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## **New approach to narrow highway bridge cycle safety**

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### **Abstract**

The Appleby Bridge on SH60 Tasman, New Zealand, has been identified as a cycling safety hazard in the highway road safety inspections. The bridge has a 100km/h open road speed, carries 9,000 vehicles/ day, with only narrow shoulders provided for cyclists over the 300m span. It is seen as a pressing safety concern for local cyclists and as a discouraging factor for regional cycle growth. This is particularly noted in the regional cycle strategy.

There have been several previous major capital bridge upgrade investigations, all of which have failed to achieve the required funding benefit cost ratio. Rather than using conventional cycle warning treatment Opus Nelson promoted an approach that applies electronic tunnelled warning sign technology from the US to the narrow highway bridge with the intent to warn approaching motorists of this potential cycle hazard and to encourage both cyclists and drivers to behave responsibly.

The system uses specially-designed detector count loop technology which automatically detects cyclists in the traffic stream and triggers electronic signs. The loops also provide continuous traffic count data. This is the first time in the world that this cycle loop detection technology has been used for this application.

The presentation will detail the sign installation, driver and cyclist behaviour changes, include video interviews with users and will detail how we have measured success. This application has significant potential for use nation-wide, especially on high cycle use tourist Highways, where traffic volumes or crash history cannot support full bridge upgrades. It would also support the National Cycle Path Network government initiative.