



# Understanding worker perceptions of common incidents at roadworks in Queensland

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# Roadworks – an almost everyday event on roads.



**Frustrating to motorists. Life-threatening to workers. Hazardous to all.**

- 2% of road fatalities occurred in work zones (US, UK, and Netherlands).
- 22% increase in crash numbers during roadworks (US).
- Work zone crashes are more severe than other crashes.

# Work zone incidents in Australia

## Man witnesses death of wife at roadworks on Bruce Highway north of Rockhampton

KATE MCKENNA • THE COURIER-MAIL • JANUARY 17, 2013 1:00AM



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**A MAN has reportedly witnessed the death of his wife, who was hit by a truck at roadworks on the Bruce Highway northwest of Rockhampton.**

Police said the woman, believed to be in her early 60s, was hit by the prime mover while working as a "stop/go" traffic controller at Marlborough about 4.25pm Wednesday.

It is understood her husband was also working at the site, located around 500m south of the Perkins Rd turnoff, at the time of the accident.

Police said the woman was declared dead at the scene. They are yet to speak to the driver of the truck, who was being treated for shock.

The highway was closed for more than six hours but has now reopened.

Source: Herald Sun, January 17, 2013.

# Work zone incidents in Australia

**Difficult to identify in official records and likely to be under-reported.**

- At least 50 deaths and 750 injuries occur annually (estimated).
- About 1% (n=467) traffic crashes in NSW in 2007 were work-zone crashes.
- Under-reporting is likely when
  - Public vehicle is not involved,
  - Severity is low,
  - Roadwork is not reported as a 'contributory circumstance'.

**What the common types of work zone incidents in QLD are? What are the causes?**

# A Qualitative study of workers' perceptions

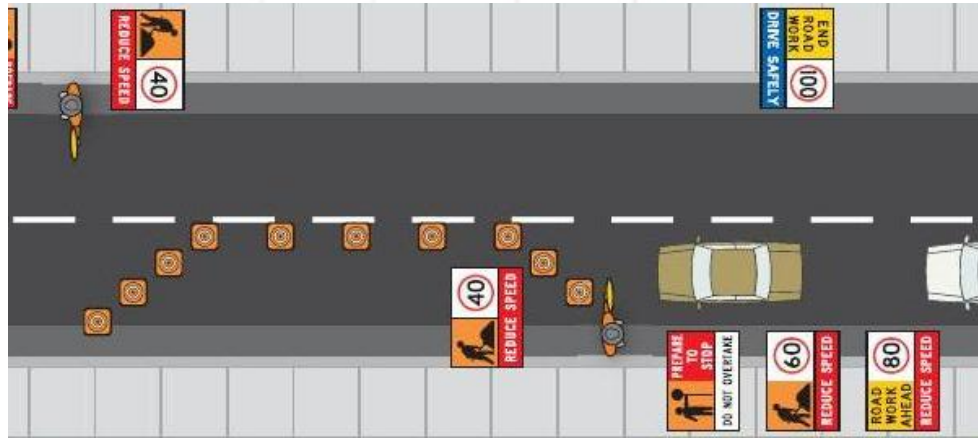
- 66 roadwork personnel across Queensland interviewed.
- 63 face-to-face, 3 telephone interviews.
- Semi-structured interview recorded and transcribed.
- Participants recruited from TMR, Leighton, GHD, and two large Traffic Control companies.
- Voluntary and anonymous participation.

# Respondent characteristics

Work role	Exposure to traffic	No of respondents
Traffic control	Fully-Exposed	25
Machinery operator, labourer	Semi-exposed	15
Manager, engineer, supervisor, director	Non-exposed	26

- 5 aged below 30 years, 48 aged between 30-54 years, 13 aged >54 years.
- 9.8 years average experience (S.D. = 9).
- 43 working in urban work zones, 23 working in rural.
- 57 reported to be mostly on foot in work zone.
- 49 work during day, 7 work at night, 10 work both day and night.

# Common types of incidents<sup>(1/3)</sup>



Exposure	No of respondents	Vehicle drive into work area	Traffic controller hit by vehicle	Rear end	Reversing
Fully-exposed	25	4	8	8	6
Semi-exposed	15	3	6	2	2
Non-exposed	26	18	8	9	7
<b>Total</b>	<b>66</b>	<b>25</b>	<b>22</b>	<b>19</b>	<b>15</b>

# Common types of incidents<sup>(2/3)</sup>

- 1. Public vehicle encroaching into work area**
  - Missing detour,
  - Driving through closed lanes and traffic control,
  - Failing to slow/stop at traffic control.
- 2. Public vehicle hitting traffic controller (TC)**
  - Vehicles driving into work area often hit TC,
  - Drug/alcohol influenced drivers are serious threat to TC,
  - Trainee TC are made well aware of this hazard.



# Common types of incidents<sup>(3/3)</sup>

## 3. Rear-end crashes

- Mostly occur at work zone approaches,
- When under stop/slow traffic control.

## 4. Reversing incidents

- Mostly involve work vehicles/machinery,
- Failing to see behind when reversing,
- Reversing beepers may blend with background noise,
- Reversing beepers tampered,
- Disregarding spotter advise.



# Causes of incidents<sup>(1/3)</sup>



Exposure	No of respondents	Ignoring signage and traffic controller	Driver distraction	Driver error	Drink driving
Fully-exposed	25	11	4	2	2
Semi-exposed	15	4	2	2	2
Non-exposed	26	11	8	2	1
<b>Total</b>	<b>66</b>	<b>26</b>	<b>14</b>	<b>6</b>	<b>5</b>

# Causes of incidents<sup>(2/3)</sup>

## 1. Drivers ignore signage and traffic controller

- Speed reduction signage are ignored by most drivers,
- Drivers lack proper understanding of roadwork related signage,
- Proper education required to improve public awareness of roadworks.



# Causes of incidents<sup>(3/3)</sup>

## 2. Distracted driving

- Tendency of drivers to see what's happening around,
- Use of mobile phone and in-vehicle devices,
- Inattentiveness due to fatigue or too many work zones within a short distance.



## 3. Driver errors

- Misjudging stopping distance,
- Pressing accelerator instead of braking.

## 4. Drink and alcohol influenced driving

- Speeding, failing to stop at traffic control.

# Lessons learnt

- Work zone approaches and tapers are perceived as the most hazardous areas.
  - Driver error is claimed to cause most roadwork incidents.
- Reversing related incident is perceived as the most common one in work areas.
  - Misjudging reversing beepers and ignoring spotters are the common causes reported.
- Need to improve both the availability and quality of work zone incident data in Australia.
- Need to understand perceptions of drivers to get a balanced assessment of work zone hazards.



# Questions?

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