

# Lessons learned

Don't let complacent behaviour lead to an incident.  
Enforce and follow site rules and procedures.

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**Small Mines Roadshow 2024**

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February to April 2024



# What's in this presentation

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- Statistical information for between Oct 2022 to Sept 2023
- Review of 5 dangerous / serious incidents investigated by the Resource Regulator
  1. Serious injury S 189 (a) injury or illness requiring immediate treatment as an in-patient in hospital
  2. Dangerous incident S 190 (1) (g) Collapse or partial collapse of a structure
  3. Dangerous incident S 190(1) (l) an immediate or imminent exposure to the unintended activation, movement, or failure to stop of vehicles
  4. S 190(1)(p) a failure of ground, or of slope stability control measures
  5. S 190(1)(o) damage to plant or structure
- Summary of Legislative obligations if you have an incident or notifiable



**Compliance priority report**

Hazard reporting of safety-related issues – small mines

January 2023 to 30 April 2023



**Resources Regulator**  
Department of Regional NSW

**Investigation information release**

Date: September 2023  
**Serious injury of a worker performing maintenance work on a power screen**  
 Incident date: 28 August 2023  
 Event: Serious injury of a worker while assisting with belt tracking of a power screen  
 Location: Mt Magometon Quarry

**Overview**

A worker assisting with tracking the belt on a power screen was seriously injured when his arm became entangled in the screen's rotating tail drum.

**The mine**

Mt Magometon Quarry is a hard rock quarry about 25 kilometres east of Coonamble in the central west of NSW. The quarry is operated by Coonamble Shire Council. Several workers, including the injured worker, are employed by a contracting company, which provides mobile crushing services to the quarry.



## Small mines quarry sector health and safety report card 12 months from October 2022 to September 2023

### 101 incidents received (6 Inspectors attended site)

0 work-related deaths

10 serious injuries

25 dangerous incidents

20 potentially dangerous incidents

30 high potential incidents (22 dust exceedances)

14 medical treatment (3 lost time injuries)

2 explosives

17 workplace complaints

554 notices issued

(223 concern, 313 improvement, 17 prohibition, 1 non-disturbance)



Resources Regulator  
Department of Regional NSW

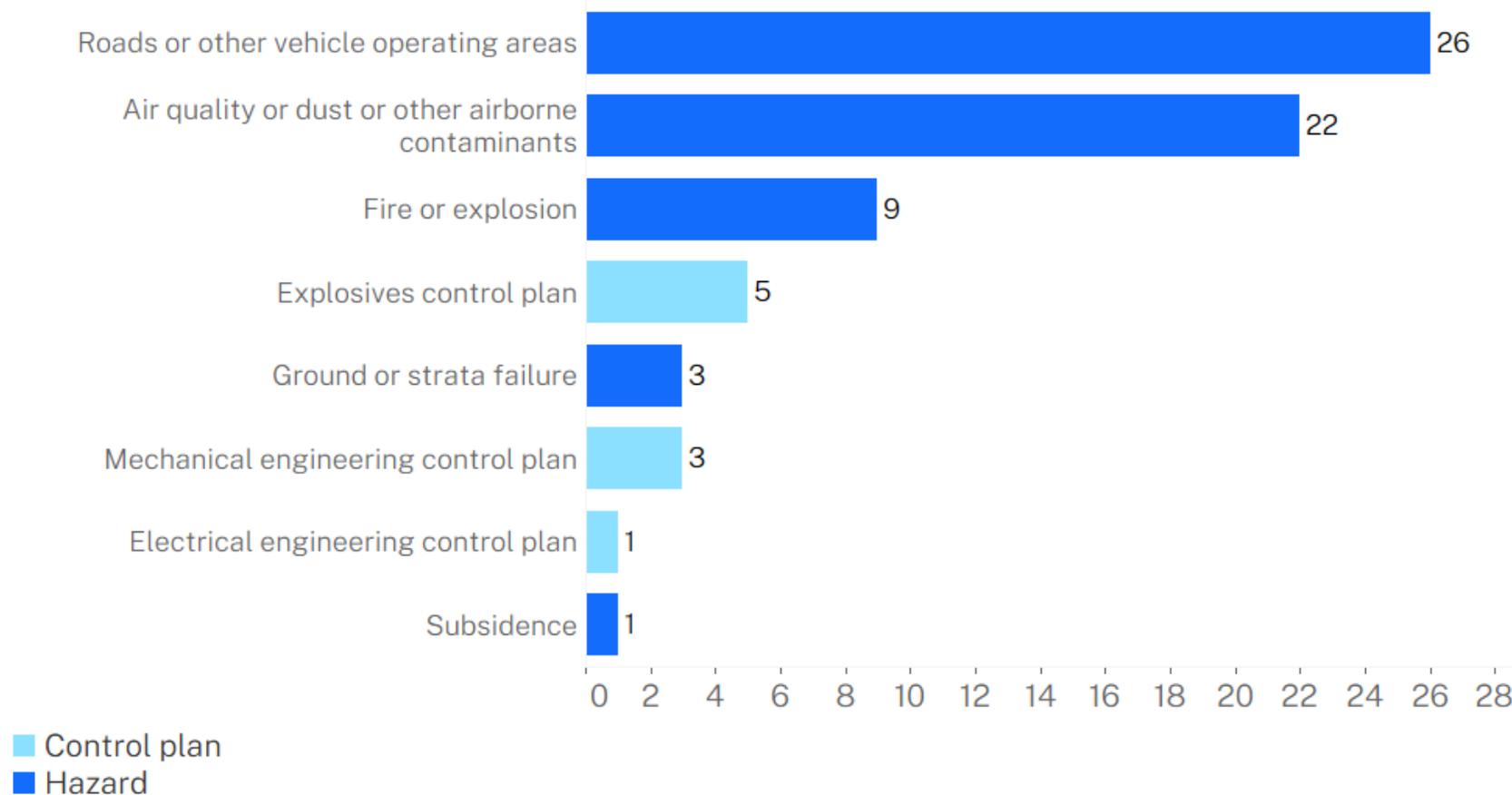
Mine Safety News  
Weekly incident summary

Report an incident or injury  
**1300 814 609**

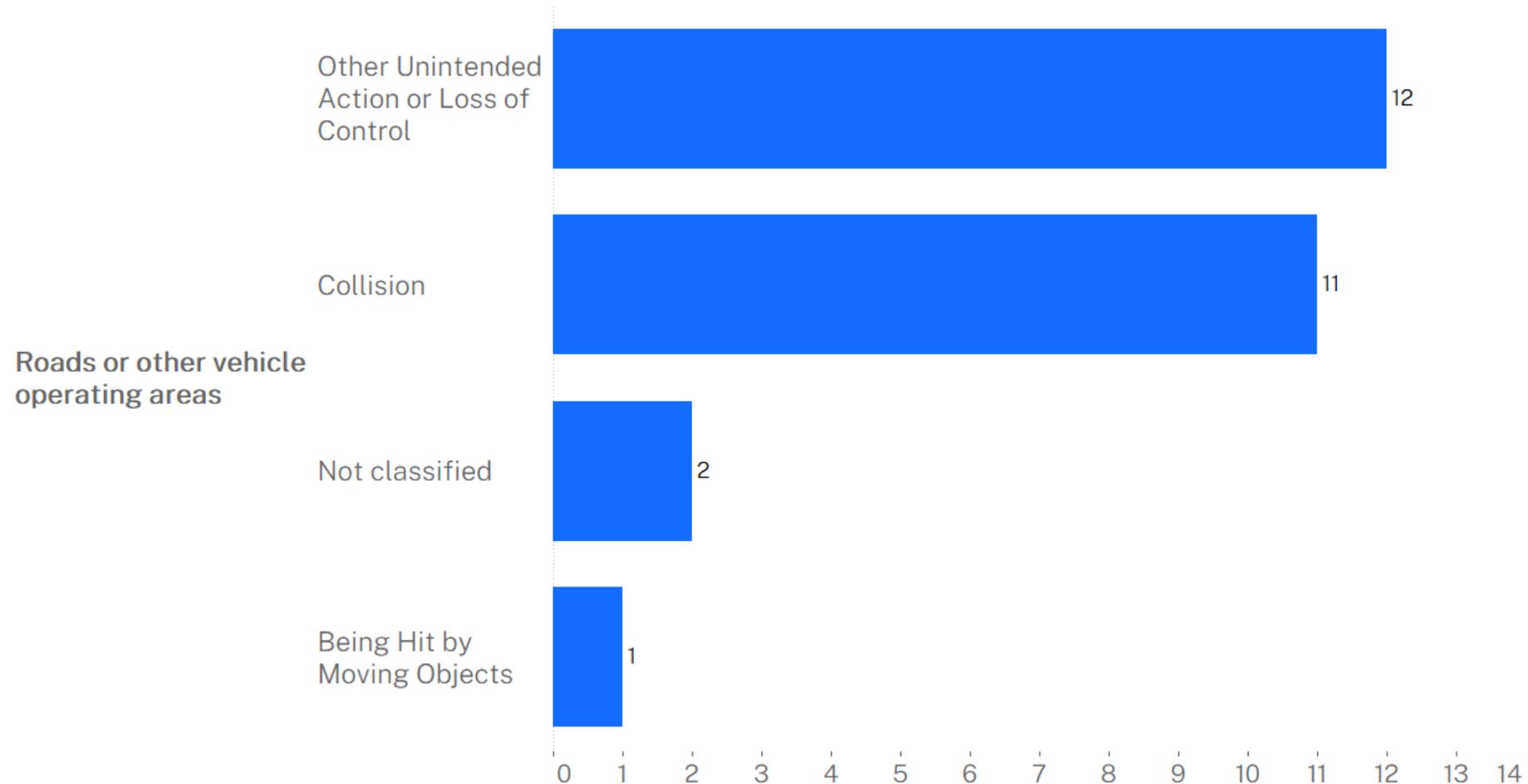
The graphic features a blue header with the Resources Regulator logo and text. Below this, the title 'Mine Safety News Weekly incident summary' is displayed. A dark blue sidebar on the right contains the NSW Government logo. The main content area is light grey and contains a white rounded rectangle with a blue border. Inside this rectangle, on the left, is a blue circle containing a white smartphone icon. To the right of the icon, the text 'Report an incident or injury' is written in blue, followed by the phone number '1300 814 609' in a large, bold blue font.

- Data is at 03/10/2023
- Sector is Small mines, Mine type = construction materials

# Incident notifications received, classified by principal hazard or control plan 12 months from October 2022 to September 2023



# Incident notifications received for principal hazard ROVOA, by incident subtype 12 months from October 2022 to September 2023



## Serious injury

S 189 (a) injury or illness requiring immediate treatment as an in-patient in hospital



### Causal factors

1. SWMS did not adequately address the task.
2. Confined working area, obscuring line of site of excavator operator whilst load shifting.
3. Injured worker remained in crusher chamber after blow-bar had been fitted.
4. Miscommunication between spotter and excavator operator when load shifting.
5. Location of work area limited positioning of plant.
6. A regular task (often weekly) caused complacency.

# Serious injury

## S 189 (a) injury or illness requiring immediate treatment as an in-patient in hospital



### Lessons learned

1. Manufacturer's procedures did not adequately address the task sequence.
2. SWMS to address specific required maintenance tasks. Apply hierarchy of controls when developing steps in a task.
3. Consider experience, training and qualifications when load shifting.
4. Conduct maintenance tasks in a clear flat area.
5. All workers involved in the task to sign-off on the SWMS.
6. Ensure workers are not exposed to plant movement in a confined work area.
7. Incident scene should be preserved.
8. Review the site emergency control plan to determine its application and effectiveness in relation to the incident.

## Dangerous incident

S 190 (1) (g) Collapse or partial collapse of a structure, or  
S 190 (1) (o) Damage to plant or structure

### Causal factors

1. Structural changes to the discharge cone (removal of internal splitter system) had not been documented and risk assessed
2. Previous structural engineering report requested access to the silo but this request had not been actioned.
3. Some bolts holding the discharge cone flange to the bin appeared to be have signs of fatigue.
4. No documented inspections of the silo structure as required by the MECP.
5. Structural engineering inspections were adhoc and not scheduled.
6. Silo clam gates could be operated without a truck being in the correct position under the silo.
7. Bolts used in the silo connections were not suitable.



## Dangerous incident

S 190 (1) (g) Collapse or partial collapse of a structure, or  
S 190 (1) (o) Damage to plant or structure

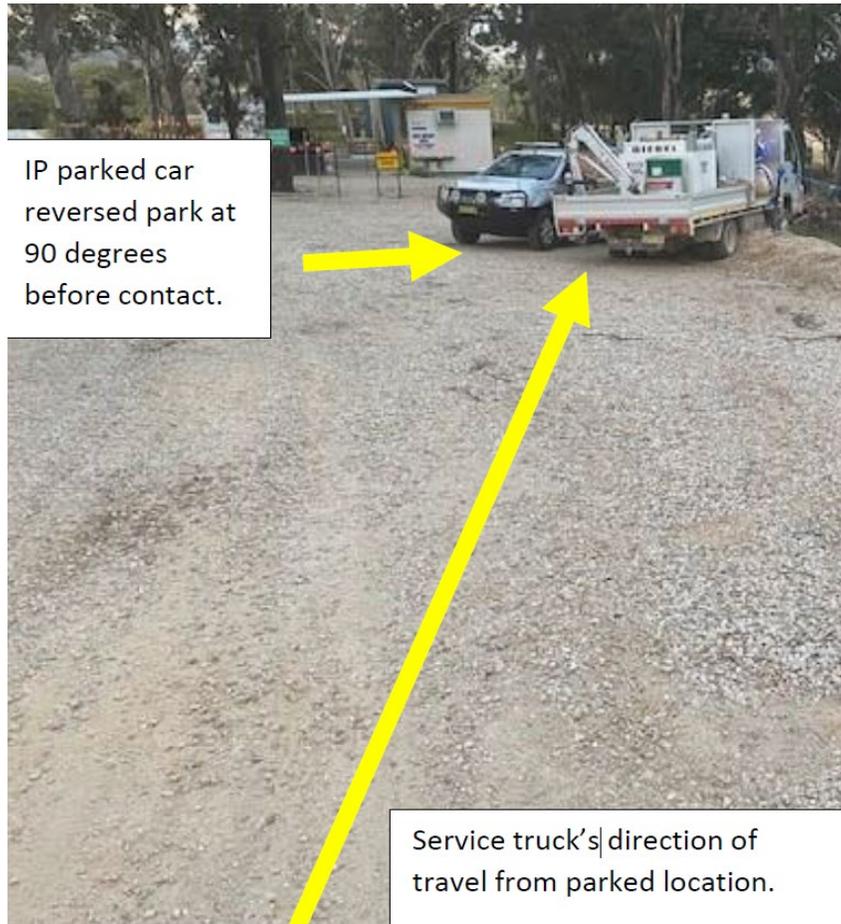


### Lessons learned

1. Workers are trained and competent to carry out maintenance and inspections of plant.
2. Ensure safeguarding to prevent chute gates from opening if correct plant was not in position for loading.
3. Ensure supervisors and workers are consulted in the relevant contents for the SMS (engineering control plan) and risk assessment.
4. Prepare and implement scheduled structural engineering inspections of fixed plant
5. Ensure timely rectification works recommended to maintain structural integrity.

## Dangerous incident

S 190(1)(I) an immediate or imminent exposure to the unintended activation, movement, or failure to stop of vehicles or machinery



### Causal factors

1. The driver and passengers ignored a no entry sign to enter the car park and did not park in the HV parking as required.
2. Mechanical inspection found the hand brake required adjustment and would not adequately hold the vehicle on a slope.
3. Documented operator weekly prestart was conducted 3 days before the incident and no record of the defective park brake was recorded.
4. Other workers on site were aware the truck's hand brake was not fit for purpose, did not report it and when driving it, used a fitted hill-start assist device instead.
5. The driver when exiting the cabin of the truck left it in neutral and running, did not engage the park brake and was texting on a mobile phone.
6. The driver tried to enter the cabin when the truck started to move and fell onto the ground, resulting in his left leg being run over by the rear wheels.

## Dangerous incident

S 190(1)(l) an immediate or imminent exposure to the unintended activation, movement, or failure to stop of vehicles or machinery



### Lessons learned

1. Plant pre-starts to be completed before operation.
2. Re-enforce the process when reporting plant critical safety items and instigate appropriate actions.
3. Review and update the site traffic management plan.
4. Re-enforce traffic management site rules through toolbox and safety meetings.
5. Re-enforce disciplinary action for breaches of site rules.
6. Ensure the operation has appropriate levels of management on site to monitor compliance with site safety rules.

## Dangerous incident

### S 190(1)(p) a failure of ground, or of slope stability control measures



#### Casual factors

1. The access road was not designated as a haul road and was in poor condition due to recent heavy rain.
2. The truck operators were given autonomy in choosing the roads to haul material between a dam and the dump tipping point.
3. The access road selected had not been risk assessed by the truck operators or inspected or monitored for changes in condition by the quarry supervisor or manager. As a result, the soft edges of the access road were not identified.
4. Road bunding was of a poor standard or missing.
5. The section of road where the slump had occurred was previously used as a dam bund wall.

# Dangerous incident

S 190(1)(p) a failure of ground, or of slope stability control measures



## Lessons learned

1. Management to conduct pre-inspection of all work areas before commencing operations.
2. Management to continue to monitor throughout the shift, particularly when changes in weather occur.
3. All bunding throughout the quarry to be prepared and maintained to site standards.
4. Management to specify worker tasks during the shift pre-start meeting to ensure no changes to work practices unless authorised.

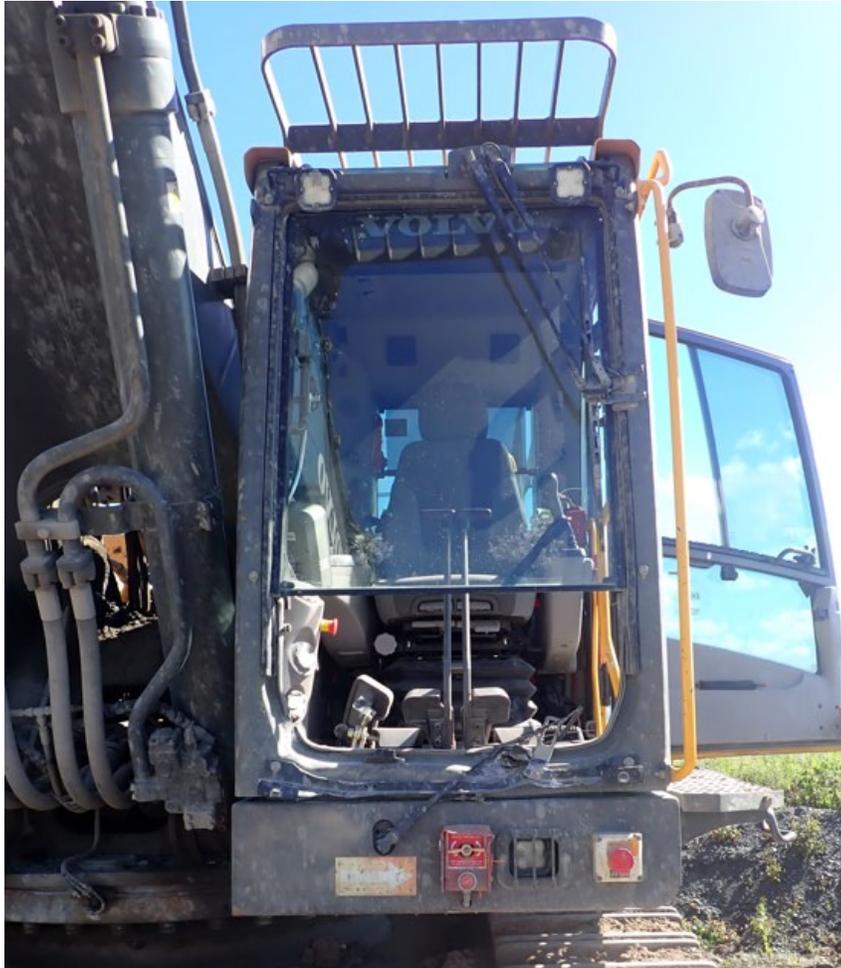
## Dangerous incident S 190(1)(o) damage to plant or structure

### Casual factors

- The bucket and pick located in the excavator bucket was not secured.
- The bucket was being carried too high in relation to the cabin.
- The bucket fell on a high bund and rolled back towards the excavator cabin.
- The SWP for transporting of items of plant in an excavator bucket did not detail all critical controls for handling and securing items of plant.



## Dangerous incident S 190(1)(o) damage to plant or structure



### Lessons learned

1. Items of plant to be transported must be secured to ensure unintended movement.
2. Excavator SWP to include a risk assessment of all activities undertaken by the plant and provide detailed control measures.
3. Plant operators to be consulted in the development of SWP for plant.
4. Supervisors must be aware of incident reporting and legislative scene preservation obligations.

# Summary of legislative obligations if you have an incident or notifiable

<b>Notify the Regulator</b>	<b>Provide photos of incident scene</b>
<b>Preserve the scene</b>	Isolate the scene with signs and flagging tape and do not remove items
<b>Commence investigation</b>	Obtain witness statements and review relevant documentation. Identify likely cause of incident.
<b>Review control measures in documentation with workers as part of the investigation</b>	Maintain a record of review
<b>Make recommendations</b>	Consider hierarchy of controls when considering new controls
<b>Prepare an action plan</b>	Prioritise high risk hazards identified and be reasonably practicable with timeline / responsibilities
<b>Consult workers and implement training if identified</b>	Outcomes implemented and consultation completed
<b>Updated SMS documentation</b>	Record changes and update document control processes
<b>Monitor changes and consult workers</b>	Monitor and review remedial actions for effectiveness

# Any questions?

