



16 October 2025

Welcome to the Mackay Quarry Forum

MINERAL MINES AND QUARRIES INSPECTORATE



Resources
Safety & Health
Queensland

Welcome

Welcome to our first Mackay Quarry Forum



Agenda

Time	Item	Speaker
09:00 - 09:30	Registration	RSHQ Staff
09:30 - 09:45	Welcome and Agenda brief	Christine Ashby, Inspector of Mines, RSHQ and Forum Chair
09:45 - 10:15	Updates on Industry matters	Hermann Fasching, Chief Inspector of Mineral Mines and Quarries and Chief Inspector of Explosives, RSHQ
10:15 - 10:45	IQA Training and Education	Andrew Dutton, Education Lead, IQA
10:45 - 11:00	Break	Morning Tea
11:00 - 11:30	Still Relevant Today - 2019 Campaign for Change	Alan Graham, Regional Inspector of Mines, RSHQ
11:30 - 12:15	Critical Control Management	Clayton Hill, Technical Discipline Manager for SLR Consulting Australia Pty Ltd
12:15 - 12:45	Contractor Management	Bradley Alvey, Senior Inspector of Explosives, RSHQ
12:45 - 13:30	Break	Lunch

Agenda

Time	Item	Speaker
13:30 - 14:00	Managing Workforce and Company Mental Health	Jayden McLaughlin, SSE, Winchester Downs Quarry and Joe Zarb, Owner and Managing Director, Quarrico Products and Coolibah Concrete
14:00 - 14:30	Psychosocial Health & Safety	Liz Grolimund, Manager Health, Strategy & Compliance, RSHQ
14:30 - 15:00	Welding Fume - The Emerging Issue	Samantha Forster, Inspector of Mines (Occupational Hygiene), RSHQ
15:00 - 15:15	Break	Afternoon Tea
15:15 - 15:45	IQA news	Michelle Lergessner, Treasurer/Secretary North Qld IQA Branch
15:45 - 16:15	Q & A Panel	Hermann Fasching, Clayton Hill and Lawrence Fahey, Operations Manager, BQC Quarries and BQC Sands Pty Ltd
16:15 - 16:45	Wrap up and close	Michelle Lergessner, Treasurer/Secretary North Qld IQA Branch



OCTOBER 2025

MMQ QLD Sector Overview

Mineral Mines and Quarries Inspectorate



Resources
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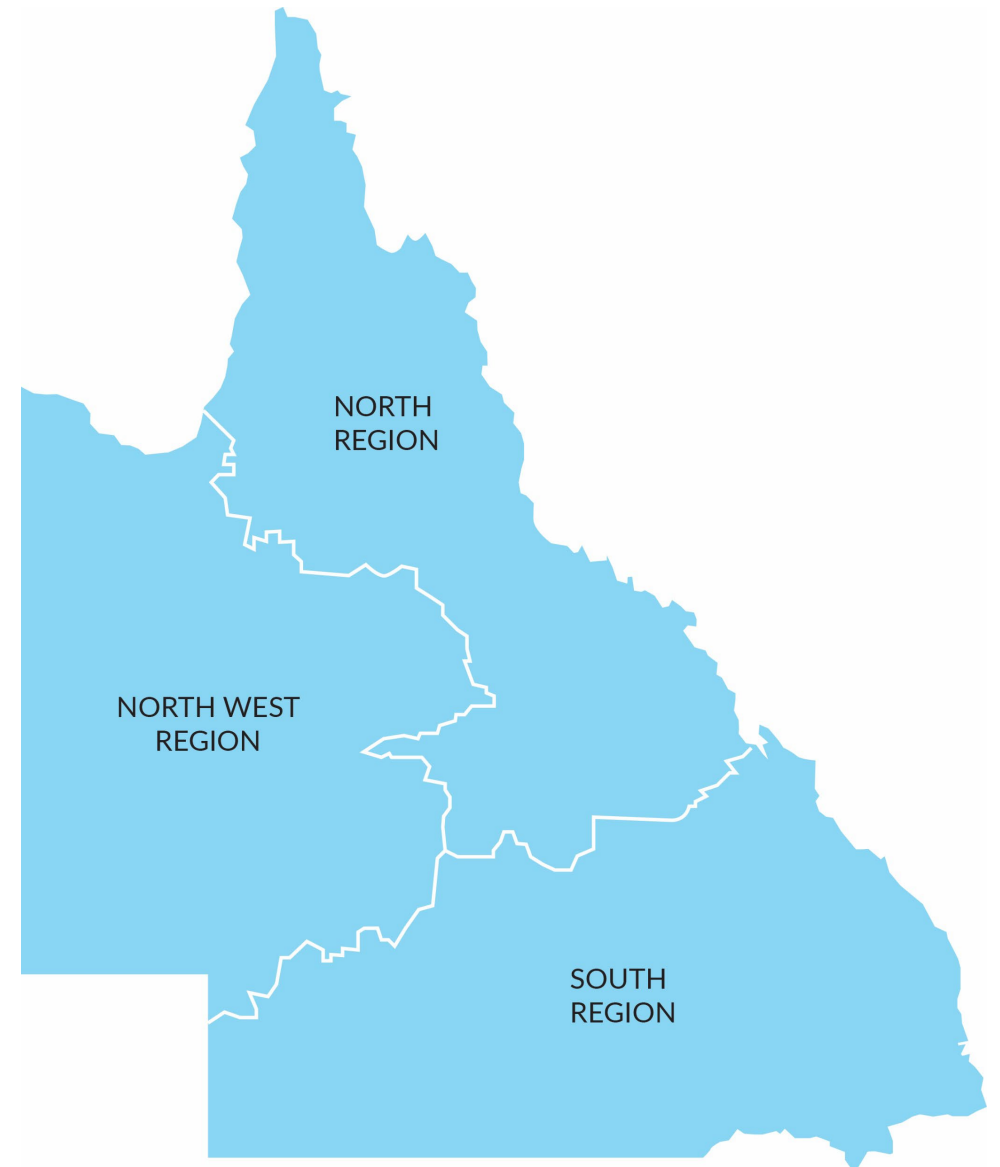
Who we are

31 Staff

- 23 Inspectors
- 3 District Workers' Representatives
- 5 Ancillary Staff

Office Locations

- Brisbane
- Townsville
- Mackay
- Mt Isa
- Cairns



What we do

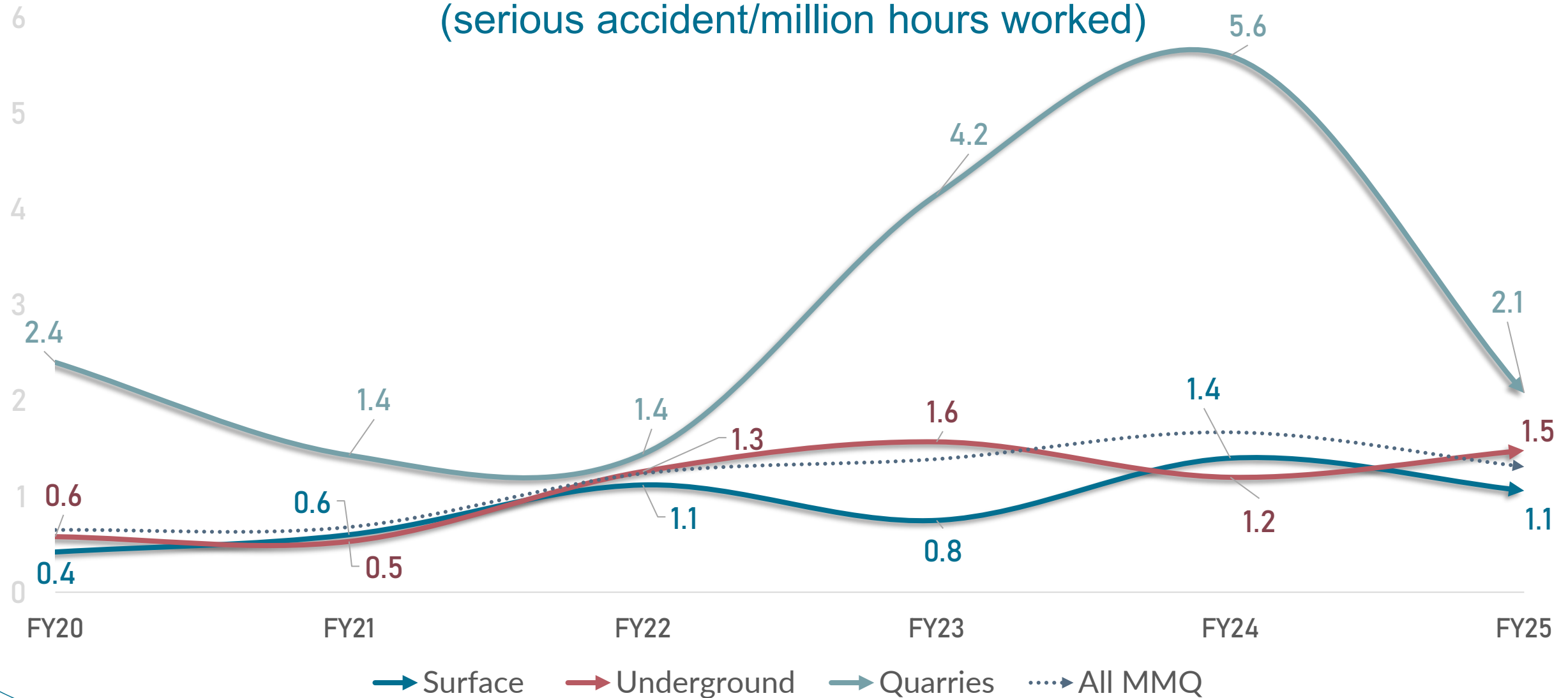
Administer the *Mining and Quarrying Safety and Health Act 1999* and the *Mining and Quarrying Safety and Health Regulation 2017*

- Conduct inspections and audits at a diverse range of sites including large-scale mineral mining operations and quarries through to small-scale mining, such as opal mines.
- Respond to incidents and complaints about mine/quarry workers' safety and health matters.
- Communicate emerging trends and investigation outcomes through forums and seminars, investigation reports, health and safety alerts and publications.



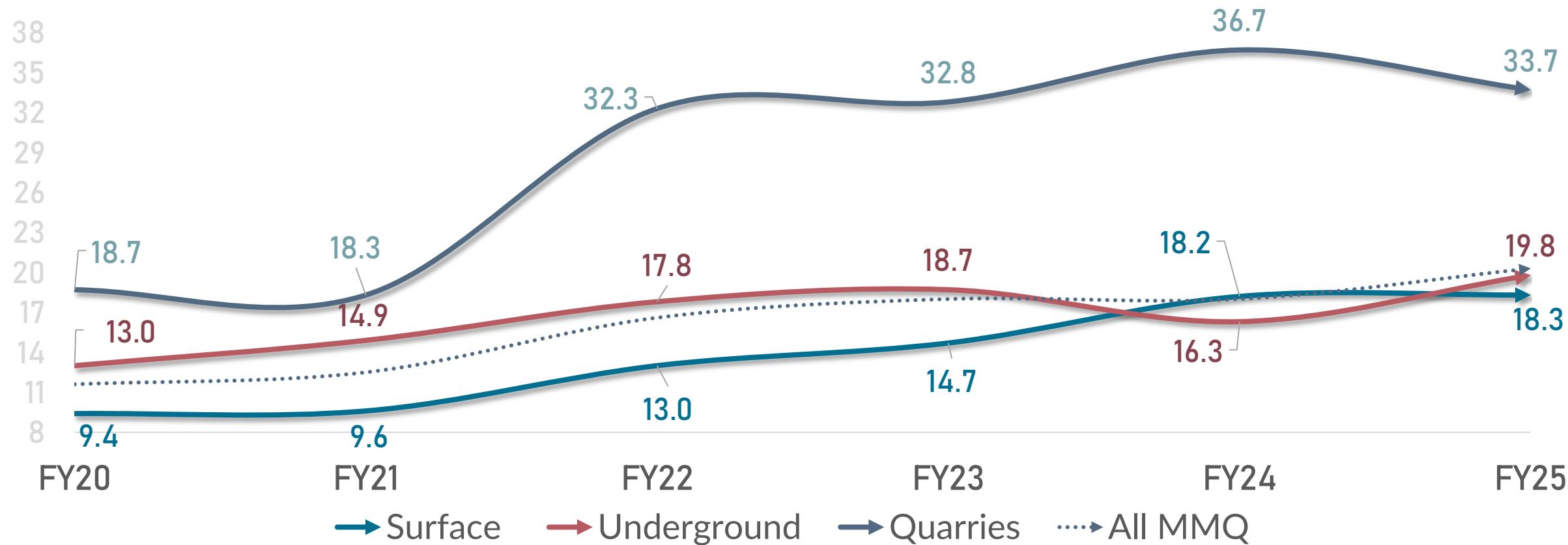
Serious accident frequency rate per sector FY20 – FY25

(serious accident/million hours worked)

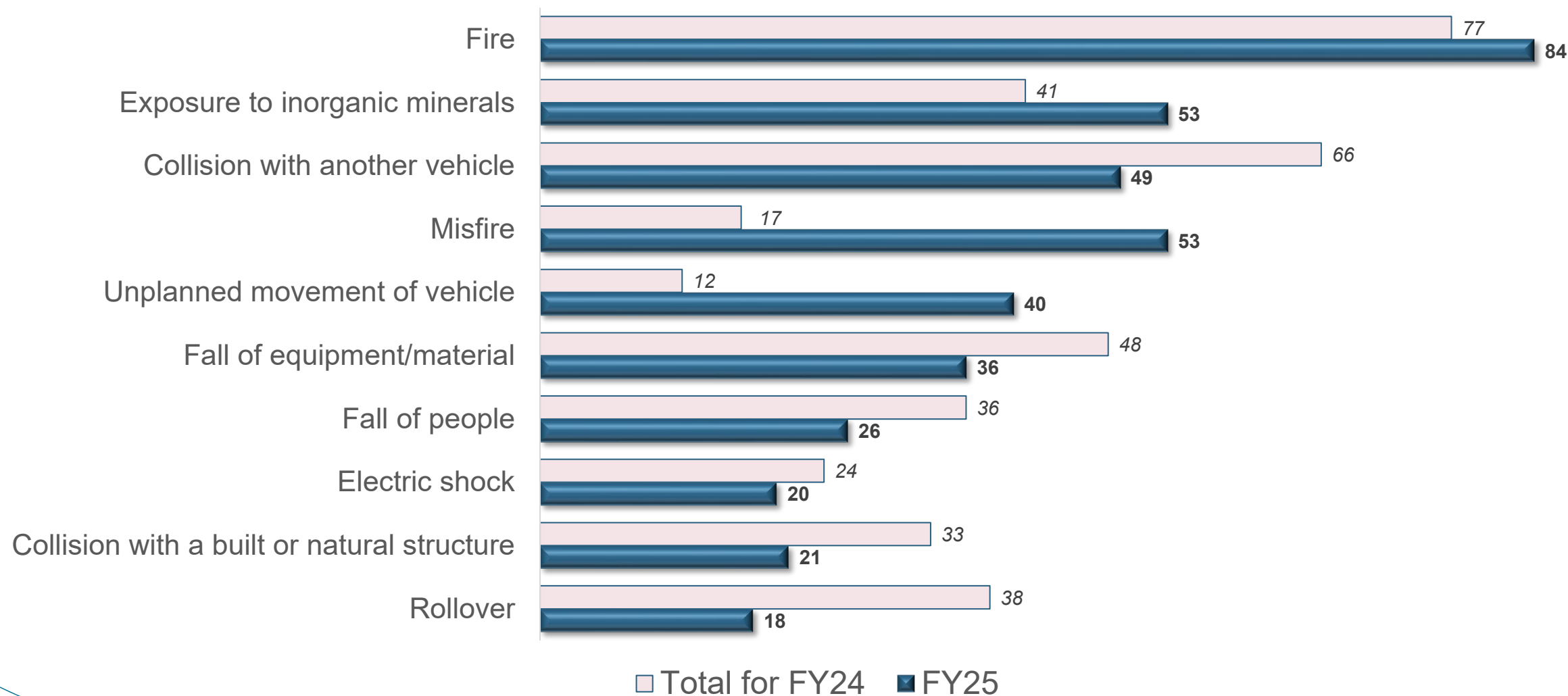


High potential incident frequency rate per sector FY20 – FY25

(high potential incident/million hours worked)



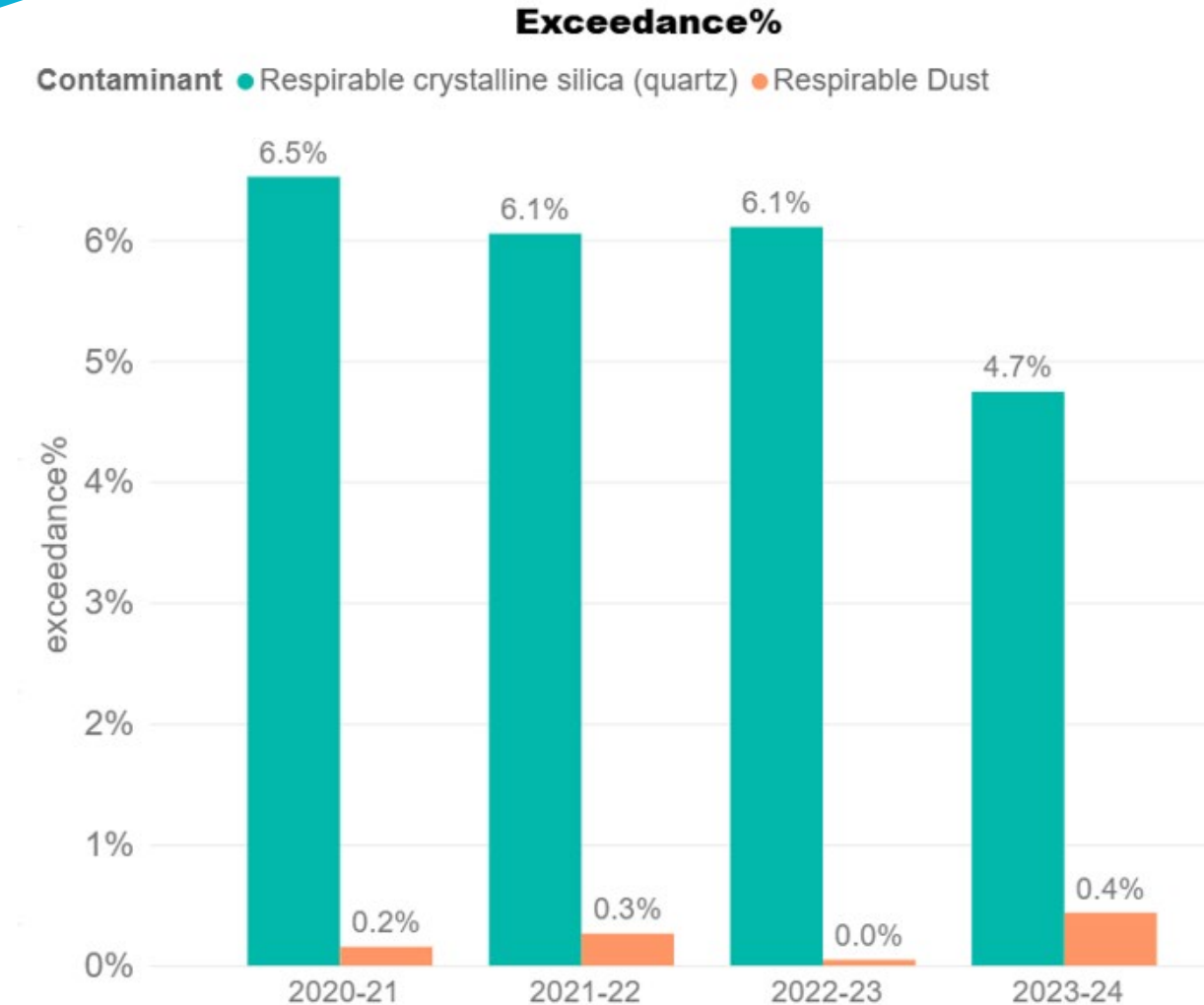
Top ten hazards FY25 vs FY24



Respirable dust / RCS

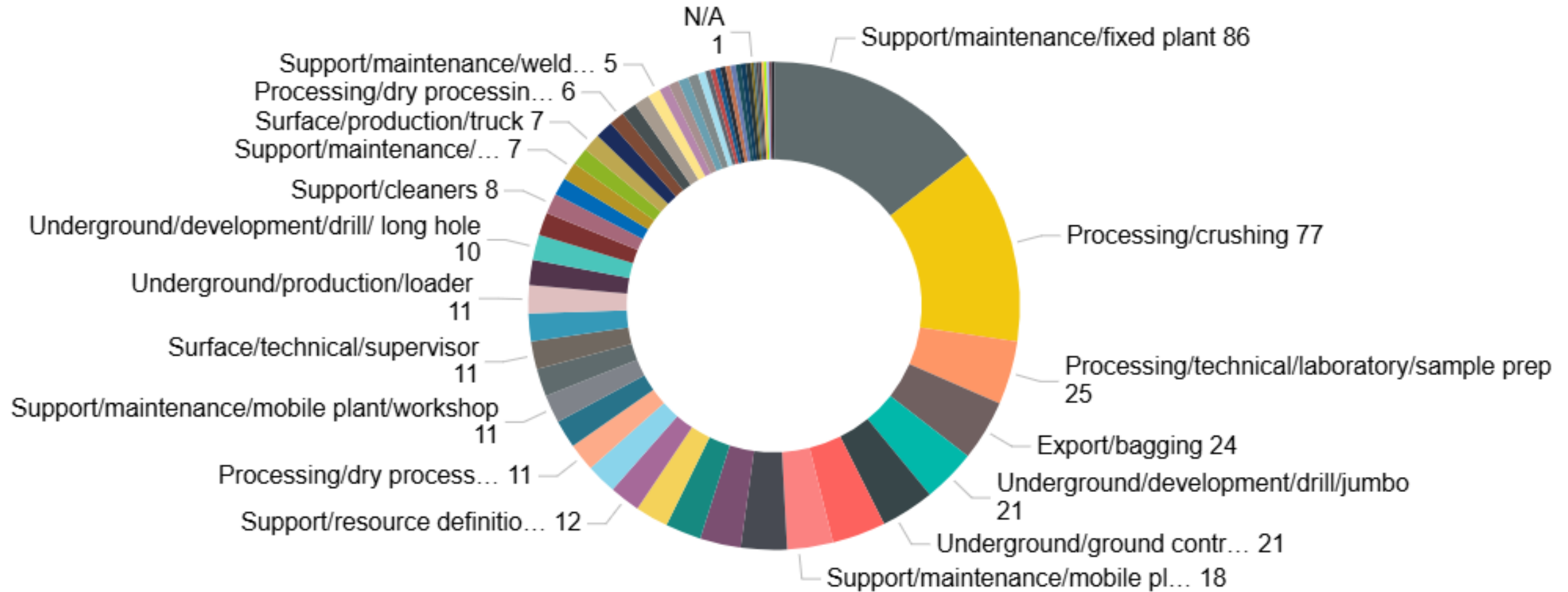
Industry exceedance rates

- Very low RD exceedance rates
- RCS exceedance rates are trending down



Activities generating respirable dust

Exceedance Number



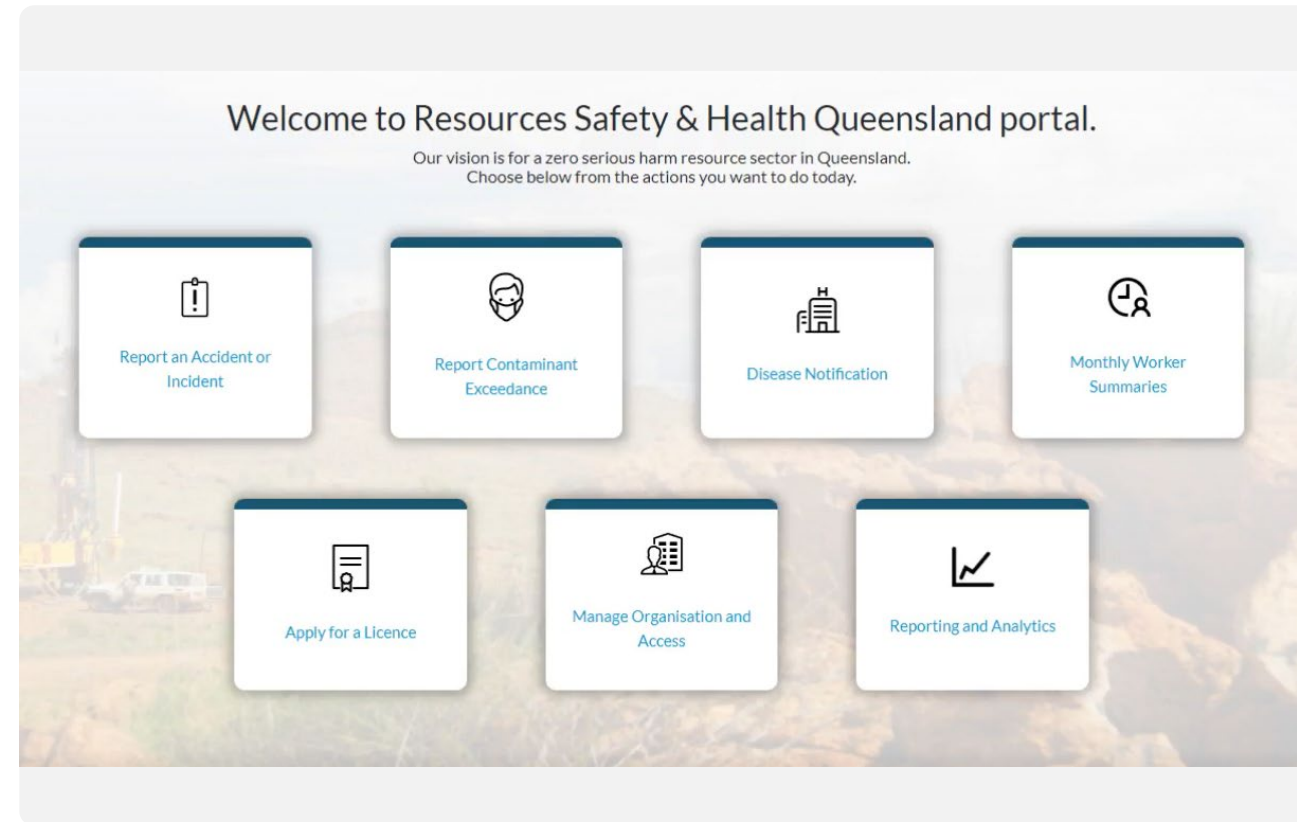


Key Issues & Focus Areas

- **Emergency Egress**
- **Fatigue**
- **Welding Fumes**

RSHQ Portal – Incident Reporting

- 47% of mineral mines and quarries have been onboarded
- 33 Exploration sites have elected to come on early
- All MMQ sites must report incidents through the RSHQ Portal (Approved Form)
- SSE's and a suitable number of delegates must register



RSHQ Incident Reporting

- To report an incident or for technical support call **1300 312 339**
- Email support is available at incidents@rshq.qld.gov.au
- Report an incident or register for an account via [RSHQ Portal](#)



Practicing Certificate Scheme (PCS)

Legislative changes establishing the PCS become mandatory on 10 June 2025.

From 10 June 2025:

- Persons cannot be appointed to or remain in the role of UMM or SSE without a current practicing certificate issued by the board of examiners
- First Class Mine Managers and SSE's must maintain a current practicing certificate.



CPD Requirements

- UMM's require 150 hrs and SSE's require 135 hours of CPD over a five-year period
- A minimum of 20% of total hours CPD must be undertaken and logged each year
- CPD covers mining methods, legislation, emergency management, leadership, risk management and health and safety
- CPD covers both formal and informal learning and evidence of learning needs to be provided when logging hours
- UMM's and SSE's can register for the scheme now on the BOE website and up to 1 year of CPD hours can be carried forward into the mandatory scheme





Thank you



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Queensland

QLDMinesInspectorate@rshq.qld.gov.au

[Return to agenda](#)

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The Institute of Quarrying
Australia

IQA Education

Educating and connecting people engaged with the extractive and associated industries



The Institute of Quarrying
Australia

<https://vimeo.com/1125019895?fl=pl&fe=sh>



Vision

To be the leading provider of professional development and training for the Australian quarrying sector, equipping professionals with the skills, knowledge, and excellence to enhance safety, efficiency, and sustainability.



Mission

- Deliver high-quality, professional development training tailored to the quarrying sector.
- Enhance safety, compliance, and operational excellence.
- Leverage digital and blended learning to increase accessibility for regional and remote workers.



Four Key Pillars

Sector Alignment

CPD
Requirements

Competency
Framework

Program Accessibility

Delivery
Modes

Key Locations

Workforce Development

Corporate
Training

S2W
Pathways

Capacity Building

Trainers and
Partnerships

Program
Development

1. Sector-Aligned Training & Development

- Utilising the IQA Competency Framework for the Sector
- Develop training across the 5 keys areas of focus
- Align training with sector standards.
- Support Quarry Managers in Maintenance of Competence Scheme





2. Programs that Provide Accessibility

We offer programs in a variety of delivery modes

1. Online Self-Paced

2. Hybrid Programs

1. Webinar and Online Workshops:
2. Blended Learning:

3. Face to Face Training



3. Projects and Initiatives

- **Corporate Training focus** across providers in the sector.
- **School 2 Work Pathways** (Kits and resources for employers, schools and young people)
- **Industry engagement** as a member on the Industry Reference Group (IRG) chaired by the Queensland Resources Council (QRC).
- **New program development** in gaps within the sector. (Jan-Mar 2026)

Practising Certificate Scheme



- Update released 15th of October.



- We provide CPD hours with aligned programs to the categories of the PCS



- Keep engaging with RSHQ to help shape the program and increase clarity for participants and suitable programs and events.

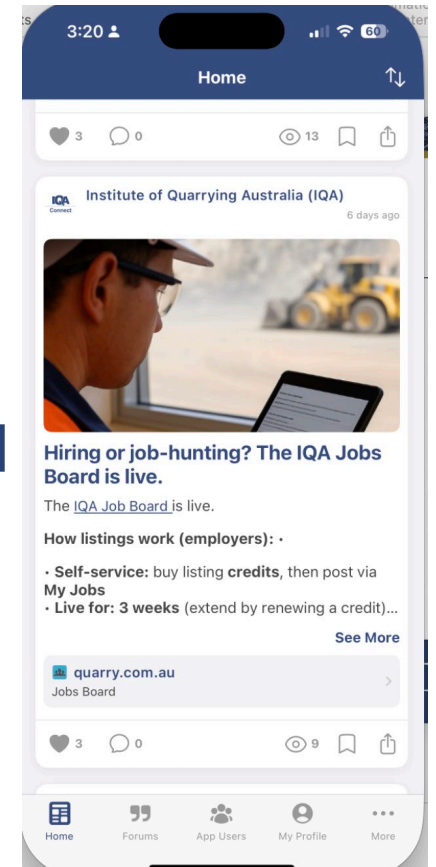


How can the IQA help?

- Wide range of courses which meet formal learning requirements
- IQA Branch events (e.g. lunch and learn, site tours)
- Guidance on meeting area of competence and type of learning requirements
- Recommended pathways to meet annual hours

IQA Education Hub and IQA App

- Single source for all IQA education programs
- Access records of training any time
- Track CPD hours and categories
- IQA App – Released later this month in both apple and play stores.
 - Industry forums and connection
 - Directly access education and event
 - Connect with us and the sector.





The Institute of Quarrying
Australia





My Courses

See courses you are enrolled in



Available courses

View all available courses on the IQA website and purchase access.



Resources

Browse or download resources



External Training

Upload non-IQA PD records



Transcript

View Transcript

My Courses



ONLINE: Incident Investigation

Online Course

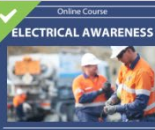
Completed



WEBINAR: Introduction to Safety Management Systems

Instructor Led Course

View



ONLINE: Electrical Awareness

Online Course

Completed



ONLINE: Effective Risk Management

Online Course

Resume

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quarry.com.au

TRANSCRIPT FOR JO SMITH

Print Transcript

CPD Hours

Certificates

Courses



Username: edutest

Email Address: education@quarry.com.au

Branch: New South Wales

CPD Hours: 10.5

CPD Hours

8.5

NSW MOC 1. Mining & WHS Systems (Sub B: Principal Hazards)

2

NSW MOC 3. Emergency Management

Certificates

Certificate is expired

Course Title	Valid From	Expires	View
ONLINE: Electrical Awareness	July 8, 2024 10:34 AM		Download
ONLINE: Incident Investigation	October 10, 2023 10:38 AM		Download
Slope Stability	June 6, 2024 9:00 AM		Download

Courses

Course Title	Status	Score	Completion Date	
ONLINE: Effective Risk Management	In Progress			Resume
ONLINE: Electrical Awareness	Complete		February 8, 2024 10:33 AM	View
ONLINE: Incident Investigation	Complete		October 10, 2023 10:38 AM	View
WEBINAR: Introduction to Safety Management Systems	Not Started			View

Educating and connecting people engaged with the extractive and associated industries



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Thank you

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OCTOBER 2025

Mechanical Matters - Campaign for Change

Alan Graham, Regional Inspector of Mines, RSHQ
Original presentation 2019



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History – revisit of my original 2019 presentation

The 2018/2019 era was not a good period for the Mining and Quarrying Industry. In May 2019 the Chief Inspector announced the “Campaign for Change” initiative to all Metal Mines and Quarries, with the focus on:

- **Guarding**
- **Mobile Plant**
- **Isolation**

Unfortunately, there were two more fatalities in June/July 2019 – this triggered the state-wide “Safety Reset.”

Now in 2025 we believe it timely to give ourselves a check-up, and a chance to make sure we are focused on the basics.

2019 Regulatory initiative →

Does your SHMS support these requirements?

Campaign for Change

We continue to find sites not effectively implementing controls to manage known risks that have caused numerous fatalities over the years. We have identified three areas where we believe there should be no room for compromise and as such we will be targeting these areas as part of inspections. Below is an outline of the areas of focus and expectations that along with other controls should be implemented to ensure risk is as low as reasonably achievable.

- Guarding
 - Plant requiring guards must not be operated without them securely fitted
 - If guards are removed plant/equipment must be isolated
 - Reference made to AS/NZS 4024.3611:2015 – Zone A areas must be guarded and require a tool for removal of guards
- Mobile equipment
 - A maintenance schedule developed and implemented with reference to OEM where possible
 - Maintenance records up to date and available
 - Operator trained and assessed to ensure competency, records available
 - Operator and maintenance manuals onsite and readily available to workers
 - Correct testing of all braking systems are carried out prior to daily operation
 - Machinery specific brake maintenance understood and carried out
- Isolation
 - Have a documented isolation procedure
 - All workers trained and assessed in identifying energy sources and how to apply the isolation procedure
 - Locks and tags available
 - All plant must be able to be isolated/locked/tagged

Effective Safety & Health Management System

Fit for purpose plant

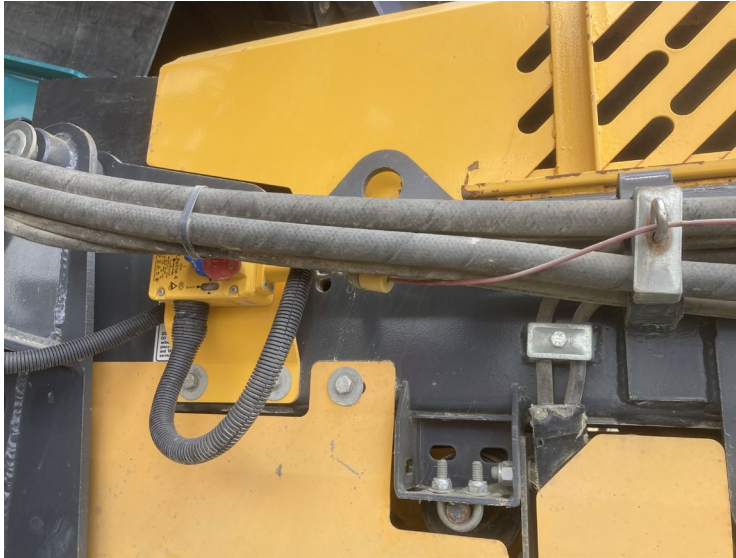
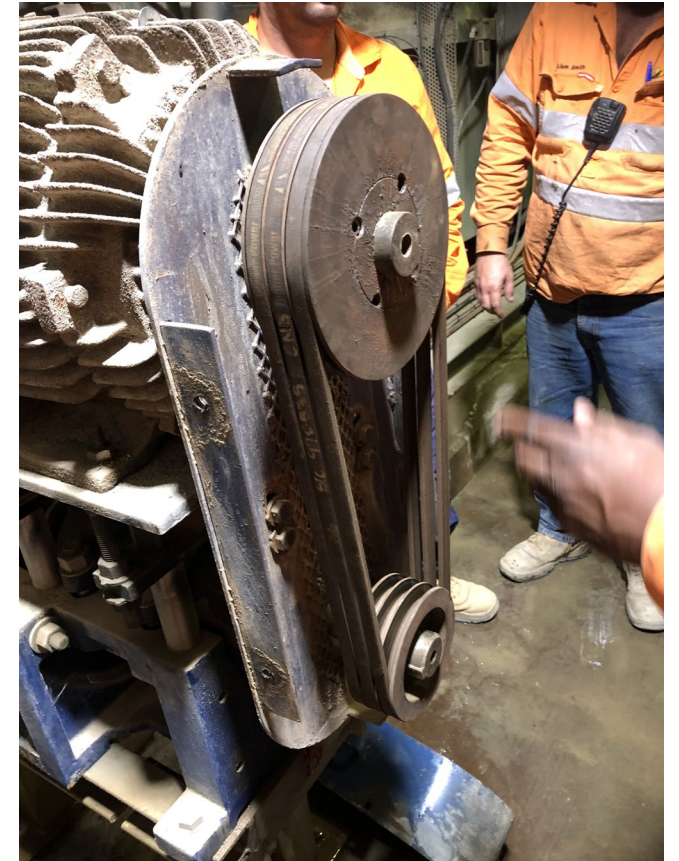
- Design – guards, access, isolation/lock-out, e-stops/lanyards
- Seatbelts/seats
- Brakes – park/service/emergency
- Tyres – management/fitting, TKPH, Load & Pressure
- ROPS etc

Isolation procedures, Brake test procedures

Training and Competency, Supervision



What have we seen since.....



Guarding

MQSHR Part 10, section 100, states –

“if it is necessary for managing risk from the plant and it is reasonably practicable, the plant –

- (iii) incorporates appropriate engineering controls to protect the plant operator and other persons; and

Example of engineering controls—

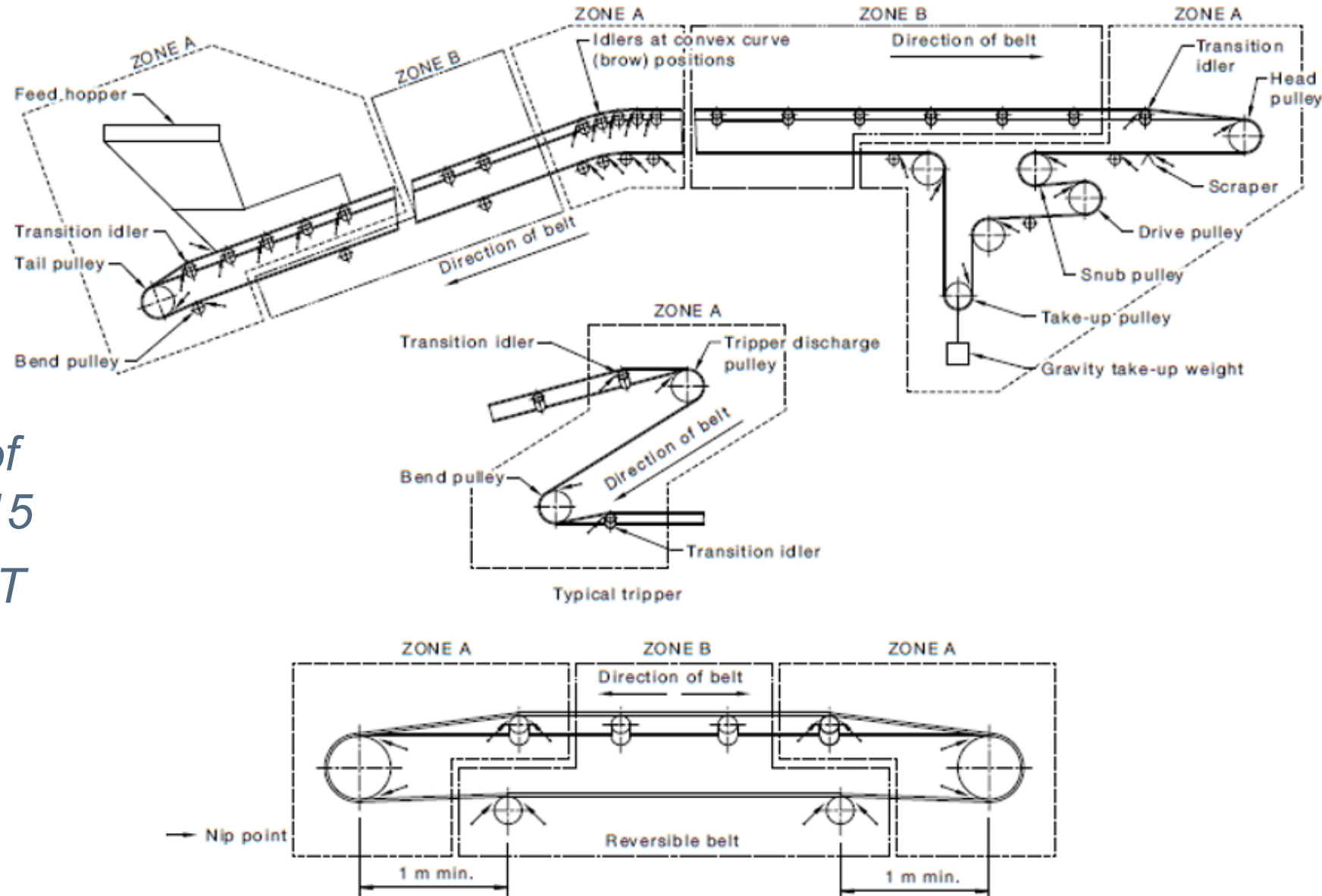
guards on moving parts, rollover protection, falling object protection, noise insulation or seatbelts

Guarding

Reference to page 18 of
AS/NZS 4024.3611:2015

All Zone 'A' areas **MUST**
be guarded.

All Zone 'B' areas to be
risk assessed



NOTE: Requirements for Zone A are given in Clause 2.10.2. Requirements for Zone B are given in Clause 2.10.3.

FIGURE 2.2 BMH BELT CONVEYOR NIP POINT—GUARDING

Guarding

**All guards require a tool for removal - Excerpts taken from AS4024:1601
(cable-ties are not acceptable)**

5.3.9 Removal of fixed guards

Demountable fixed parts of guards shall only be removeable with the use of a tool



3.7 Tool

Implement such as a key or wrench designed to open and close a fastener

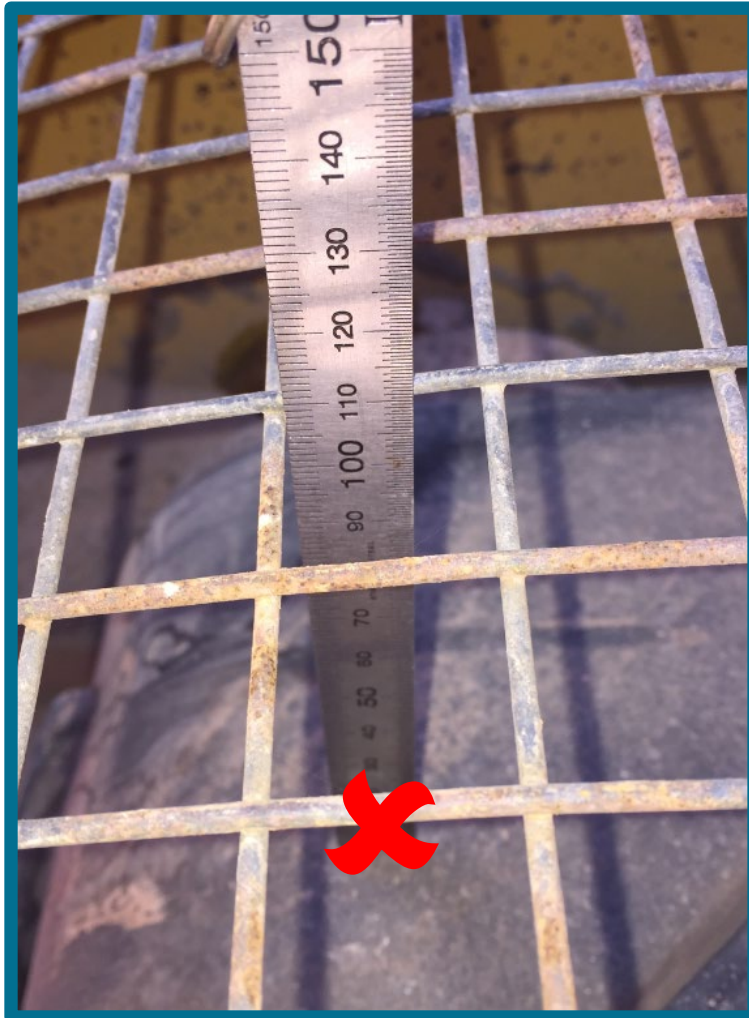
3.8 Use of a tool

Action by a person under known and predetermined circumstances as part of a safe working procedure.

Guarding – Mesh Size AS4024:3610 Conveyors – General requirements

75

AS/NZS 4024.3610:2015



Part of body	Illustration	Opening	Safety distance (sr)		
			Slot	Square	Round
Fingertip		$e \leq 4$	≥ 2	≥ 2	≥ 2
		$4 < e \leq 6$	≥ 10	≥ 5	≥ 5
Finger up to knuckle joint or hand		$6 < e \leq 8$	≥ 20	≥ 15	≥ 5
		$8 < e \leq 10$	≥ 80	≥ 25	≥ 20
		$10 < e \leq 12$	≥ 100	≥ 30	≥ 80
		$12 < e \leq 20$	≥ 120	≥ 120	≥ 120
		$20 < e \leq 30$	$\geq 250^*$	≥ 120	≥ 120
Arm up to junction with shoulder		$30 < e \leq 40^*$	≥ 850	≥ 200	≥ 120
		$40^* < e \leq 120$	≥ 850	≥ 850	≥ 850

* **50 × 50 mm mesh** size may be used where a risk assessment shows that people cannot reach through the mesh to the hazard, see Clause 2.13.4.5.

† If the length of the slot opening is less than or equal to 65 mm, the thumb will act as a stop and the safety distance can be reduced to 200 mm.

Guarding – Reach Safety AS4024:3610 Safety of machinery conveyors

C2 PREVENTION OF UPPER LIMBS REACHING DANGER ZONES

C2.1 Reaching up

If a risk assessment determines there is a risk from the danger zone, then—

- (a) either the height of the danger zone h shall be 2700 mm or more; or
- (b) other safety measures shall be used.

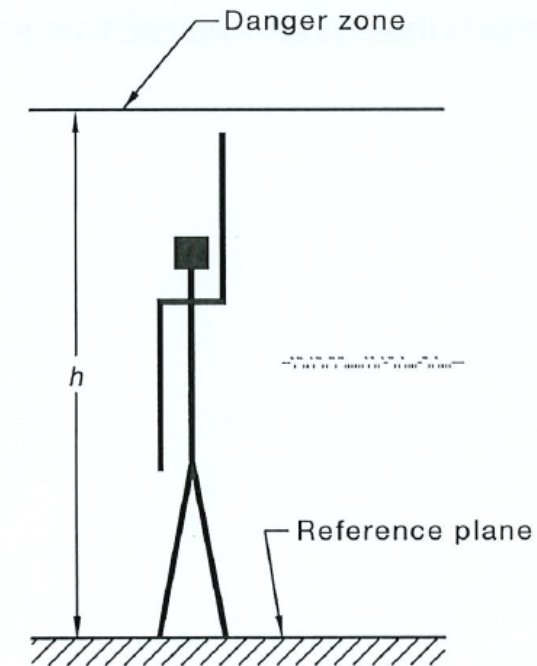


FIGURE C1 REACHING UPWARDS

Guarding – Mesh Strength AS4024:3610

Conveyors – General requirements

As a minimum, the following loads shall be applied and resulting deflections added to the safety distances:

- a) A force of 450N (46Kg) applied at right angles to the surface at any point on the guard applies over square area of 50mm x 50mm (to simulate the force of a person leaning against the guard)
- b) For guards which can be climbed or rested upon, a mass of 900N (92Kg) applied vertically and a simultaneous force of 220N (23Kg) applied to points selected so as to establish the strength of the guard
- c) Any loads from spillage of conveyed material

Guarding

Remember, the guard is the barrier
between YOU and the HAZARD
If you fell, would you be safe?



Mobile Plant

109 Service and maintenance

MQSHR Part 10,
section 109 -

- (1) The operator or site senior executive must ensure plant in use at the mine is serviced and maintained so the plant—
 - (a) is capable of performing its intended functions; and
 - (b) is within the condition and performance limits of its specifications.
- (2) If a breakdown of the plant is likely to cause an unacceptable level of risk, the operator or site senior executive must ensure the servicing and maintenance is based on a preventive strategy.
- (3) If the plant can not be serviced and maintained under subsection (1), the operator or site senior executive must ensure the plant is taken out of service.

Mobile Plant

112 Specifications, instructions and other information about plant

MQSHR Part 10,
section 112 -

- (1) If, having regard to the nature and level of risk from plant used at a mine, it is necessary for managing the risk, the site senior executive must ensure—
 - (a) the mine has written specifications for the plant and instructions for its use; and
 - (b) a copy of the specifications is available to, and readily accessible by, each worker required to use the plant at the mine; and
 - (c) a copy of the instructions is available to, and readily accessible by, each worker required to carry out the activity to which the instructions relate at the mine.

Mobile Plant

MQSHR Part 10,
section 112,
continues to say –

PRE START TESTS	
Prior to performing tests, ensure the machine is parked on level ground If any of the tests fail – report the results to your supervisor IMMEDIATELY	
STEERING TESTING <ol style="list-style-type: none">1. Key In 'ON' Position, but engine not running2. Push test switch (top)3. Check steering (Left & Right)4. Test switch down	SECONDARY BRAKE <ol style="list-style-type: none">1. Apply secondary brake; place in 1st gear2. Bring to 1200 RPM3. Truck should not move, if it moves DO NOT Operate4. Return to Neutral
FOOT BRAKE <ol style="list-style-type: none">1. Apply foot brake; place in 1st gear2. Bring to 1200 RPM3. Truck should not move, if it moves DO NOT Operate4. Return to Neutral	RETARDER <ol style="list-style-type: none">1. Apply Retarder; place in 1st gear2. Bring to 1200 RPM3. Truck should not move, if it moves DO NOT Operate4. Return to Neutral

- (3) The instructions for using the plant must deal with the following matters for the plant, as appropriate, having regard to the nature and level of risk from the plant—
- (a) transport, storage and installation;
 - (b) commissioning;
 - (c) operation;
 - (d) monitoring;
 - (e) servicing and maintenance;
 - (f) dismantling and demolition.
- (4) Also, if, having regard to the nature and level of risk from the plant, it is necessary for managing the risk, the site senior executive must ensure hazard warnings, operating limitations, instructions for use and other critical information are marked on the plant or displayed near the plant.

Mobile Plant – Excerpt from AS 2958.1

**Do you know what
the OEM brake test
is for each of your
machines?**

4 DEFINITIONS For the purpose of this Standard, the definitions below apply.

4.1 Brake system

4.1.1 *Service brake system*—a system used to stop and momentarily hold a machine.

4.1.2 *Secondary brake system*—a system used to stop a machine in the event of any single failure in the service brake system.

4.1.3 *Parking brake system*—a system used to hold a stopped machine stationary for prolonged periods.

5.2.4 *Holding ability* The service brake system shall be capable of holding the machine on a 25% grade.

B2.3 Parking brakes Parking brakes shall be capable of holding the vehicle stationary in a fully loaded condition on the steepest grade that it will encounter in both the forward and the reverse directions, subject to a maximum incline of 15%.

NOTES:

- 1 This test should not submit the operator to any danger.
- 2 The test can be a live test or a stall test that will apply an equivalent braking force. A live test is more reliable, provided that a standard test grade is available.

Mobile Plant – why do we need good brakes?



Figure 1 Runaway grader incident scene

Mobile Plant



Queensland
Government

Department of Natural Resources, Mines and Energy



Fatal crush injury on exploration site

Mines safety alert no. 212 | 28 November 2008 | Version 1

Mine Type

All mine types

Incident

A water truck operator sustained fatal injuries when he was crushed between the rear of his water truck and a pastoral property gate. The operator had opened the gate, driven through it and had just closed it when the truck rolled back trapping him. Preliminary investigation, testing and mechanical inspection of the truck has shown that the brakes were ineffective.

Equipment

Heavy rigid truck (1985 Mack Econodyne) and steel farm gate.

Hazard

Caught between a moving (truck) and stationery object (gate).

Cause

Ineffective park/emergency brake system.

Mobile Plant - Brakes



Mobile Plant - Brakes

Questions about mobile plant on site – Ask these questions at your site...

What is the **Plant Maintainer's** knowledge?

- How do you know that there is nitrogen pressure in the accumulators?
- Do you know how to test the accumulator pressure?
- How do you know that brake reservoirs are not losing brake fluid?
- What are the indications of a fault?



Mobile Plant - Brakes

Questions about mobile plant on site – Ask these questions at your site...

What is the **Operator's** knowledge?

- Do you know if there are brake fluid reservoirs?
- How do you know that brake reservoirs is not losing brake fluid?
- How do you know if operators know that brake warning lights are working?
- How do you know if operators understand the action they must take if a warning light and buzzer comes on?



Isolation

MQSHR Part 10,
section 103 -

Isolation facility

- (1) If, having regard to the nature and level of risk from plant used at a mine, it is necessary for managing the risk, the site senior executive must ensure the plant has a facility for—
 - (a) preventing its operation; or
 - (b) preventing or controlling the release of its stored energy; or
 - (c) isolating its energy supply.
- (2) The site senior executive must ensure the facility is capable of being locked-out and tagged or otherwise secured.

Isolation

MQSHR Part 10,
section 107 –

Isolating, locking-out and tagging plant

- (1) A mine's safety and health management system must provide for the following matters—
 - (a) isolating plant, including effectively isolating plant to control the risk from a release of energy;
 - (b) taking plant out of service;
 - (c) testing plant or its energy source for zero potential;
 - (d) returning plant to service.
- (2) The site senior executive for a mine that is not required to have a safety and health management system under the Act must ensure the mine has a standard work instruction for the activities mentioned in subsection (1)(a) to (d).
- (3) If the safety or health of a person is directly affected by the operation or non-operation of plant, the system or standard work instruction must also provide for locking-out and tagging the plant.

Isolation

ALL forms of energy MUST be considered, including –

- electrical (mains, solar and/or generator/battery)
- mechanical
- gases, liquids, solid fuels/stored fuels
- thermal
- fluids under pressure (ie water, air or hydraulic oil)
- potential energy – stored energy due to the equipment position or height
- radiation
- hazardous substances (chemical, corrosives, poisons, flammable, explosive)



Isolation

There needs to be consideration given to the isolation of 'upstream' and 'downstream' energy sources.

Isolation points may not always be effective or located immediately near the equipment on which the work is to occur.

All persons are required to 'test for dead' to verify the effectiveness of the isolation and/or that any residual energy is released prior to the commencement of work.

Isolation

HPI – serious injury

Maintenance worker removed a positioning ram without securing the conveyor



Isolation

Using the excavator the conveyor was lowered. The gap reduced from ~450mm to ~60mm

The worker had been trapped between the cross beam and rear of the conveyor.

Before removing any item of plant, first think – “What does this item do?”

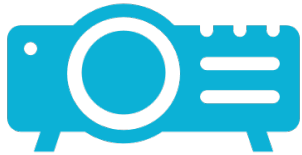


How to improve safety standards?

Please consider:

- Have you assessed that your plants hazardous areas are guarded? Are the guards effective? Consider an audit against AS4024.
- Do you have manuals for your equipment? Do you have brake test procedures for all your plant? Do your operators know how to carry out the testing correctly?
- Do you have an isolation procedure? Have you determined all the energy sources? Can all plant be isolated/locked/tagged out?

Conclusion



This was a rerun of a 2019 presentation



It is an opportunity:

- To reflect on safety progress
- To consider methods of improving safety performance on your site
- To come back to basics if needed and focus on key safety controls



Thank you

SLRCONSULTING.COM

Critical Controls

MMQ Quarry Forum

Mackay

October 2025





About Me

Clayton Hill

Technical Discipline Manager - Construction Materials & Services

- 23+ years in quarry industry
- Qld Site Senior Executive Notice >20 workers & Practising Certificate Holder
- Bachelor of Environmental Technology
- Master Public Health
- Certificate IV in Government (Statutory Investigation and Enforcement)
- Past President Institute of Quarrying Australia





What are we talking about?

- Changes to legislation
- What is Critical Control Management
- Identifying and Implementing Critical Controls
- Monitoring and Verifying Critical Controls
- Explaining Critical Controls to workers



Changes to Legislation

- Resources Safety and Health Legislation Amendment Act 2024
- Part 4 deals with the amendments to the Mining and Quarrying Safety and Health Act 1999
 - Introduction of Critical Controls
 - New notification requirements
 - Changes to management structure
 - Advising contractors of particular matters
- New provisions will commence on 1 June 2025 with the industry having until 1 June 2026 to be compliant



Queensland

Resources Safety and Health Legislation Amendment Act 2024

Act No. 34 of 2024

An Act to amend the Coal Mining Safety and Health Act 1999, the Explosives Act 1999, the Mining and Quarrying Safety and Health Act 1999, the Petroleum and Gas (Production and Safety) Act 2004 and the Resources Safety and Health Queensland Act 2020 for particular purposes

[Assented to 18 June 2024]



153 Amendment of **s 27** (Risk management)

- (1) **Section 27**(3)—
insert—
 - (ca) provide for critical controls; and
- (2) **Section 27**(3)(ca) to (f)—
renumber as section 27(3)(d) to (g).

162 Amendment of **s 44A** (Obligation of officers of corporations)

- (1) **Section 44A**(3)(b) and (d), ‘and risks’—
omit, insert—
 - , risks and critical controls
- (2) **Section 44A**(3)(f), example, ‘**section 38**(1)(e)’—
omit, insert—
 - section 38(1)(f)



171 Amendment of [s 55](#) (Safety and health management system)

- (1) [Section 55](#)(3), after ‘mine’—
insert—

including any remote operating centre, or the remote operation of plant or equipment, for the mine

- (2) [Section 55](#)(5)—
insert—

(da) identifying critical controls; and

- (3) [Section 55](#)(5)(da) to (g)—
renumber as [section 55](#)(5)(e) to (h).

- (4) [Section 55](#)—
insert—

(6) The site senior executive must make available for inspection, by workers employed at the mine, and ROC workers employed for the mine, a copy of the safety and health management system.

Maximum penalty—100 penalty units.



231 Amendment of [sch 2](#) (Dictionary)

(1) [Schedule 2](#), definitions *hard rock*, *holder*, *obstruct*, *service provider*, *treatment* and *worker*—
omit.

(2) [Schedule 2](#)—
insert—

authorised official, for part 9, division 5, see section 158.

board of inquiry means a board of inquiry established under section 199.

board qualification means—

- (a) a certificate of competency; or
- (b) a site senior executive notice; or
- (c) a practising certificate.

contractor includes—

- (a) a person contracted to carry out work at a mine; and
- (b) a person contracted to provide a service to a mine; and
- (c) a person contracted to provide workers to a mine, including, for example, a labour hire agency.

critical ▶ ◀ **control** means a risk ◀ **control** ▶ measure for a mine—

- (a) that is ▶ **critical** ▶ to—
 - (i) prevent a material unwanted event at the mine; or
 - (ii) mitigate the consequences of a material unwanted event at the mine; and
- (b) the absence or failure of which would significantly increase risk despite the existence of other risk ▶ **control** measures.



What is Critical Control Management?

Critical Control Management (CCM) is a structured method for concentrating on the most essential controls to manage risks effectively. These controls are vital for stopping or reducing the severity of potentially deadly or significant incidents.

The MQSH Act defines a Critical Control as:

critical control means a risk control measure for a mine—

(a) that is critical to—

(i) prevent a material unwanted event at the mine; or

(ii) mitigate the consequences of a material unwanted event at the mine; and

(b) the absence or failure of which would significantly increase risk despite the existence of other risk control measures.



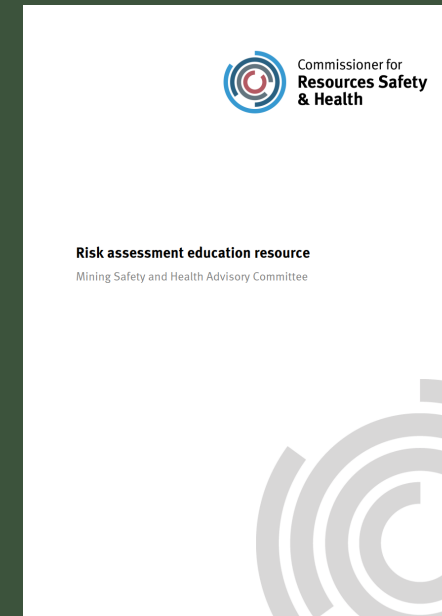
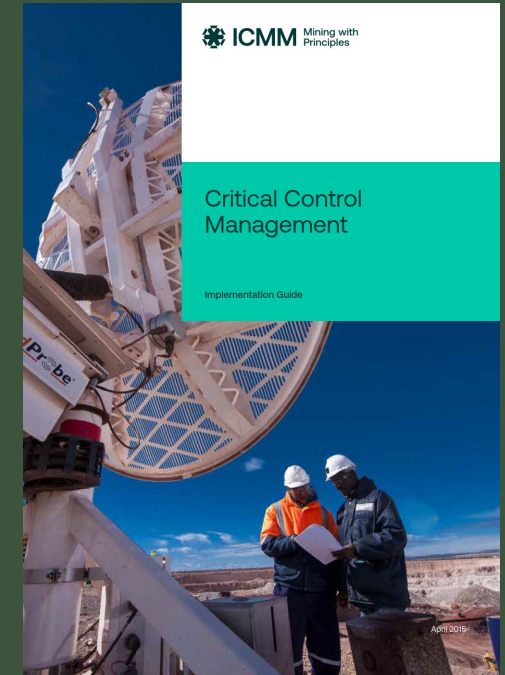
Critical Control Management

- My simplified version:
 - Focusing on implementing and maintaining controls, that if they failed, would likely cause a serious accident or fatality



Guidance Material

- International Council on Mining and Metals (ICMM) has developed some guidance material
- Good reference for specific ways to implement CCM at your site
 - identifying the critical controls
 - assessing their adequacy
 - assigning accountability for their implementation
 - verifying their effectiveness in practice

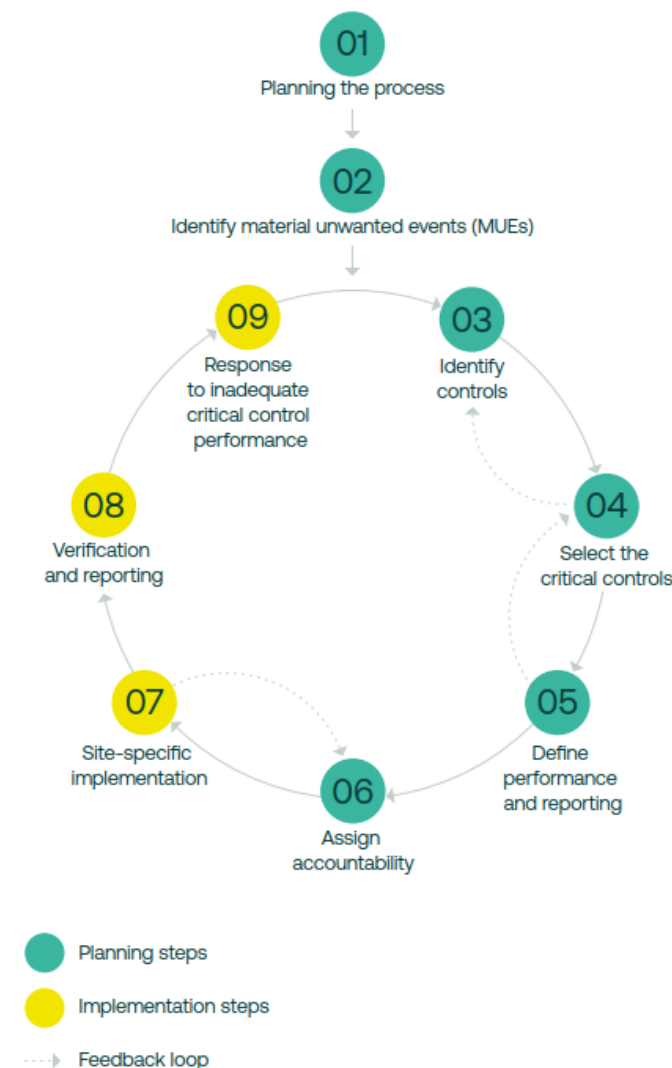




The CCM Process

- The ICMC Critical Control Management Process can be described in 9 steps
- Questions & comments I regularly get are:
 - How does this apply on my site?
 - Where do start?
 - Do I need to create a new process to manage this?
 - This looks complicated, will I need to employ someone to assist?

Figure 1. The Critical Control Management Process





How to identify and define your site's Material Unwanted Events (MUE)

- A Material Unwanted Events (MUE) is an event where the potential or actual outcome exceeds a predefined level or threshold set by the company, indicating a significant impact on health, safety, environment, finances or social standing.
- Your organization/Mine Operator needs to determine the MUE Thresholds.
- Sites have different opinions, however most identify MUE's across categories of
 - Safety
 - Health
 - Environment
 - Financial
 - Social

	Threshold Criteria
Safety	<ul style="list-style-type: none">• <i>Fatality; or</i>• <i>serious injury resulting in permanent disability</i>
Health	<ul style="list-style-type: none">• <i>Fatality; or</i>• <i>significant life shortening effects; or</i>• <i>life-impacting health effects</i>
Enviro.	<ul style="list-style-type: none">• <i>Irreversible harm to natural environment; or</i>• <i>destruction of important habitat</i>
Financial	<ul style="list-style-type: none">• <i>Recovery costs greater than \$500 000 (including profit loss, downtime costs, fines, fees etc)</i>
Social	<ul style="list-style-type: none">• <i>Widespread (national or international) community unrest; or</i>• <i>formal prosecution action</i>



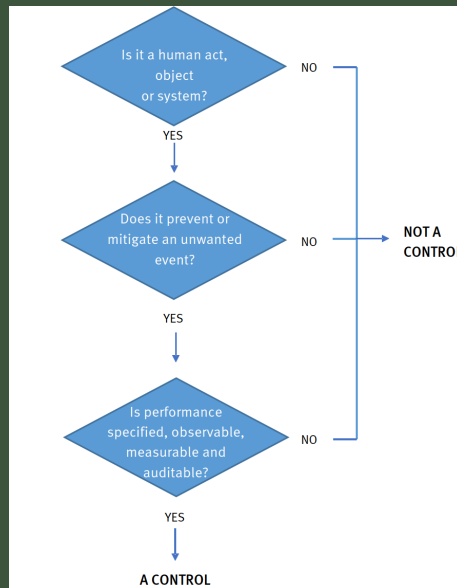
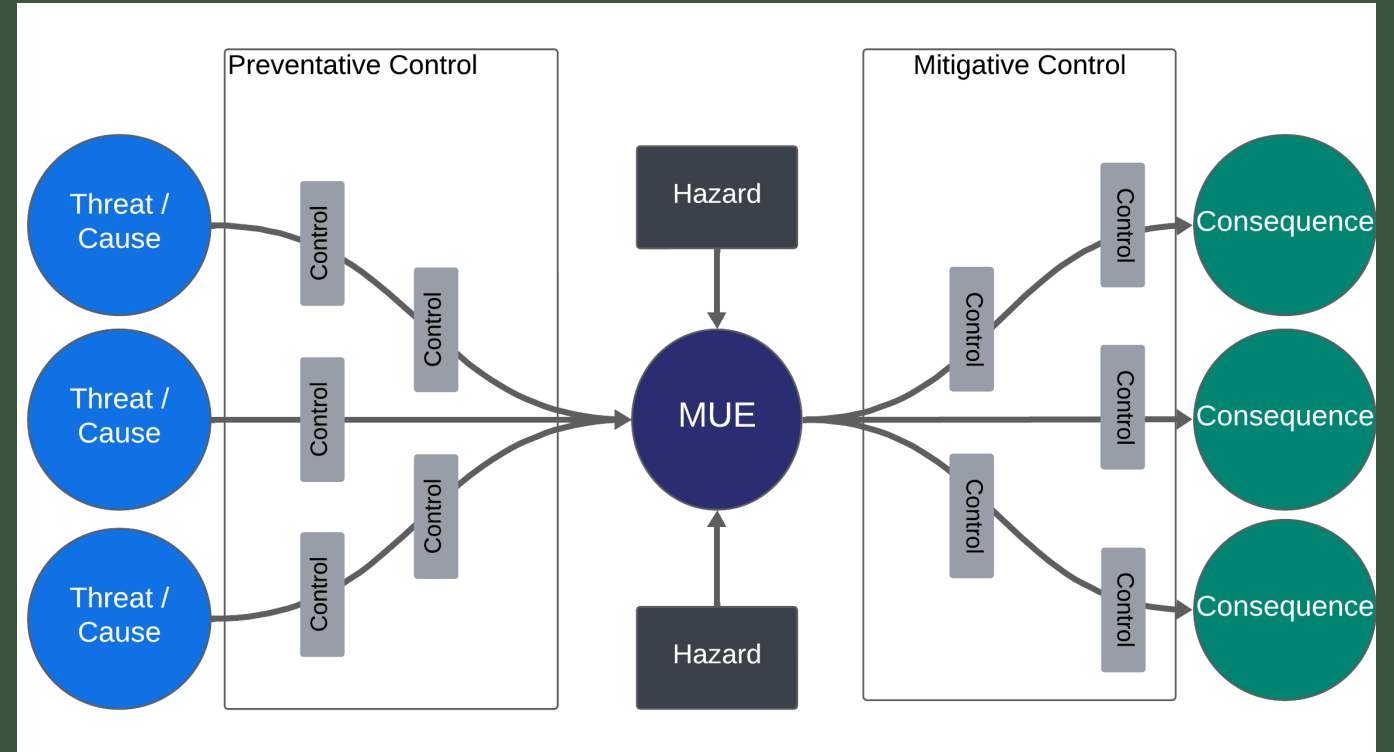
MUE Example

- Failure of Quarry Bench, Face or Highwall (Slumping of Pit Walls for Brendale)
- Electrocution/Electric Shock
- Vehicle Roll Over
- Vehicle to Vehicle Collision
- Vehicle to Pedestrian Collision
- Accident due to Mechanical Failure
- Entanglement in moving or rotating parts
- Struck by falling object/material
- Overexposure to chemical or biological contaminants
- Person trapped in Confined Space
- Fall from heights
- Ignition of potential sources of flammable, combustible and explosive substances and materials
- Unauthorised access
- Overexposure of respirable dust and crystalline silica
- Uncontrolled entry to a water body



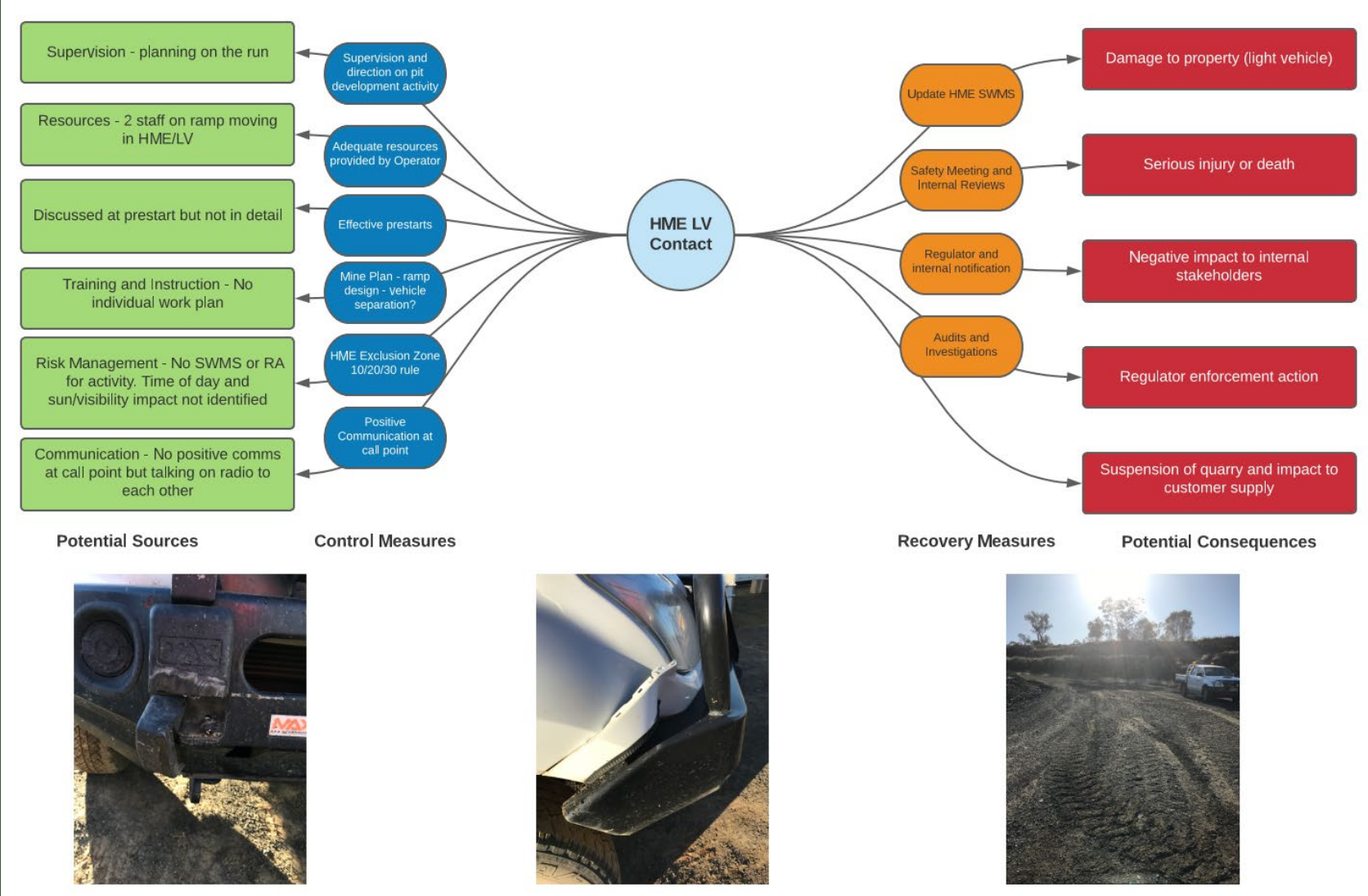
Identify the controls and define what is a Critical Control

- **A Bowtie Analysis** can be used to assist with identifying appropriate controls for a MUE
- **Risk Assessments** associated with Principal Hazards can also be used to identify MUE's





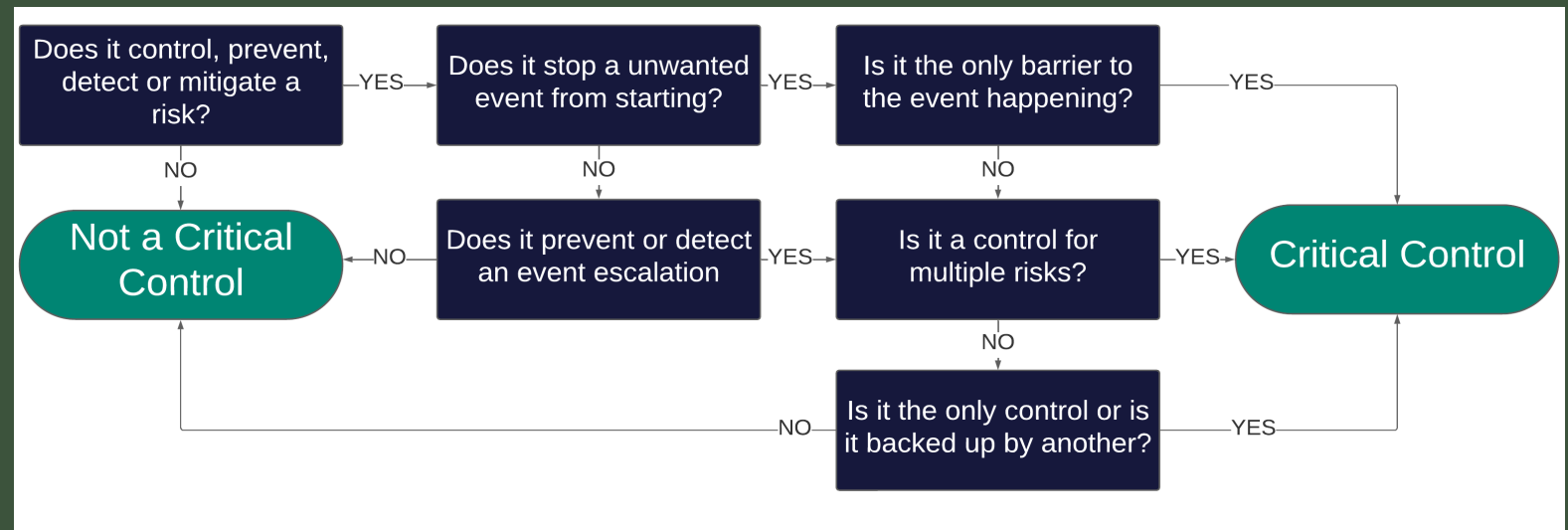
Example of a bowtie





Identifying Critical Controls

- Using Bowtie Analysis or other method, work through the controls for each MUE.
- Use the flowchart in the ICMC guide to determine if the control is a **Critical Control**





Implementing Critical Controls

- Once Critical Controls have been identified objectives of the control, responsible persons and verification methods should be workshopped and recorded.
- These should be practical and achievable with success measured easily
- They should also be realistic within the operating environment

MUEs & IDENTIFIED CRITICAL CONTROLS	
MUE	Critical Controls
Failure of Quarry bench, Face or Highwall	     
Electrocution/Electric Shock	     
Vehicle Roll Over	     
Vehicle to Vehicle Collision	     
Vehicle to Pedestrian Collision	     
Accident due to mechanical failure	     
Entanglement in moving or rotating parts	     
Struck by falling objects / material	     
Overexposure to chemical or biological contaminants	     
Person trapped in Confined Space	     
Fall from heights	     
Ignition of potential sources of flammable, combustible and explosive substances and materials	     
Unauthorised access	     
Overexposure of respirable dust and crystalline silica	     
Uncontrolled entry to a water body	     



Implementing Critical Controls



- Implement using current methods or information already being gathered –e.g.
 - Incorporate new inspections into current inspections worksheets
 - Review and update current site plans as required and ensure they are communicated and implemented
 - Update current inductions and training packages



- Don't overcomplicate it or introduce multiple new forms and registers
- Don't make it generic. It needs to be site specific
- A Management Plan document is not a critical control, the information within a management plan may be critical controls but need to be implemented in accordance with the plan



Verifying and Recording the Effectiveness of your Critical Controls

- Verification of the Critical Controls and their effectiveness at mitigating the MUEs needs to be undertaken and recorded.
- This should include a review of the performance of the control and if there was a failure, what is the response.
- Verification may include:
 - Checklists
 - Interviews with workers
 - Maintenance completion details
 - Safety observations
 - In-field observations



Risk Register and Verification Examples

Item	Hazard Type	Description of Risk	Location of Risk	Risk Assessment before controls			Hierarchy of Controls	Hierarchy of Controls - Description	Critical control? Y/N	Risk Assessment after controls			Responsible Person(s)	Action / Due Date	Critical Controls																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
				Likelihood	Consequence	Risk rating				Likelihood	Consequence	Risk rating			Name of Critical Control	Location	Is the Critical Control implemented?	Is the Critical Control monitored? What is the method of monitoring?	Frequency of Monitoring	Is the Control Designed Well?	Is it Implemented Well?	Any Options for Improvements?	Comments	Crucial to Prevent the Event or Minimise Consequences?	Only Control is it backed up?	Does it Address multiple causes or mitigate multiple consequences?	Method of Verification	Responsible Person(s)	Date of Last Check																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Critical Control Verification of Monitoring

Verification Date	Critical Control (CC) Name	Is the Control still critical and still having an Impact on the MUE as intended?	Monitoring / Verification Method	Monitoring done at prescribed frequency	Overall Performance Score	What was response where Control was ineffective, unsatisfactory or works required shutdown?	Verified by Who?	Comments

Critical Control Management

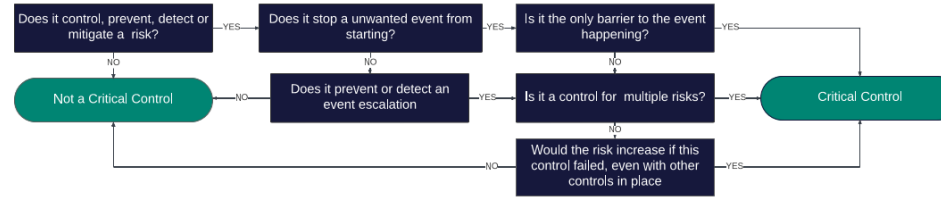
Critical control management (CCM) is a structured method for concentrating on the most essential controls to manage risks effectively. These controls are vital for stopping or reducing the severity of potentially deadly or significant incidents.

Cryna Road Quarry



WHAT IS A CRITICAL CONTROL?

A control that is crucial to preventing the event or mitigating the consequences of the event. The absence or failure of a critical control would significantly increase the risk despite the existence of the other controls. In addition, a control that prevents more than one unwanted event or mitigates more than one consequence is normally classified as critical.



WHAT IS A MATERIAL UNWANTED EVENT ?

A Material Unwanted Events (MUE) is an event where the potential or actual outcome exceeds a predefined level or threshold set by the company, indicating a significant impact on health, safety, environment, finances or social standing.

CRITICAL CONTROL PROCESS

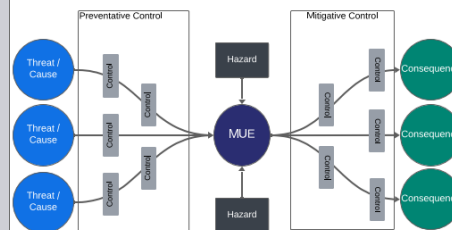


NEILSENS GROUP MUE THRESHOLDS

Threshold Criteria	
Safety	• Fatality; or • serious injury resulting in permanent disability
	• Fatality; or • significant life shortening effects; or • life-impacting health effects
	• Irreversible harm to natural environment; or • destruction of important habitat
Financial	• Recovery costs greater than \$500 000 (including profit loss, downtime costs, fines, fees etc)
	• Widespread (national or international) community unrest; or • formal prosecution action
Social	

BOW TIE ANALYSIS FOR IDENTIFYING CONTROLS

The Bowtie Assessment method identifies the potential threats and consequences associated with a MUE. Existing controls, such as safety procedures and training programs, are then evaluated alongside potential new controls, like upgraded equipment or additional safety protocols. Critical Controls should be highlighted in the Bowtie for emphasis.



MUEs & IDENTIFIED CRITICAL CONTROLS

MUE	Critical Controls
Failure of Quarry bench, Face or Highwall	
Electrocution/Electric Shock	
Vehicle Roll Over	
Vehicle to Vehicle Collision	
Vehicle to Pedestrian Collision	
Accident due to mechanical failure	
Entanglement in moving or rotating parts	
Struck by falling objects / material	
Overexposure to chemical or biological contaminants	
Person trapped in Confined Space	
Fall from heights	
Ignition of potential sources of flammable, combustible and explosive substances and materials	
Unauthorised access	
Overexposure of respirable dust and crystalline silica	
Uncontrolled entry to a water body	

CRITICAL CONTROLS IDENTIFIED

	1. Positive Communication including the use of Call/Hold Points
	2. Training, Inductions and verification of competence
	3. Isolation
	4. Guarding
	5. Exclusion Zones
	6. Supervision
	7. Personal Protective Equipment
	8. Dust Suppression



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Summary

- Read the legislation and understand what is required with respect to CCM
- Refer to the guidance material available
- Determine and agree MUE Thresholds with the Operator/Organisation
- Determine critical controls (refer to the definitions of controls and critical controls)
- Use existing systems and processes where possible to verify implementation and effectiveness
- Ensure that workers understand what is required and what their role and responsibility is with respect to CCM



Do you
have any
questions?



Making Sustainability Happen

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OCTOBER 2025

MMQ Blasting Contractor Management

Bradley Alvey, Senior Inspector Explosives Inspectorate



Resources
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Explosives Inspectorate – Who are we ?

Our purpose is to protect and promote the safety and health of persons from risks associated with explosives

Authorise explosives for use in Queensland

Licence all explosives use within Queensland including storage, transport and use

Regulate the industry for compliance

Perform community recoveries of explosives



Explosives Regulatory Framework within Mineral Mines & Quarries

- MQSHA 1999 s39 Obligations of site senior executive for mine
- MQSHA 1999 s40 Obligations of contractors
- MQSHA 1999 s50 Management structure for safe operations at mines
- MQSHA 1999 s55 Safety and health management system
- Explosives Act 1999
- Explosives Regulations 2017
- Australian Standard 2187 for Explosives - Storage and Use
- Australasian Explosives Industry Safety Group (AEISG)
 - Codes of Practice
- Australian Code for the Transport of Dangerous Goods by Road & Rail Edition 7.8 2022

Compliance within the site's SHMS

Questions to ask yourself as the site Authority when employing the services of a Blasting Contractor:

- Is the blasting contractor's SHMS integrated into the sites SHMS? Are the blasting contractors working under the sites systems and are the systems site specific?
- Is there a system in place to ensure that procedures and SWI's used on site by contractors have been reviewed and approved by the Manager/SSE and adopted as part of the Site Safety & Health Management System (SHMS)?
- Have blast management plans and risk management processes that are supplied by contractors been checked to ensure they are equivalent to, or better than the site's SHMS and in accordance with AS2187.1 & AS 2187.2 Explosives Storage and Use?

Compliance within the site's SHMS cont.

- Does the site SHMS incorporate procedures that manage explosives accountability including loss or theft? What is the sites response for an incident involving this?
- Does the site ensure that contractors comply with the site Safety and Health Management System in relation to the work undertaken by the contractor? What checks, inspections or audits of the contractor management process are conducted by site personnel? Is there documented evidence that routine checks are undertaken by line managers/supervisors to ensure that the blast crews (Contractors) are carrying out their work activities in accordance with established procedures? Are contractors adequately supervised while on site? Who is responsible for this?
- Does the site conduct formal internal audits of its systems relating to explosives storage and use? Are records kept of the system? Frequency? Are they up to date? Security Plan must be reviewed and updated annually or if anything that is listed in the Explosives Regulation 2017 Section 46D (b) happens.

Compliance within the site's SHMS cont.

46D Requirement to review security plan

The holder of the prescribed authority must review the security plan—

- (a) annually; and
- (b) if any of the following happens—
 - (i) a change in the national counter terrorism alert level or level of risk;
 - (ii) there is a loss of explosives;
 - (iii) there is unauthorised entry, or attempted unauthorised entry, to the place where the explosives are stored;
 - (iv) an explosives stock discrepancy cannot be reconciled with records kept by the holder;
 - (v) an explosive has been stolen;
 - (vi) an explosive has been fraudulently obtained;
 - (vii) an explosive or an explosive facility has been intentionally damaged;
 - (viii) information kept by the holder in relation to explosives has been lost or stolen;
 - (ix) an explosive has been accessed by a person who should not have access to the explosive;
 - (x) an explosive has been sold and has not been delivered by the expected delivery day.

Maximum penalty—100 penalty units.

Compliance within the site's SHMS cont.

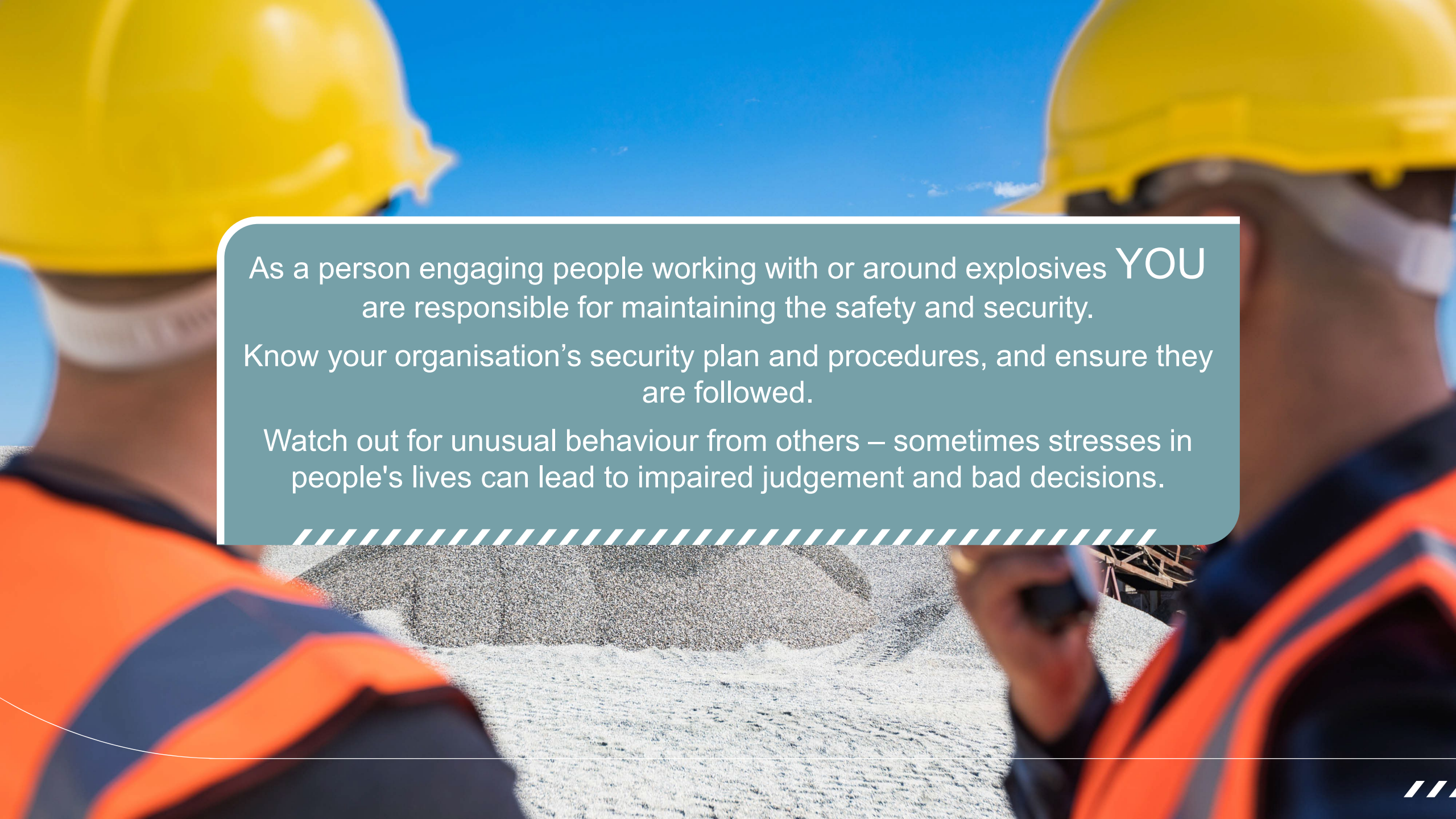
- Is there a process in place for the Mine/Quarry Manager to ensure that the drill and blast process is appropriately managed including blast preparation, drilling, blasting and post blast inspection? How is this conducted? (Blasting checklist etc).
- Are persons authorised to use and handle explosives at the site? Have they been appointed by the SSE/Manager? (Shotfirers/Magazine keepers) Is this documented? Is there a site-specific process for this? Does this process ensure that explosives use competencies have been verified, including Qld Explosives Security Card and Shotfirers licence? Are they current and is this documented and monitored within the site's records including expiry dates?
- Have contractors and their staff been inducted to the level that all workers on the site are inducted (Site specific induction for the tasks being completed) Is this induction periodically assessed? How is this monitored and maintained?

Compliance within the site's SHMS cont.

- Is there a process in place for inspecting plant used by contractors to ensure it is fit for purpose, meets the site requirements & those of the Aus Standards, the Aus Explosives Code for Transport & the MPU Code of Practice?
- Is the contractor in control of the site magazine? If so what checks are conducted by the site management to ensure the contractor is maintaining appropriate control of the explosives security and accountability? (Internal audits/inspections, QESC currency checks.)
- How is a sleeping shot or recovered misfired product handled? Lightning response plan, safety of the personnel, security of the explosives, location in respect to other works including infrastructures such as rail & road, & the safe disposal should all be assessed. Is the site manned 24/7?
- If the Explosives are being supplied under a service provider agreement, is the explosives always in the custody of the blasting contractor until the shot is fired & the explosives are consumed?

Compliance within the site's SHMS cont.

- Are explosives incidents being reported, documented, investigated and necessary measures implemented to minimise a reoccurrence? RSHQ EOS reporting system and calling the 1300 739 868 On Call Explosives Inspector. All misfires are reportable.
- Is there a process in place to ensure all contractors and their staff are fit for the work they are conducting, including issues such as fatigue, alcohol and drugs? (both illegal and prescribed). Maximum hours worked in a day does it include travel to and from site for a blasting contractor?
- Is there a process at the site for blast monitoring and impact on community? (Including community notification) Is there a process on the site for setting the blast exclusion zone distances? Is this a joint process with the Mine/Quarry Manager and shotfirer? Are records kept for a minimum of 5 years? Is there a process in place at the site for dealing with complaints? Are complaints investigated?



As a person engaging people working with or around explosives **YOU**
are responsible for maintaining the safety and security.

Know your organisation's security plan and procedures, and ensure they
are followed.

Watch out for unusual behaviour from others – sometimes stresses in
people's lives can lead to impaired judgement and bad decisions.





Thank you



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Queensland

**If you have any questions or comments
contact the Explosives Inspectorate on:**

explosives@rshq.qld.gov.au

1300 739 868

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www.rshq.qld.gov.au

2025 QUARRY FORUM – MACKAY QLD

MANAGING WORKFORCE AND

COMPANY MENTAL HEALTH



TODAY'S **PRESENTERS**



JOE ZARB

Owner and Managing Director of Quarrico Products, Coolibah Concrete. Joe has 20 plus years in the quarrying industry, and a further 35 years in the civil construction, underground mining/engineering, and farming industries



JAYDEN MCLAUGHLIN

Currently the SSE of Quarrico's Winchester Quarry with nearly 7 years of quarry operation experience with the last 4 years in various forms of site supervision and management capacity

PRESENTATION SCOPE

Quarrico Products Pty Ltd's response to managing the mental health of employees and the business in response to a catastrophic event occurring Father's Day Sunday 27 August 2023.

1

The intent is not to go into detail of the investigation processes but rather how Quarrico managed, fostered, monitored, supported and assisted the mental health and well being of employees and the business during and post the catastrophic event.

2

Quarrico, like many other businesses in our industry, has experienced more than its fair share of highs and lows. But this single event brought back into perspective two simple metrics – LIFE and PEOPLE.

3

WHO IS QUARRICO?

Quarrico Products Pty Ltd are a family owned and operated quarry products, ready mix concrete, haulage and heavy haulage company operating from Moranbah for twenty years.



Own and operate Coolibah Quarry, Winchester Quarry, Grosvenor Quarry and Doctors Claim Quarry

Own and operate fixed batch plant at Coolibah and mobile batch at various sites along with a fleet of agitators

Own and operate combination of truck and dogs, double road trains, AB triple trains, heavy haulage floats in order to service the freight task

Operates 7 days per week 363 days of the year making and supplying on average 1.5mt of quarry product and 16500m³ readymix concrete per annum

Employ directly 70 employees and a further 45 subcontract employees and subcontractors across the portfolios of operators, drivers, batchers, fitters, boiler makers, mechanics, labourers and support services

View Video -

<https://vimeo.com/1036862128?fl=pl&fe=sh>

View Video - [https://](https://vimeo.com/1124669655?share=copy)

vimeo.com/1124669655?share=copy

Caution Please – some of the content of this presentation maybe disturbing to the audience due to the graphic nature of the event we are about to discuss

THE CATASTROPHIC EVENT



**JAMES ROLPH – QUARRICO TRUCK AND DOG
DRIVER**

James had been driving truck and dogs for Quarrico for 8 months

James's son Josh was also working for Quarrico as an operator at Coolibah Quarry

James could best be described as one of the most likeable blokes, genuine, knock about and down to earth. He was often referred to as a type of father figure to those younger team members around him, both in the workplace and the camp environment.

James was not rostered to work on Sunday 27 August 2023 (father's day)

James's son Josh was at work Sunday 27 August 2023 (father's day)

THE CATASTROPHIC EVENT



**JAMES ROLPH – QUARRICO TRUCK AND DOG
DRIVER**

Actual conversation late Saturday afternoon 26 August 2023 between the haulage supervisor and James Rolph;

“Hey mate, know it’s your day off tomorrow but can you run a load out to Anglo Moranbah North for me? No worries mate”

At 9.40am on Sunday 27 August 2023 our General Manager and his wife were at the Grass Tree Beach Races near Mackay when his wife showed him a Facebook post alert about an accident which had just occurred outside MacDonalds in Moranbah. Our GM then contacted our then Haulage Supervisor to “go for a drive and find out what’s going on” and then contacted our Maintenance Manager to do the same. There was no indication at this point that the incident had any association with any of our trucks or drivers

THE IMMEDIATE RESPONSE



**JAMES ROLPH – QUARRICO TRUCK AND DOG
DRIVER**

- The Haulage Supervisor, Maintenance Supervisor, and the then SSE Coolibah quarry had attended the site of the accident and had observed James in the truck where the truck had come to rest. It was apparent (confirmed through the investigation) that James was deceased at that point. They were not prepared for this. Their wellbeing became paramount.
- James's son Josh was working at our Coolibah Quarry on this day and was insistent on attending site. Josh's wellbeing became paramount.
- There came a need to immediately inform the Quarrico team of the facts (as we knew at that point) regarding the accident to as to manage misinformation.
- We knew the team were hurting and immediate consultation and the opportunity just to "take a breath and talk" had to take place
- Business in its majority was put on hold and communication with the clients took place
- All quarrying and haulage operations ceased for Monday 28 August 2023 and all staff met at Coolibah quarry

RESPONSE STAFF WELLNESS



**JAMES ROLPH – QUARRICO TRUCK AND DOG
DRIVER**

- Monday 28 August 2023 (the day following James's accident) all staff met onsite at Coolibah and Grosvenor "for a conversation". This was difficult and was facilitated by the Quarrico GM and Joe. The team had an opportunity to speak in an environment where we were all equally a part of the same situation.
- At this point in time, Quarrico did not have a formal Employee Assistance Provider (EAP) however, in the past individuals that were identified as requiring assistance were referred to Gryphon Phycology in Moranbah. However, our Safety Manager organised that in this instance that Gryphon would provide any support needed to any person or family member who had been impacted by this event or who simply wanted to speak with someone external about this event.
- Further, the Moranbah Base Hospital offered their services to Quarrico for a month period that should anyone require support of any kind, our team could access these services
- We immediately engaged with the Rolf family and offered whatever support they required. This support came in many forms, but from a business perspective, nothing we could do seemed enough, however upon attendance at James's funeral which will be discussed later, this support was as much for the Quarrico family as it was the Rolf family
- One of our clients who knew James both personally and also through his work with Quarrico commenced a fund raiser on GoFundme. This action alone was not just about the money, but more so those who felt helpless in a way to support James family, now had a vehicle to do this.

STAFF WELLNESS



The Quarrico team off their own bat established memorials both at the site of the accident and at the Quarrico haulage depot, as well as on the side of one of the truck and dogs;



THE EMOTIONS



**JAMES ROLPH – QUARRICO TRUCK AND DOG
DRIVER**

- Extreme sadness/Grief – James is not here any more
- Disbelief – has this really happened?
- Confusion – how did this happen, how could this have happened?
- Guilt – was there something we did that caused this? Could have we done something to prevent this from happening?
- Helplessness – How do we help Josh and the rest of his family? What do we / can we do?
- Concern – “old mate over there is doing it tough. He / she was close to James. How do we help them?”
- Stress – during the investigation phase, has there been a step we missed, a process not followed, a maintenance matter with the truck that we missed that contributed to the accident?
- Anxiousness – will the staff be OK and will we return to “business as usual”?
- Apprehension – how will the Rolf family and friends perceive/receive Quarrico? Will they see us as the cause of James no longer being with us?
- Trepidation – will the investigating authorities, our clients and the broader public see James (and Quarrico also) as a “villains” without knowing the facts

All the above was very real and only examples of what we were dealing with personally (all staff) and as a business. Some of the above appears “selfish” but these are REAL emotions experienced as a business that relies on people.

ADDRESSING EMOTIONS



JAMES ROLPH – QUARRICO TRUCK AND DOG DRIVER

- **Sadness, Concern, Disbelief, Confusion, Helplessness and Guilt;**
 - We gave the staff time to talk.
 - Time to grieve
 - Did not shut down any conversation unless it related to factual circumstances surrounding the accident
 - We communicated very regularly as matters progressed and openly. This became someone difficult as it was some time before we even knew the actual causation metric of the accident.
 - Allowed the staff to express themselves – eg what they had done with the memorials etc
 - Made Gryphon Psychology and Moranbah Base Hospital mental health and EAP services available and ensured confidentiality
 - As cliché as it sounds, but just ensuring that everyone knew we were all in the same boat with this
 - Ensured that the focus remained on helping Josh and his family at a staff level
 - Whilst the day after the accident following the all staff briefing, we gave the staff the option to go offsite and have a beer to simply be with each other, we monitored carefully that alcohol consumption did not become the preferred coping mechanism
 - Reinforced that it is OK to ask for help. Your mate/work colleague is no longer here as a result of a workplace accident – no one is 100% prepared for this

ADDRESSING EMOTIONS



JAMES ROLPH – QUARRICO TRUCK AND DOG DRIVER

- **Trepidation, Apprehension, Anxiousness and Stress;**

- Deal in fact. Avoid conjecture, opinion and treat theories as exactly that – theories
- Be a part of the investigation. Whilst yes, we are being investigated as part of the investigation you (and the team and business) will get more benefit and information by being as “open book” as possible during the investigation which better enables you to communicate with your team
- Be open with the family. You will soon gauge the sense of where the line is between trying to assist and stepping over the line. The family is the guide.
- Joe, the GM and couple of other staff and contractors attended James’s funeral 7 September 2023 in Kingaroy. The sense of trepidation is unexplainable. Do they blame us? Have we done enough to support the family? Realising the family will be extremely sad on the day, will they also be angry with us?
- These feelings are/were real, although this seems selfish, it is still real. In this instance the family and friends of James were more than receiving of Quarrico on one of the saddest days of their lives. All people present were as you would expect of James. Down to earth people.
- Communicate, use truth and support is all you can really do.
- Be open with authorities, be it Police, RSHQ etc. No one in this room runs a business, provides a workplace, turns up to work with the specific intent to harm another. Legislation put in place and systems are developed to minimise risk of harm to any person in the workplace.

ENSUING ACTIONS



**JAMES ROLPH – QUARRICO TRUCK AND DOG
DRIVER**

- Work with internal and external investigators interrogating actions, systems, controls, processes, records and a subsequent brief in preparation for the coroner over a period of approximately 7 months in conjunction with;
 - Senior Constable Aaron Webster – Mackay Forensic Investigation Unit
 - Mr Andrew Mackie – Queensland Department of Transport (Now NHVR unit)
 - Local Police, Fire and Ambulance in Moranbah
 - The company who owned the second truck involved in the crash
 - Resources Health and Safety Queensland
 - The Rolph immediate and extended family
 - Our Insurer
 - The other parties Insurer
 - Our clients
 - AND OUR STAFF AND EXTENDED BUSINESS FAMILY WHICH IS PERTINENT TO THIS PRESENTATION

IN CONCLUSION



**JAMES ROLPH – QUARRICO TRUCK AND DOG
DRIVER**

- Firstly, we hope that those who have never experienced a fatality or serious injury in the workplace never do.
- •Quarrico have recently partnered with Mates In Mining as a way of providing an additional resource to our team should they seek assistance beyond what a good supervisor or manager may be able to provide.
- •We work in an industry that “relies heavily on people”. Your business relies on people every day as does ours. The mental health and wellbeing of your employees/work colleagues/contractors needs to be as important as, and if not more, as the PPE they are wearing to start the day – the boots!. It does not need to be an incident at work that has caused a “point in time” stress that is affecting their mental health. It could be a home life matter, conflict with another employee, or any other unlimited number of metrics that may indicate that “your mate” or “your employee” is not right and needs a hand. Know how and where to get them that hand. It’s to theirs and your benefit!

So Lets Make Sure Our Team “Have their Boots On”

RISK MANAGEMENT PROFILE

A site senior executive (SSE) in a Queensland quarry has responsibility for the fitness for work of its staff under the Mining and Quarrying Safety and Health Regulation 2017, which refers to the requirements in Division 1 (Fitness), particularly sections 85 (Fitness of workers) and 87 (Assessing workers to decide fitness level)

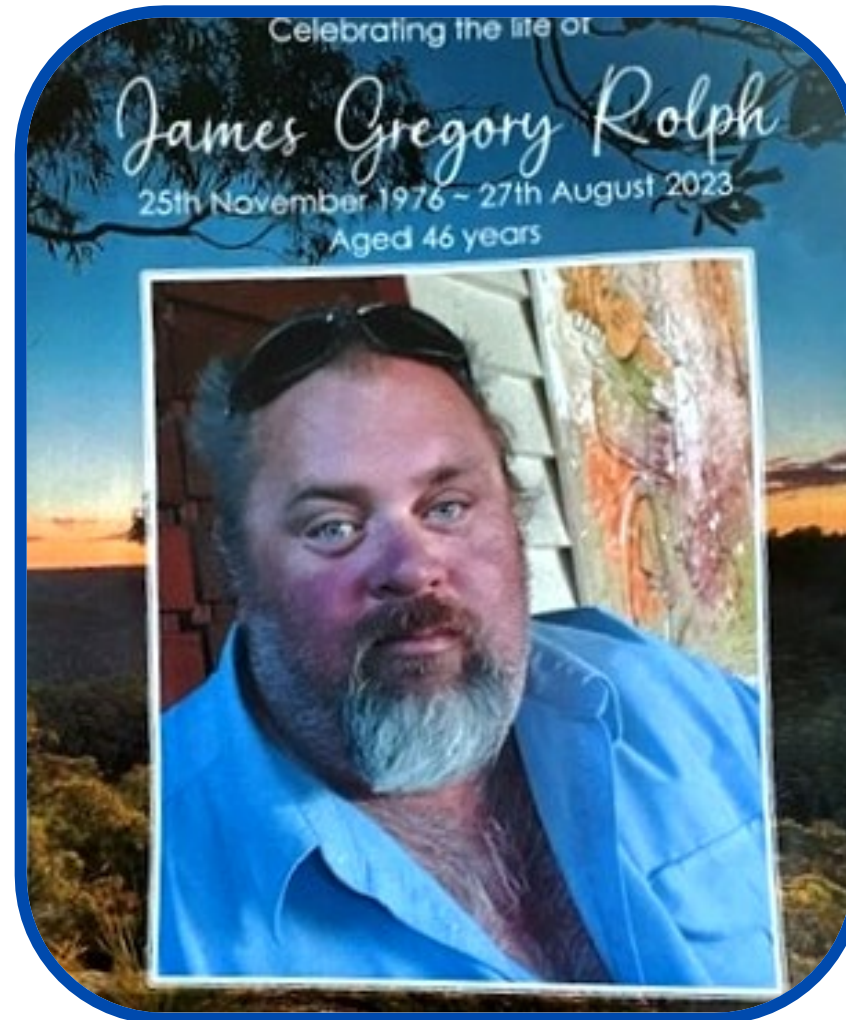
The workforce has changed and the distraction options for the workforce has changed and increased exponentially over the last 40 years. For example;

- In the early 80's television stations would shut down from around 10pm until early in the morning. There were 3 channels if you were lucky, no internet and in a camp environment you may have had one television in a common room.
- Availability and type of illicit and prescription drugs were both available and accessible in the 1980's compared to now is both night and day.
- This poses regulatory, safety and moral risk to not only the SSE but the business and the industry in general when trying to manage factors that influence a workers mental health which may be fatigue related or chemically induced related and subsequently affecting both the detection ability of the company/SSE and ability for the individual SSE/supervisor/work colleague to identify that the person is affected, subsequently elevating the potential risk in the work place thru having an "affected or impaired" person in the workplace.

RISK MANAGEMENT PROFILE

1. Bill Smith is an operator in a quarry on a 14/7 roster and stays in camp . Bill is tested randomly for drugs and daily for alcohol at 6.15am in the morning. Bill passes with flying colours. It is noted though that Bill has an energy drink every morning at tool box. Bill is a good operator and his performance has never had cause to question anything. Mid way through Bill's swing Bill has an incident which is a HPI near miss. During the investigation it was found that Bill averages 3 hours sleep a day as he is a keen sport lover and streams sport on his iPad every night until 2am in the morning. – How do you deal with this situation?
2. Mary Jane is an operator in a quarry on a 14/7 roster and stays in camp . Mary is tested randomly for drugs and daily for alcohol at 6.15am in the morning. Mary passes with flying colours. It is noted though that Mary is always energetic and brings a spark to the crew. Mary is a good operator and her performance has never had cause to question anything. Mid way through Mary's swing Mary has an incident which is a HPI near miss. During the investigation it was found that Mary is a synthetic illicit drug user, using heavy on her days off and occasionally whilst on swing. Your company uses Sure Step urine tests which are the industry standard tests yet has never detected Mary's drug usage – How do you deal with this situation?

RIP JAMES



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16 OCTOBER 2025 – QUARRY FORUM 2025

Managing the risks of psychosocial hazards

Liz Grolimund, Manager Health, Strategy & Compliance, Occupational Health, RSHQ



Resources
Safety & Health
Queensland

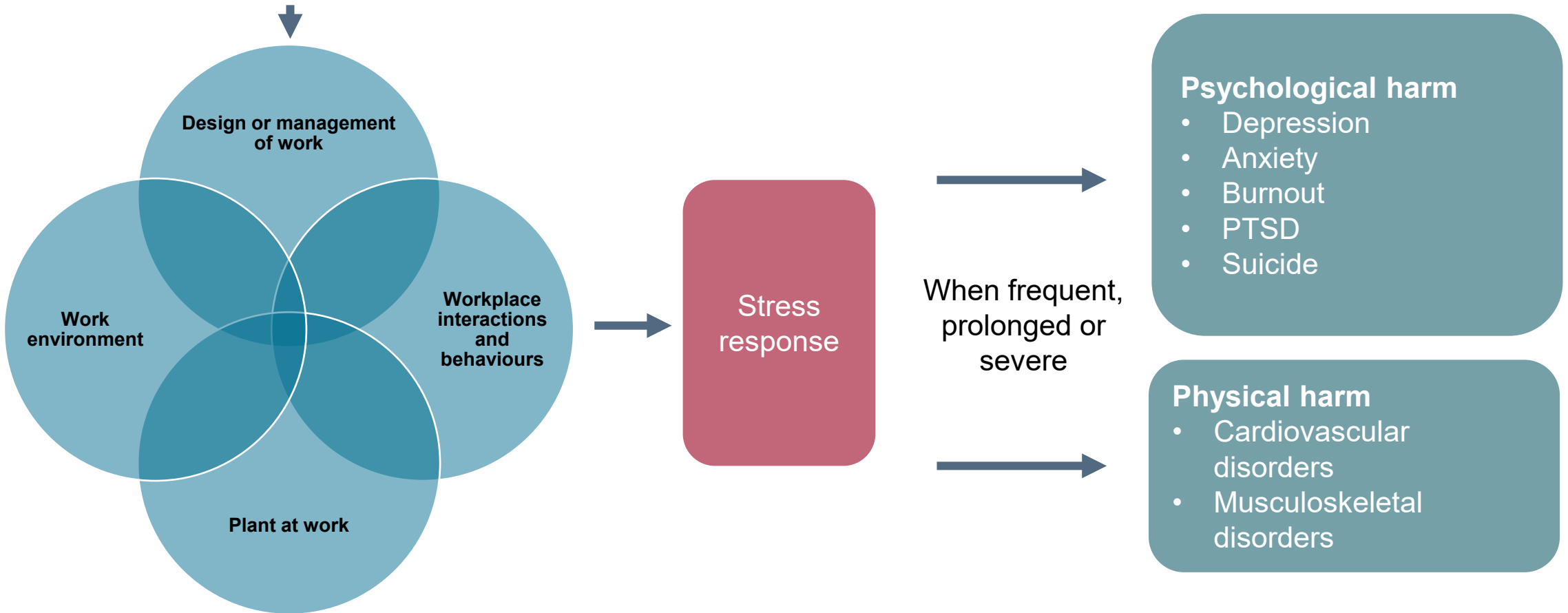


Introduction

- Managing psychosocial hazards
 - Understanding psychosocial hazards
 - How to make a report
 - What good looks like
 - RSHQ's activities and priorities
 - Resources
- 

Understanding psychosocial hazards

Psychosocial hazards arising from or relating to:



Psychosocial hazards



Psychosocial hazards

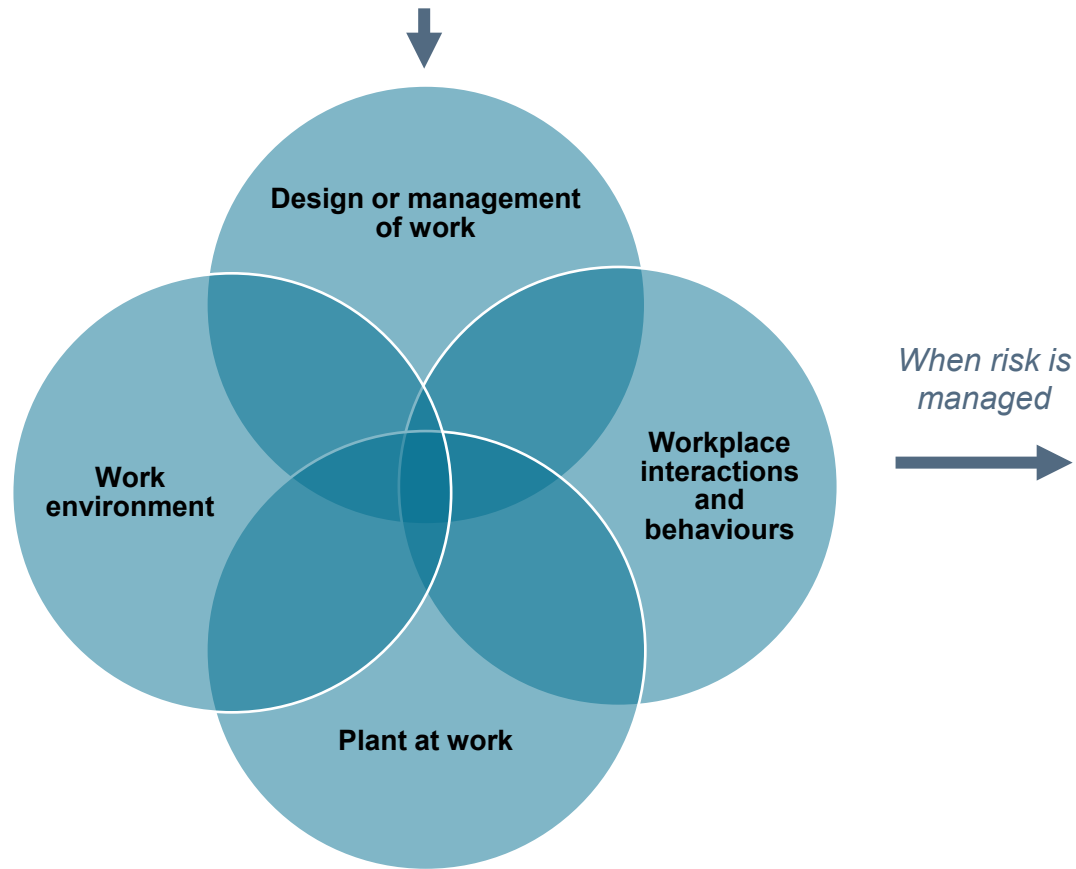


Psychosocial hazards



Effectively managing the risks of psychosocial hazards

Managing the risks of psychosocial hazards effectively



Psychological health

- Support ongoing psychological health
- Avoid worsening of pre-existing mental health challenges

Physical health

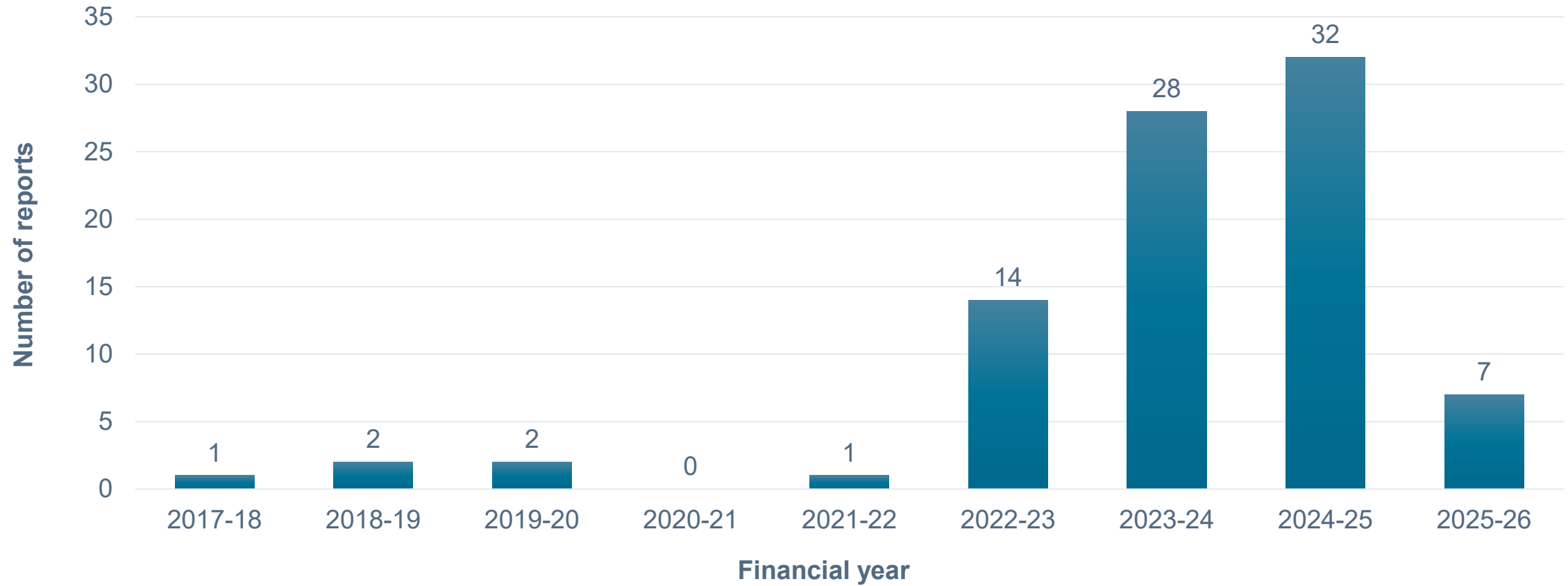
- Support ongoing physical health
- Avoid injury and illness

Performance

- Productivity
- Attendance
- Team cohesion

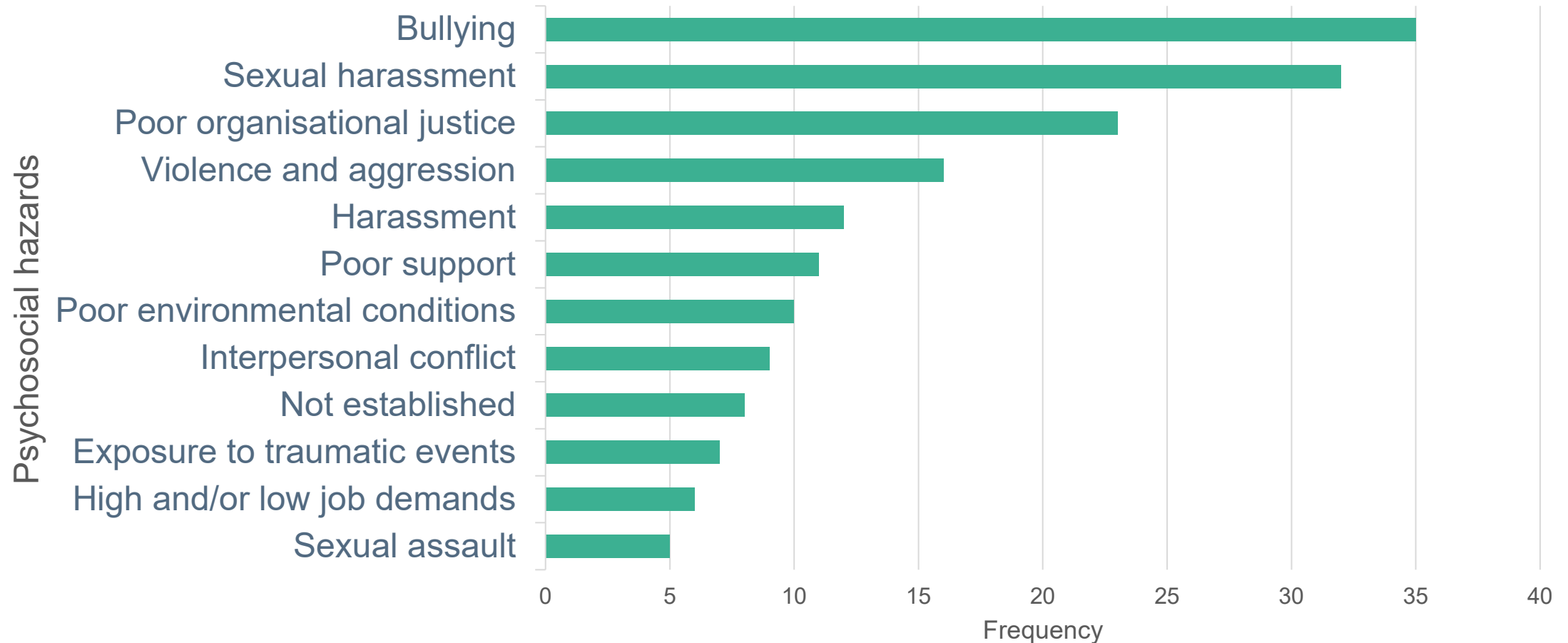
Psychosocial reports to RSHQ

(as at 13 October 2025)



Types of psychosocial hazards reported

(as at 13 October 2025)



Note. Data from 2018 - present. The data represents the types of psychosocial hazards or serious incidents reported to RSHQ. Some reports have more than one associated psychosocial hazard.

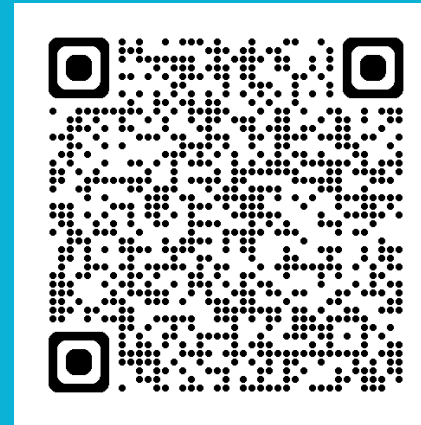
Reporting a psychosocial incident to RSHQ

Call RSHQ's Psychosocial Team on **1300 581 077**

Obligation holders send industry
notification form to
psychosocial@rshq.qld.gov.au



Workers send Psychosocial hazard
report form to
psychosocial@rshq.qld.gov.au



RSHQ investigations: What to expect



Managed by RSHQ's Psychosocial Team

Investigation focus on risk management including preventative and mitigating controls

Generally SSE contacted, advised of report and next steps e.g. site attendance

Information gathering from affected person or witnesses

Evidence gathering through interviews or exercising of statutory powers

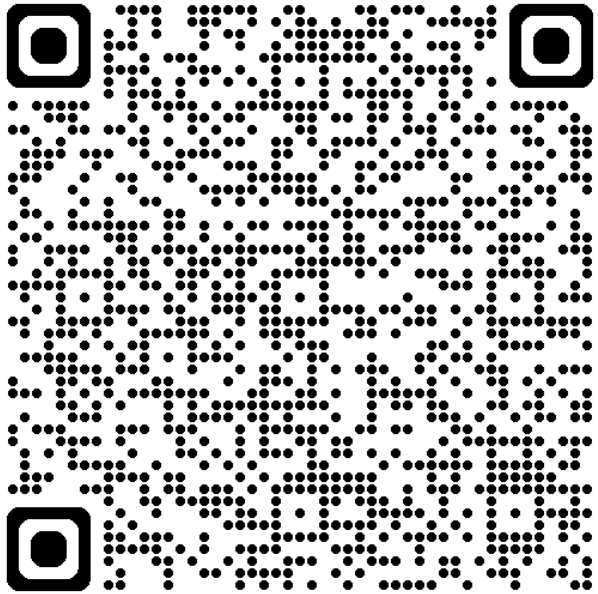
Finalisation of matter, which may include action under RSHQ's Compliance and Enforcement Policy.

What does good look like?

- ✓ Engagement and commitment from leadership
- ✓ Documented risk management process
 - consult with workers
 - address all psychosocial hazards
- ✓ Appropriate trauma-informed reporting and support structures
- ✓ Investigate through safety and health lens
 - sharing information throughout organisation
 - reviewing and adjusting controls accordingly
- ✓ Incorporate outcomes into safety and health management system
- ✓ Openly report psychosocial hazard incidents to RSHQ



Discussion paper



April 2025

Legislative options to clarify obligations to manage psychosocial hazards in Queensland's resources industry

Discussion paper – NOT GOVERNMENT POLICY



Core chapters

Protecting workers from psychological harm

Managing the risks of psychosocial hazards

Psychosocial risk controls

Reporting obligations

Assessing the management of psychosocial hazards in Queensland's resources sector

Project objectives

- ✓ ensure the resources sector is identifying, assessing, and managing psychosocial risks to an acceptable level
- ✓ enhance understanding of psychosocial hazards through education and support, and enforcing obligations where required
- ✓ promote the accurate and timely reporting of psychosocial incidents

Project approach



1. Site selection

A range of sites across the coal, mineral mine and quarry, and petroleum and gas sectors will be selected for assessment based on risk factors.



2. Assessment

Through on-site inspections and desktop audits, RSHQ will assess how psychosocial hazards are identified, assessed, and managed, including how controls are implemented, reviewed, and embedded into broader safety and health systems.



3. Outcomes

Sites will receive information about their inspection or audit findings. Where necessary, steps may be taken in accordance with RSHQ's Compliance and Enforcement Policy.



4. Sharing learnings

At the conclusion of the assessments, RSHQ will share learnings with industry and stakeholders through a report and other engagement opportunities.

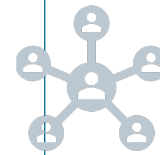
What will inspections and audits review



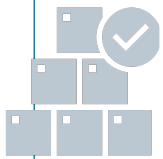
Psychosocial risk assessments



Identifying and implement controls



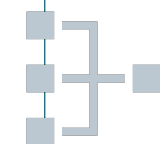
Engaging with workers



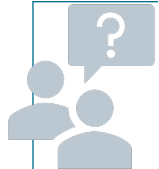
Promoting safe reporting avenues



Providing training and support



Embedding controls into safety systems



Supporting worker wellbeing

Guide to managing the risk of sexual harassment



Dr Meg Brodie

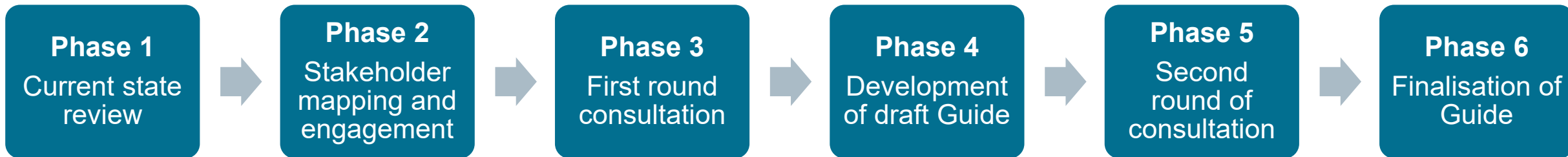
Partner Human Rights and Social Impact



Dr Meredith Nash

Director Gendered Violence and Sexual Harassment

Stakeholder Advisory Group



Guide to managing the risk of sexual harassment

Sections

Risk
management

Leadership

Culture

Knowledge

Reporting,
responding and
investigating

Support



Reading the Guide

Section: Risk management

Introduction and context

Practical guidance – Theme 1:
Sexual harassment risk
management approach applied

Practical guidance – Theme 2:
Consultation

Practical guide for managing risks of sexual harassment

THEME 1

Sexual harassment risk management approach applied

This approach ensures that sexual harassment risks are proactively identified, analysed and assessed, and controlled, seamlessly integrating with site safety and health management systems to create a safer and more respectful work environment.



The risk management approach considers how work factors interact to create a risk of sexual harassment, incorporating an understanding of intersectionality to address how overlapping social identities and power dynamics can exacerbate these risks.



Implementing higher order controls with a focus on prevention; prioritising the adoption of proactive measures to stop sexual harassment before it occurs, rather than simply reacting to incidents.

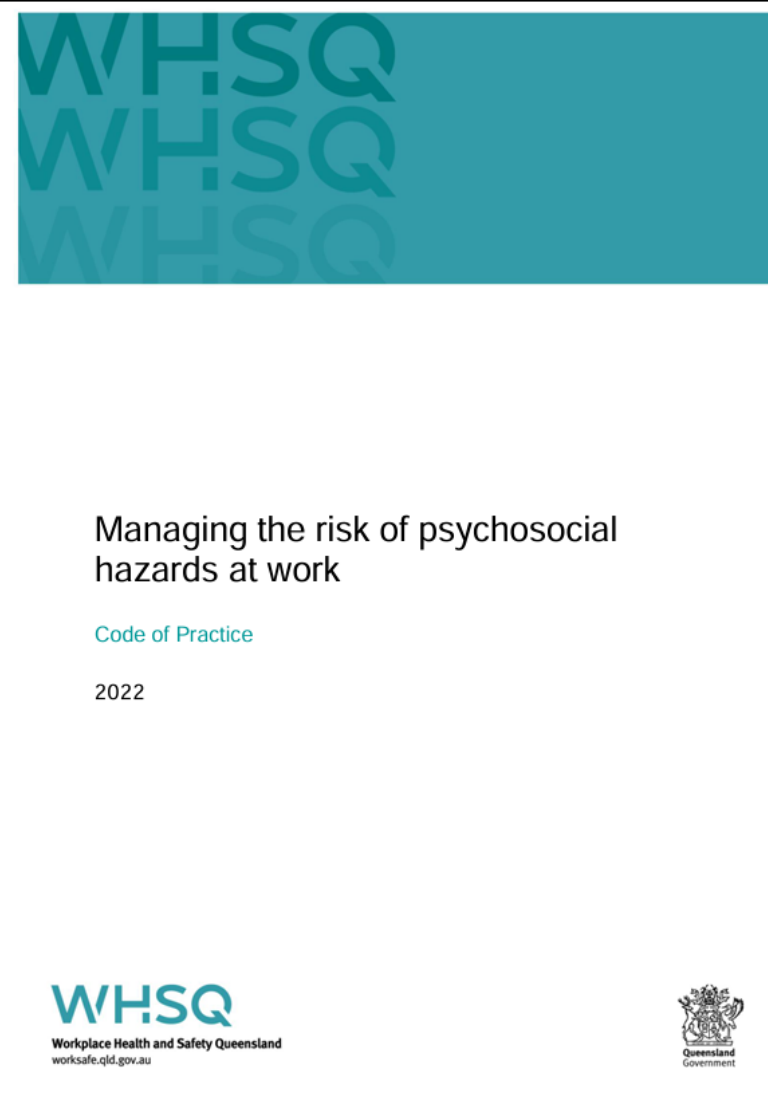
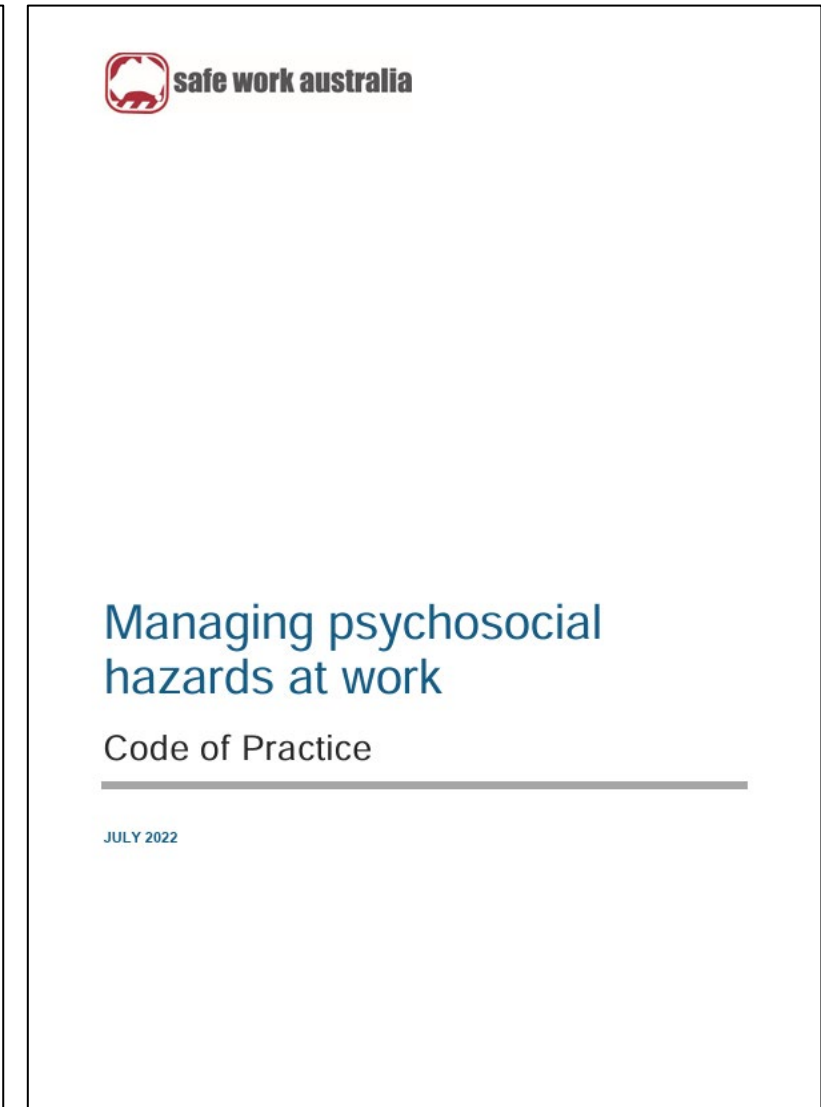
Mechanisms in place for regular analysis of work environment and a way of working to detect new hazards and changes in risk.



Safety and health management systems include risk management procedures to effectively identify sexual harassment hazards, analyse and assess risk and determine the necessary controls.

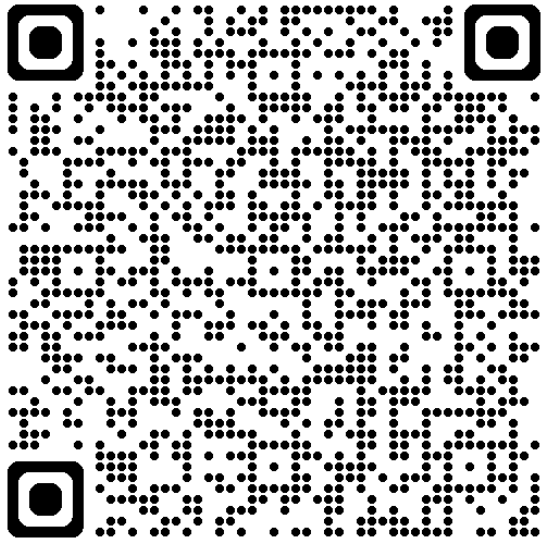
Risk assessments clearly document the identified hazards, assessment of risk, controls and review periods.

Resources

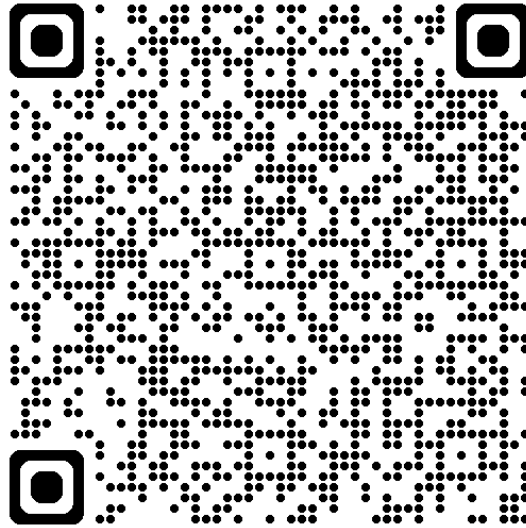


Quick links

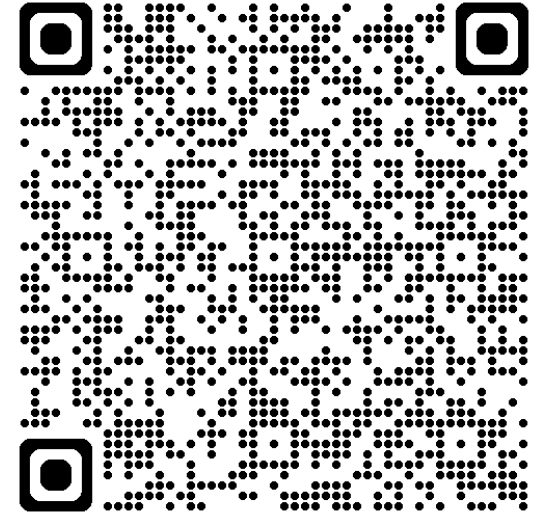
RSHQ webpage for managing
psychosocial hazards



RSHQ webpage for information
about sexual harassment



Guide to managing the risks of
sexual harassment





Thank you

Psychosocial Team

1300 581 077

psychosocial@rshq.qld.gov.au



16 OCTOBER 2025 – QUARRY FORUM 2025

Welding Fume – the emerging issue

[Image www.apexweldingsafety](http://www.apexweldingsafety)

Samantha Forster, Inspector of Mines (Occupational Hygiene) Mineral Mines
and Quarries, RSHQ



Resources
Safety & Health
Queensland

What is welding fume (WF)?



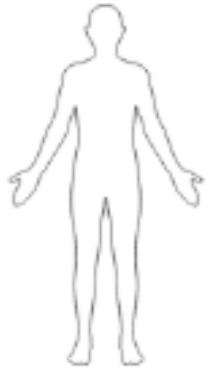
Why welding fume?

Health impacts

- **Carcinogen**
- **Short term – metal fume fever, pneumonia, dermatitis, asthma**
- **Long term – lung cancer, COPD, occupational asthma, pneumoconiosis and pulmonary fibrosis**
- **Secondary cancers - bladder cancer and kidney cancer.**
- **Manganese exposure – neurotoxic, symptoms similar to Parkinson's disease, Ototoxic - increases the risk of hearing loss**



Fume is a hazardous chemical



Make up of fume depends on

1. **Source metal – mild steel, hardened steel, stainless, aluminium**
2. **Consumables used – electrodes, filler metal, shielding gas**
3. **Coatings – galvanised, oils, grease, paint, anything else on surface**

How much welding fume?



- Data indicates very limited use of controls
- RPE not being worn in majority of exceedances



Who is exposed to welding fume?



Chronic exposure is

- **prolonged** or **repeated contact**,
- over a long period, (months or years)
- effects are **not immediately observable**

June 2025 Quarry Qld, 23 yr old worker (contractor)

- MIG welding in workshop on wear plates and welding screen centre rails.
- No PAPR, extraction or ventilation observed.
- Fume was visible for both tasks and seen circulating the workshop.

Where is the Exposure?

Worker 1:

Welding metal – Gal steel and mild steel
Duration – 68 minutes

Welding fume 6mg/m^3
Manganese 0.43mg/m^3

Workshop

Worker 2:

Welding metal – Mild steel
Duration – 30 minutes

Welding fume 40mg/m^3
Manganese 0.13mg/m^3

Field

Controls ???

Drinking milk to protect you
from weld fumes

NO

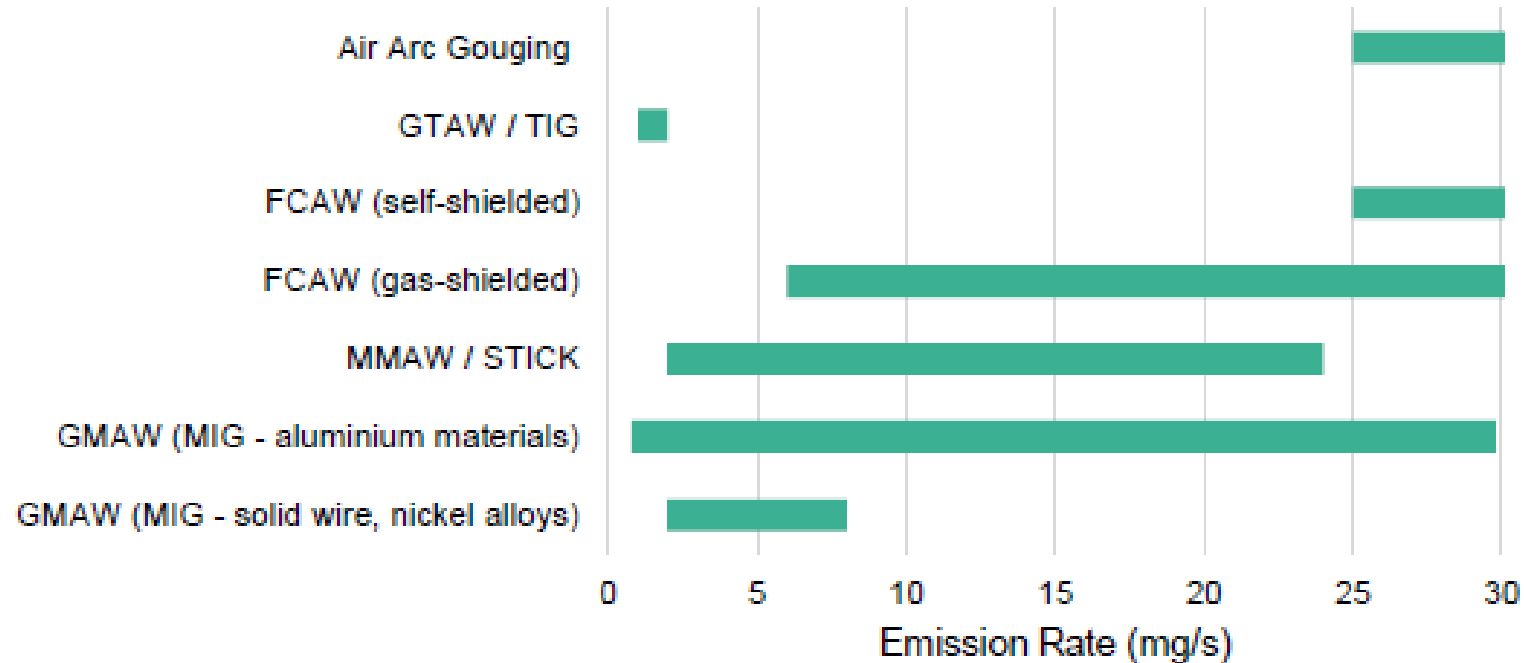
Holding a milk jug to your mouth while
welding acts as a filter



Controls - Substitution or modification of process

Can a different welding/hot work process be used?

Emission rates for common welding methods in QLD
Coal Industry



Controls - Isolation/separation

Is automation or robotics an option?

Robotic welding provides one option for remote controlled welding, allowing the workers to operate the equipment from a safe distance or even from separate control rooms.

Cobots, or collaborative robots, are designed to work alongside human operators in a shared workspace. They are typically smaller, more flexible, and equipped with advanced sensors and safety features that allow them to detect and avoid harmful contact with humans.

Industrial robots – not applicable typically.

Product Controls - engineering



1. Extraction – on gun, fixed or portable LEV

2. Pedestal fan

Maintenance and use *must* be monitored



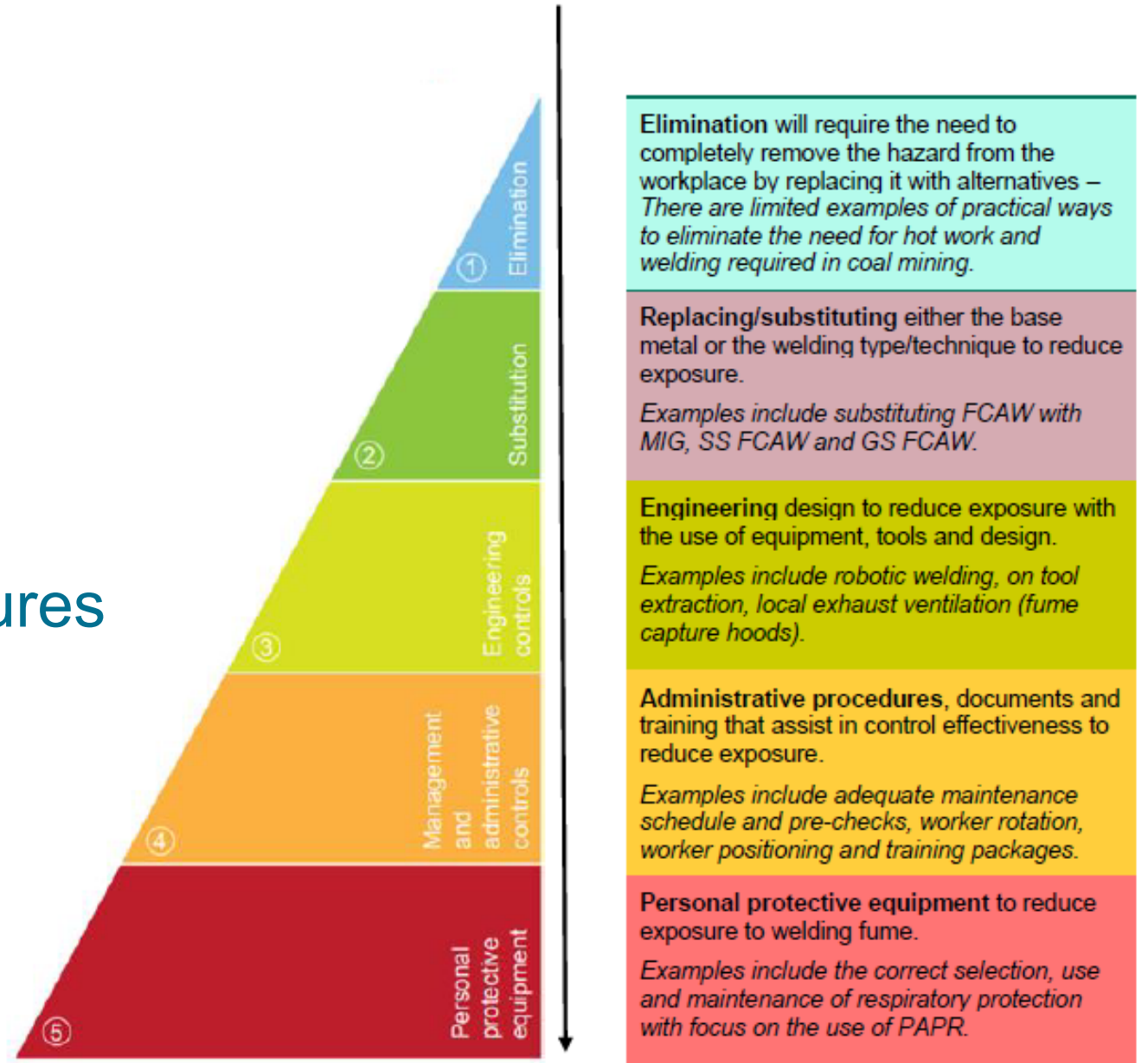
Controls – on tool

On gun extraction

View Video - <https://www.youtube.com/watch?v=R3Xshworr0I>

Controls - administrative

- Task rotation
- Welder positioning
- Welding methods and procedures
- Hot work permits
- Training and competency



Hierarchy of controls as applied to welding fume

RPE control



Disposable half face masks suitable for welding fume include P2 and P3 – negative pressure, fit testing, clean shaven.

Reusable half face masks provide a higher level of facial fit/seal and enable higher capacity filter cartridges to be used.

Powered air purifying respirators (PAPR) are typically incorporated into a welding style helmet/face shield, where the fan and filter assembly are mounted onto a belt and the filtered air is supplied through a hose connected into the back of the helmet.



Conclusion

Welding and hot work fumes are a health hazard

1. Must be risk assessed
2. Educate workers
3. Implement controls and monitor effectiveness ongoing
4. Measure worker exposure
5. Health surveillance

[Return to agenda](#)



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IQA UPDATE

Michelle Lergessner | IQA North QLD Branch Committee

2025 Quarry Forum, Mackay
Thursday, 16 October 2025



IQA Connect App

COMING SOON | STAY TUNED

IQA Member App Coming Soon

Professional networking and resources in your pocket.

Enhanced connectivity, instant updates, training access.
Keep an eye out for launch details!



IQA

The Institute of Quarrying
AUSTRALIA

Educating and connecting people engaged with the extractive and associated industries

IQA

The Institute of Quarrying
Australia



IQA Connect App

Launch date: Wednesday, 22 October 2025

Key features: Forums | Member Directory | News Feed | Direct Messaging | Events | Education & CPD and more!

Download instructions:

- "Search '**IQA Connect**' in App Store or Google Play"



Young Member Network (YMN) | South Africa 2026 Study Tour

Dates: 12-25, April 2026

EOIs: 20+ EOIs from Australian
IQA young members

Next Steps: Now open
internationally to IQ young
members

Contact: iqa@quarry.com.au



IQA 2026 National Conference | Gold Coast

A promotional banner for the IQA 2026 National Conference. The background is a gradient of dark blue and teal with a faint, wavy pattern. On the left, the 'Q26' logo is displayed in white, green, and blue. Below it, the text 'IQA 2026 NATIONAL CONFERENCE' is written in white, with 'BUILDING THE FUTURE TODAY' in blue underneath. On the right, a white-bordered box contains the text 'Mark your calendars ONE YEAR TO GO 6-8 OCTOBER 2026 GOLD COAST CONVENTION AND EXHIBITION CENTRE'. Below this box, a white rounded rectangle states 'Presale Registrations Open November 2025'. At the bottom right, the IQA logo is shown next to the text 'The Institute of Quarrying AUSTRALIA'.

Q26

IQA 2026
**NATIONAL
CONFERENCE**
BUILDING THE FUTURE TODAY

Mark your calendars
ONE YEAR TO GO
6-8 OCTOBER 2026
GOLD COAST CONVENTION AND EXHIBITION CENTRE

**Presale Registrations Open
November 2025**

IQA | The Institute of Quarrying
AUSTRALIA

Educating and connecting people engaged with the extractive and associated industries



Upcoming IQA CQLD & NQLD Branch Events

- **Central QLD Sub-Branch End of Year Event**
Friday, 31 October 2025 | 1pm - 7pm, **Rockhampton Clay Target Club** | *Registrations close 22 October!*
- **North QLD Branch End of Year Christmas Trivia Night**
Friday, 7 November 2025 | 6–9pm, **Townsville Yacht Club**



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Thank you!

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Educating and connecting people engaged with the extractive and associated industries



Thank you