

## **Evidence-based approach to manage the risk of working near traffic to optimise safety, efficiency and road user journeys through worksites**

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### **Abstract**

Roads and Maritime Services, in partnership with industry, optimises safety, efficiency and customer journeys at road worksites through a risk management approach. We seek elimination of risk before minimisation and ensure the highest level of control consistent with contemporary practice is applied when elimination cannot be achieved. The program is underpinned by quality data collection and analysis as a foundation for continuous improvement. The program provided new insights into hazards, risks, worker and road user behavior when interacting with different worksites and risk controls. Implications for road maintenance and construction will be discussed.

### **Extended abstract**

Working near traffic is a hazardous activity for the road construction and maintenance industry, affecting workers and it may also put road users at risk. Despite developments in engineering, traffic control design and work practices, controls designed to separate traffic from worksites can fail. The consequences of such failures have human, legal, financial and reputational dimensions and the issue of improving safety at worksites is of national and international concern. Roads and Maritime must eliminate, so far as is reasonably practicable, the risk of working near traffic for its workers and the public.

Early success with eliminating the risk where practicable by closing the road for all traffic to carry out a range of road maintenance activities has made it apparent that there are opportunities to reap safety, journey management and efficiency benefits from the process. Roads and Maritime proceeded to map and better understand the levels of risk where elimination is not practicable. Safety Risk Management and Assurance were central to the program of work.

The Safety Risk Management Program has resulted in an Agency Safety Risk Register. This, supported by bow-tie analyses, consolidates information on hazardous events and risk controls used in Roads and Maritime. The Safety Assurance activities focussed on verifying that risk controls are in-fact effective and that risk is minimised to acceptable levels through appropriate measures that will identify potential threats to safety.

The focus has been on quality data collection and analysis using naturalistic studies to ensure we have an improved understanding of our risk of working near traffic, a baseline understanding of the effectiveness of controls and when introducing new controls are able to understand if risk has been further minimised and no unintended risk has been introduced. Implementing actions without valid data supporting it could result in ineffective controls with unintended consequences such as the introduction of new hazards and cost the organisation a lot of resources and effort.

We propose to share the findings from our pilot projects. The presentation will outline how data was collected and analysis helped us to determine the effectiveness of existing controls aimed at managing the risk of working near traffic as well as determining the differential effectiveness when introducing other controls to the existing control set. The results will be discussed from a practitioner's point of view, from a road user's point of view driving through the worksite and from a worker's point of view working near passing traffic. We will also discuss opportunities to work towards national and international better practice.