes in 100km/h zone south of Hungry Head.



# Vision for low cost solutions

RMS wanted to find low cost safety solutions that could be implemented before the ultimate dual carriageway upgrade.

**The safe systems model was adopted for this review.**



On 7 March 2011 a \$10 million package of road safety measures for the Pacific Highway was announced

*and*

two speed limit reductions made between Nambucca and Urunga.





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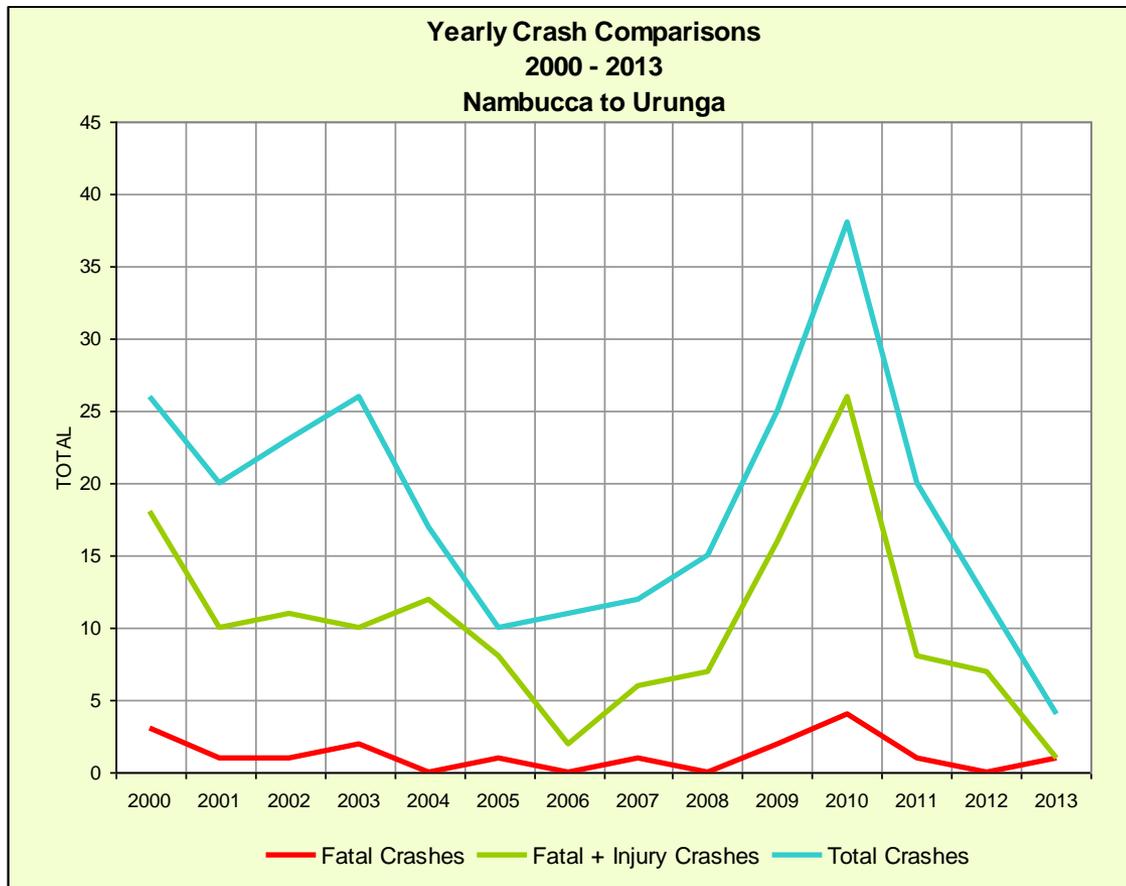
# Crash statistics

The original crash analysis focused on a five year period to November 2010.

Prior to 2008 some minor safety works had been undertaken and this could attribute to a short-term reduction in crashes during 2006/2007.

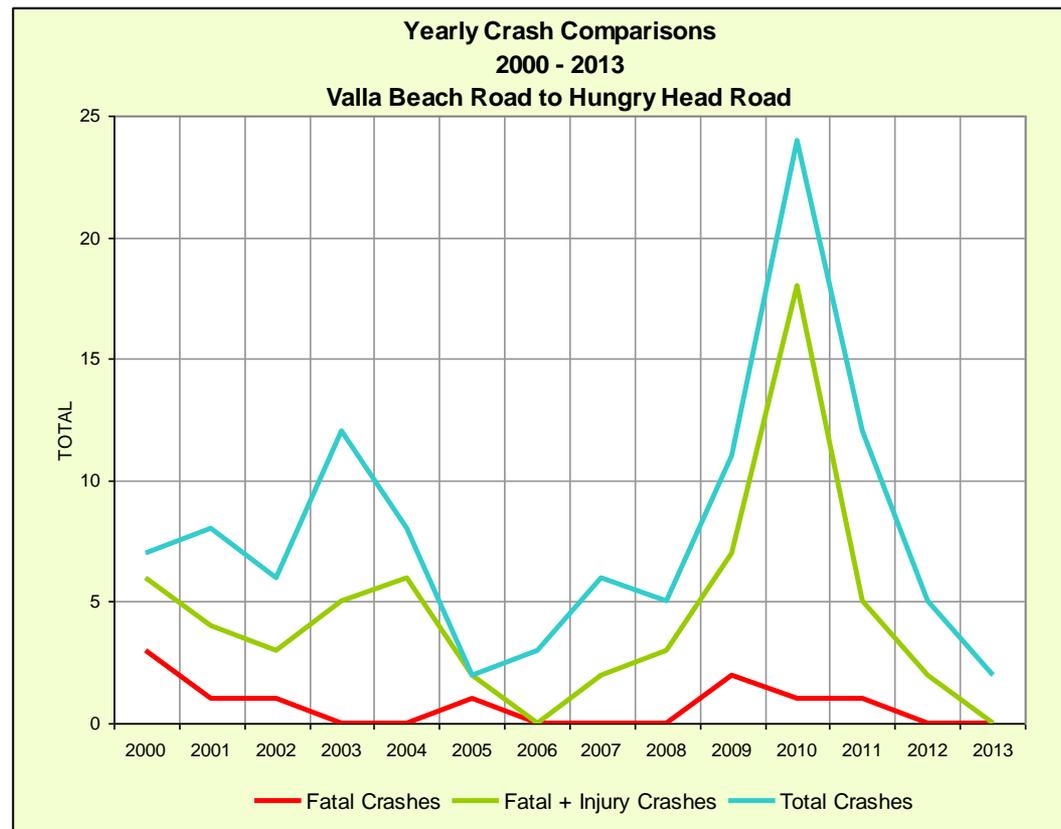
# Yearly crash comparisons

## Nambucca Heads to Urunga



# Yearly crash comparisons

## Valla Beach to Hungry Head Road



# The safety strategy

## Median Wire Rope Safety Barrier (MWRSB)

Road safety could be improved by reducing the cross median crash risk with MWRSB. **This could be achieved without the need for the high costs of road widening if a narrower painted median was trailed.**



# Guidelines

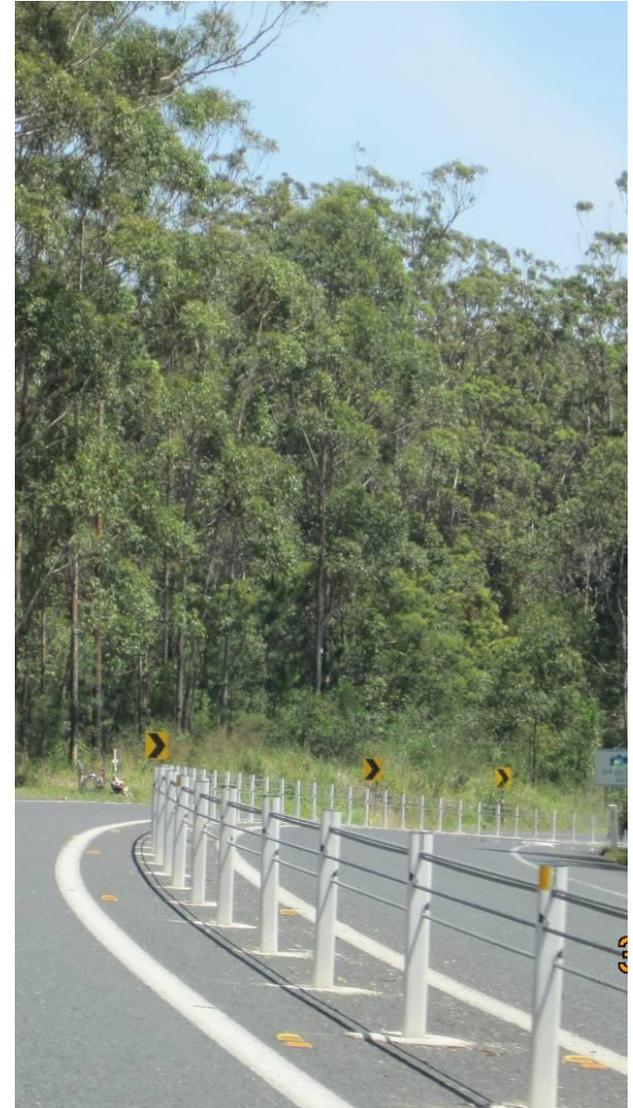
- Austroads Guide to Road Design indicates 1.6m is the minimum painted median width to be used for normal installations of MWRSB. RMS typically uses 2 metre median widths.
- Widening the road formation to provide a 2m central painted median would cost \$3M / km.
- A trial of MWRSB within narrow medians (< 1.6 metre) was initiated.

# Results

Installation was inexpensive, \$90/metre, including traffic control.

Issues with the MWRSB in the narrower painted median:

- Minor vehicle scrapes are occurring.
- Repairs to the MWRSB requires time and resources.
- The road environment now looks and feels tight.



# Positive outcomes

Travel speeds reduced.

Risky overtaking by motorists is not possible.

Safe work methods have been developed and refined to allow management of crashes.

A very low cost project that has delivered encouraging outcomes and reduced serious crashes.



# Crash statistics

Prior to the MWRSB the five year crash data (3.6km section) shows:

**3 fatal crashes.**

**4 injury crashes.**

**16 non-injury crashes.**

Since the MWRSB, crash data (1 year) shows:

**No fatal crashes.**

**1 reported injury crash.**

**4 non-injury crashes.**

Damage to the MWRSB suggest minor unreported crashes.



# Conclusion

- Implementing changes to contribute towards a safer system can range in cost from multi-million dollar new road works to improved signposting to driver education and enforcement techniques.
- One option which is continuing to make a contribution to a safer system is the central wire rope and when the barrier is installed on an existing formation the costs are relatively low.



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***“The fellows that put that fence in the middle of the road saved my life, the cars coming the other way were so close and my car was scraping down the fence”.***

