



Commissioner for
**Resources Safety
& Health**

Mining Safety and Health Advisory Committee

Annual report 2023–24



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Have your say

The Mining Safety and Health Advisory Committee hopes you find this annual report informative.

The advisory committee welcomes any comments and feedback about the report. Please send your feedback to commissioner@crsh.qld.gov.au.

4 November 2024

The Honourable Dale Last MP

Minister for Natural Resources and Mines, Minister for Manufacturing and Minister for Regional and Rural Development

1 William Street

Brisbane Qld 4000

Dear Minister

In accordance with section 68(1) of the *Mining and Quarrying Safety and Health Act 1999*, please find attached the Mining Safety and Health Advisory Committee annual report for the year ending 30 June 2024.

In the absence of an appointed or acting Commissioner, this report has been prepared by the office of the Commissioner for Resources Safety and Health.

Yours sincerely

Office of the Commissioner for Resources Safety and Health

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Introduction

This annual report details the achievements of the Mining Safety and Health Advisory Committee during 2023–24.

In that time, the advisory committee achieved a number of significant milestones and successfully advanced its mission *to provide contemporary, evidence-based advice that focuses on making mineral mine and quarry workers safer and healthier.*

In the absence of an appointed or acting Commissioner, this report has been prepared by the office of the Commissioner for Resources Safety and Health.

Year at a glance

Objective	Key achievements
A safe and healthy workplace	<ul style="list-style-type: none"> • Published, in conjunction with the Coal Mining Safety and Health Advisory Committee and the Commissioner for Resources Safety and Health, <i>The state of safety reporting culture in Queensland's mining industry</i> report. • Observed and reviewed relevant information and data including <ul style="list-style-type: none"> – significant accident and injury data, trends and identified audit findings – airborne contaminants data – work program and data concerning mine lung dust disease – drug use in Queensland's mining industry – blood lead exposure monitoring data. • Considered the <i>Facilitating High Reliability Organisation behaviours in Queensland's Resources Sector and Modernising Regulatory Enforcement</i> decision regulatory impact statement and provided advice to the Minister. • Considered a proposal from the Electrical Trades Union to allow entry permit holders under the <i>Work Health and Safety Act 2011</i> the ability to access workshops, shutdowns and construction sites on mining leases and provided advice to the Minister. • Considered a proposal for the election of electrical site safety and health representatives to advocate specifically for the safety and health interests of electrical tradespeople working at a coal mine in relation to mineral mines and quarries and provided advice to the Minister.
A competent workforce	<ul style="list-style-type: none"> • Reviewed the competencies required by statutory position holders to perform the tasks prescribed to them by regulation. • Engaged with the Australian Mining and Automotive Skills Alliance on competency requirements in the mineral mining and quarrying industries. • Considered current industry initiatives aimed at addressing the high rates of turnover of professional staff and reduced rates of talent attraction in the mining industry.
An informed industry	<ul style="list-style-type: none"> • Informed the Minister about emerging issues, their potential impact and proactive best practice safety and health activities. • Communicated emerging harms and risks to stakeholders. • Held a vehicle interaction safety forum to review current industry approaches to the management of vehicle interactions and to encourage mineral mining and quarrying industry operators to share their initiatives and learnings.
An effective advisory committee	<ul style="list-style-type: none"> • Engaged with professional bodies and external experts to ensure advisory committee provides informed advice to the Minister. • Ensured effective governance arrangements were in place to maintain advisory committee's strategic focus.

Mining Safety and Health Advisory Committee

The Mining Safety and Health Advisory Committee is established under part 6 of the *Mining and Quarrying Safety and Health Act 1999*.

The advisory committee is a tripartite body formed with the primary function to give advice and make recommendations to the Minister about promoting and protecting the safety and health of persons at mineral mines and quarries and persons who may be affected by mineral mining and quarrying operations. The advisory committee is an integral part of the accountability framework that is in place to manage safety and health in the industry and to ensure mine and quarry workers arrive home safe and healthy every day.

Under the *Mining and Quarrying Safety and Health Act 1999*, the chair of the advisory committee must prepare an annual report on the committee's operations for the year. The report must be given to the Minister for Resources as soon as practicable, but within four months, after the end of each financial year. The Minister must table the report in the Legislative Assembly within 14 sitting days.

Membership

The advisory committee is to consist of 10 members, one of whom is the chairperson.

Members appointed to the advisory committee represent the Queensland Government, mineral mine and quarry workers, and mineral mine and quarry operators. The independent chair of the advisory committee is the Commissioner for Resources Safety and Health. Members are appointed by the Minister for terms of up to three years and there is no limit to the number of terms a member can serve.

The advisory committee includes members nominated by the Australian Manufacturing Workers' Union, Australian Workers' Union, Cement Concrete and Aggregates Australia, Queensland Resources Council, and Resources Safety and Health Queensland. The Chief Inspector of Mineral Mines and Quarries is an *ex officio* member of the advisory committee.

Table 1: Mining Safety and Health Advisory Committee members for 2023–24

Name	Representing	Organisation	Meetings
Kate du Preez ¹	Independent chair	Commissioner for Resources Safety and Health	1
Andrew Clough ²	Independent chair	Interim Commissioner for Resources Safety and Health	2
Jack Farry ³	Queensland Government	Resources Safety and Health Queensland	1
Hermann Fasching	Queensland Government	Resources Safety and Health Queensland	3
John Hempseed ⁴	Mineral mine and quarry workers	Australian Manufacturing Workers' Union	0
Gavin Lawrence	Mineral mine and quarry workers	Australian Workers' Union	3
Joe Russell ⁵	Mineral mine and quarry operators	Queensland Resources Council	1
Cameron Skinner ⁶	Queensland Government	Resources Safety and Health Queensland	0
William Tangye	Mineral mine and quarry workers	Australian Workers' Union	2
Russel Wilson	Mineral mine and quarry operators	Cement Concrete and Aggregates Australia	2
Maryann Wipaki	Mineral mine and quarry operators	Queensland Resources Council	2

Substitute members

Substitute members are appointed to take part in meetings of the advisory committee in place of a member from the same organisation who is unable to attend.

Table 2: Mining Safety and Health Advisory Committee substitute members for 2023–24

Name	Representing	Organisation	Meetings
Des Bouchardt	Mineral mine and quarry workers	Australian Workers' Union	0
Samantha Boardman ⁷	Mineral mine and quarry workers	Australian Manufacturing Workers' Union	0
Martin Brownlee	Mineral mine and quarry operators	Queensland Resources Council	0
Fiona Murfitt	Mineral mine and quarry operators	Queensland Resources Council	0

Meetings held

Under the *Mining and Quarrying Safety and Health Act 1999*, the advisory committee has an obligation to meet at least twice a year. In 2023–24, the advisory committee met three times. Members also worked out-of-session on one occasion during 2023–24 in order to ensure the Minister received advice in a timely manner.

Table 3: Mining Safety and Health Advisory Committee meetings in 2023–24

Meeting number	Date	Location
80	28 September 2023	Townsville
81	23 January 2024	Brisbane
82	2 May 2024	Brisbane

¹ Kate du Preez resigned as the Commissioner for Resources Safety and Health on 24 November 2023.

² Andrew Clough was appointed as the acting Commissioner for Resources Safety and Health on 15 January 2024.

³ Jack Farry's appointment to the advisory committee expired on 27 August 2023 and was re-appointed as a member on 1 February 2024. Jack attended the 28 September 2023 and 23 January 2024 advisory committee meetings as an observer.

⁴ John Hempseed resigned as a member of the advisory committee on 7 September 2023.

⁵ Joe Russell's appointment to the advisory committee expired on 27 August 2023 and he was re-appointed as a member on 1 February 2024. Joe attended the 28 September 2023 and 23 January 2024 advisory committee meetings as an observer.

⁶ Cameron Skinner was appointed as a member to the advisory committee on 1 February 2024.

⁷ Samantha Boardman resigned as a substitute member on 7 September 2023.

Functions of the advisory committee

The primary function of the advisory committee is to give advice and make recommendations to the Minister about promoting and protecting the safety and health of persons at mineral mines and quarries and persons who may be affected by mineral mining and quarrying operations.

The advisory committee must discharge its primary function by periodically reviewing the effectiveness of the control of risk to any person from mineral mining and quarrying operations.

The advisory committee also has the following functions:

- recognising, establishing and publishing the following competencies
 - the competencies accepted by the committee as qualifying a person to perform the tasks prescribed by regulation
 - the safety and health competencies required to perform the duties of a person under this Act
- developing a five-year strategic plan for improving the safety and health of persons at mines and persons who may be affected by mining operations
- periodically evaluating, and at least once each year updating, the five-year strategic plan
- developing action plans to achieve measurable targets set in the five-year strategic plan
- obtaining information from Resources Safety and Health Queensland to assess the fulfilment of the five-year strategic plan and the action plans
- identifying and prioritising critical risks to the safety and health of persons at mineral mines and quarries and persons who may be affected by mineral mining and quarrying operations
- providing advice to the mineral mining and quarrying industry about those risks
- providing information to the Minister about the performance of Resources Safety and Health Queensland.

Five-year strategic plan

With the commencement of the *Resources Safety and Health Queensland Act 2020*, the *Mining and Quarrying Safety and Health Act 1999* was amended to broaden the functions of the advisory committee. The advisory committee must develop, and periodically evaluate and update, a five-year strategic plan for improving the safety and health of persons at mines and persons who may be affected by mining operations.

The *Mining Safety and Health Advisory Committee strategic plan 2022–27* is described in Figure 1.

Vision and mission

The strategic plan serves as a roadmap to achieve the vision of:

Safe and healthy mines and quarries, now and in the future.

To achieve this vision, the advisory committee is guided by the mission to:

Provide contemporary, evidence-based advice that focuses on making mineral mine and quarry workers safer and healthier.

Values

The advisory committee has four core values which underpin its work:

- people focussed
- robust
- collaborative
- adaptive.

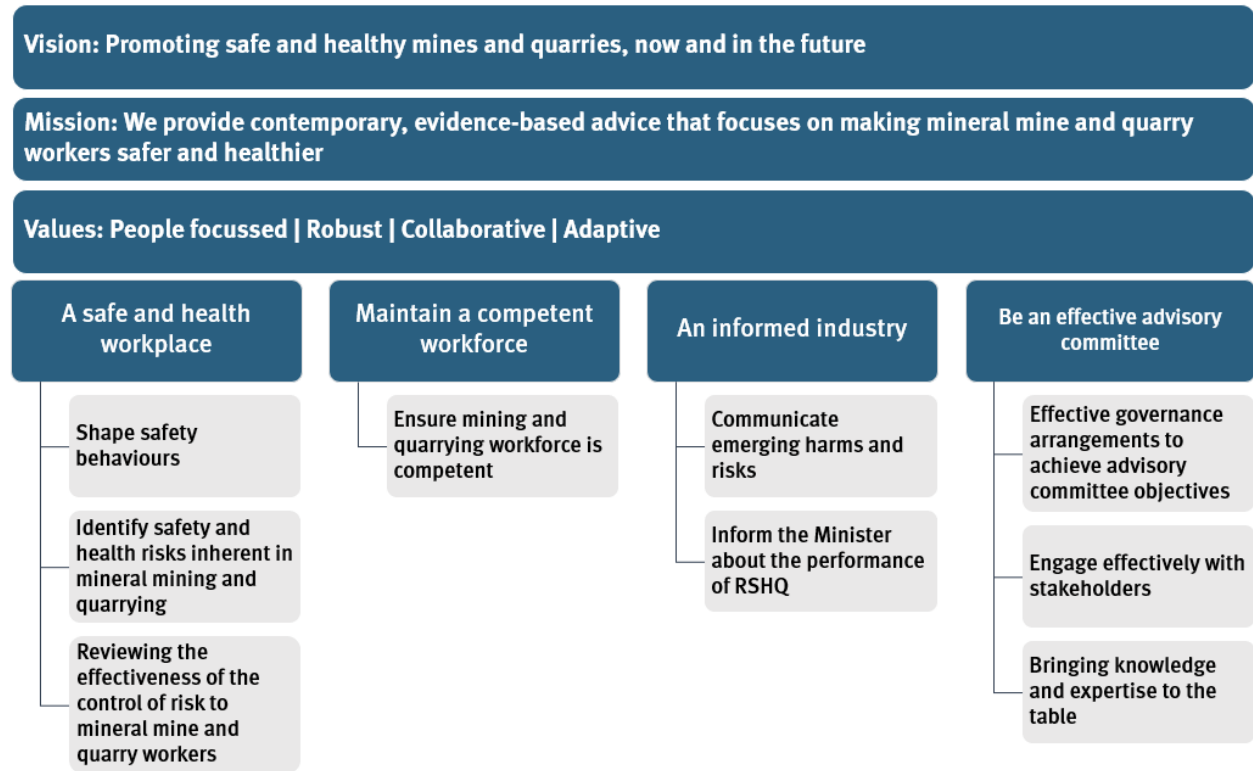


Figure 1: Mining Safety and Health Advisory Committee five-year strategic plan 2022–27

Work of the advisory committee

In 2023–24, the advisory committee completed a range of projects and activities that were aligned to the four strategic objectives under the *Mining Safety and Health Advisory Committee strategic plan 2022–2027*:

- a safe and healthy workplace
- a competent workforce
- an informed industry
- an effective advisory committee.

A safe and healthy workplace

The advisory committee takes an evidence-based approach to its work and analyses relevant information and data—while reflecting on the diversity of operations in the mineral mining and quarrying industries—to review, consider and discuss solutions and research. This approach enables the advisory committee to provide the Minister and industry with advice which fosters continuous improvement in safety and health for mineral mine and quarry workers.

The advisory committee’s priority strategies for achieving this objective are:

- shape safety behaviours
- identify and review safety and health risks inherent in mineral mining and quarrying
- review the effectiveness of the controls used in mineral mining and quarrying.

Safety reporting survey

In 2023–24, the advisory committee, in conjunction with the office of the Commissioner for Resources Safety and Health and the Coal Mining Safety and Health

Advisory Committee, completed the *Queensland mining industry safety reporting survey*.

The survey aimed to establish a baseline of the safety reporting behaviours exhibited at mine sites and identify the key opportunities and barriers to achieving a responsive and effective safety reporting culture. It also aimed to provide focus areas for industry and the advisory committees to target for further research and continuous improvement.

The survey was driven by Finding 91 and Recommendation 28 of the *Queensland Coal Mining Board of Inquiry part 2 report*:⁸

Finding 91—An extensive study undertaken by CSMHAC on reporting culture in coal mines would benefit the industry in Queensland.

Recommendation 28—As part of carrying out its functions under section 76A of the Act, CSMHAC considers including within its 5-year Strategic Plan activities that will facilitate improvements in the reporting culture in Queensland coal mines.

The survey was divided into themes to assess metrics on standards, communication, risk management, involvement, and reporting across the three levels of an organisation.

Survey questions were categorised into 15 different topic areas as shown in Figure 2.

⁸ https://www.coalminesinquiry.qld.gov.au/__data/assets/pdf_file/0014/1621211/Queensland-Coal-Mining-Board-of-Inquiry-Part-II-Report.pdf

	MY TEAM	FRONTLINE LEADERS	SENIOR LEADERS
STANDARDS	Adhere to standards	Ensure compliance	Set high standards
COMMUNICATION	Speak up	Encourage the team	Communicate openly
RISK MANAGEMENT	Plan for safety	Promote risk awareness	Control for risk
INVOLVEMENT	Get involved	Involve the team	Involve the workforce
REPORTING	Report safety concerns	Support and promote	Encourage and action

Figure 2: Queensland mining industry safety reporting survey topic areas

The survey opened on 1 June 2023 and closed on 5 September 2023. A total of 7821 survey responses were received from the coal mining, mineral mining, and quarrying sectors.

The results of the survey were analysed and compiled into a report titled *The state of safety reporting culture in Queensland's mining industry* which was co-authored with Sentis.⁹

The survey results showed that one of the industry's top strength areas was *team support for safety* indicating that Queensland's mine workers look out for each other on the job, stop work if they believe it is unsafe, and perform work safely without taking shortcuts.

Results also showed that mine workers understand and follow safety standards and procedures, the controls put in place to prevent incidents, and their obligations to report near misses and high potential incidents.

The results for frontline leaders and supervisors showed they typically encouraged mine workers to take appropriate action if they

felt unsafe and to report near misses, high potential incidents and hazards.

These strength areas extended to senior leadership in the industry with the survey indicating senior leaders typically encouraged workers to report safety concerns and that when incidents are reported they investigate the cause.

Opportunity areas for improvements identified in the report included making reporting systems clearer and easier to use, better recognition of positive safety behaviours, addressing fear of reporting, and better involvement of frontline workers in safety initiatives.

Suggestions for senior leaders included providing more timely feedback to workers about safety concerns and increasing interaction and visibility with frontline workers to inspire a more positive safety culture.

The proposed stage 2 of the safety reporting survey project will focus on understanding critical themes and supporting continuous improvements.

The advisory committee will:

- work with the Commissioner to expand upon the findings from the safety reporting survey data
- hold workshops or forums to facilitate industry discussion and engagement in survey findings
- engage with industry to generate future support for follow up rounds of the safety reporting survey, to enable safety trends to be assessed over time.

⁹ www.crsh.qld.gov.au/safety-survey

Review key safety and health outcomes

The advisory committee regularly reviewed information on high potential incidents, serious accidents and airborne contaminants to identify current and emerging safety and health risks.

In 2023–24, the advisory committee received regular briefings from Resources Safety and Health Queensland on high potential incident and serious accident data and reviewed significant incidents that occurred in the mineral mining and quarrying industries.

The advisory committee used this information to help it identify trends and to provide advice to the Minister and industry on improvements that could be made to enhance safety and health performance in the industry.

The advisory committee also received regular briefings from Resources Safety and Health Queensland on airborne contaminants data on respirable dust, respirable crystalline silica, diesel particulate matter and welding fumes. The advisory committee reviewed this data to monitor the effectiveness of controls in place to reduce risks to mineral mine and quarry workers.

Workplace exposure standards for airborne contaminants review

The advisory committee has continued to monitor Safe Work Australia’s review of workplace exposure standards for airborne contaminants.

In 2023–24, the advisory committee examined the impact of proposed changes to workplace exposure standards for diesel particulate matter and welding fumes and provided advice to the Minister.

Lung screening referrals for mineral mine and quarry workers

In reviewing key safety and health outcomes, the advisory committee noted the number of mine dust lung disease cases reported in the mineral mining and quarrying industry was lower than the coal mining industry.

Members observed that new respirable health surveillance testing requirements stipulated in the Mining and Quarrying Safety and Health Regulation 2017 requiring all workers to be tested would likely increase the number of cases reported.

The advisory committee provided advice to the Minister regarding these concerns.

Drug use in Queensland’s mining industry

The advisory committee considered information provided by the Queensland Police Service about the current prevalence of drug use in the community, and particularly in the mining and quarrying communities.

The information included data on current drugs of concern in the mining industry, issues relating to drug test avoidance and testing circumvention devices, fitness for work, and testing options for industry.

Advisory committee members considered the information and provided advice to the Minister.

Blood lead exposure monitoring

The advisory committee has monitored blood lead testing in the mineral mining industry after regulation changes came into effect on 1 September 2023 requiring blood lead testing.

The advisory committee will continue receiving updates from Resources Safety and Health Queensland on blood lead exposure monitoring bi-annually.

Review of legislative amendments

The *Facilitating High Reliability Organisation behaviours in Queensland's Resources Sector and Modernising Regulatory Enforcement* regulatory impact statement was released for public consultation on 30 May 2023. The Minister wrote to the advisory committee requesting its advice on the decision regulatory impact statement.

In 2023–24, the advisory committee continued its review at an out-of-session meeting of both advisory committees on 24 July 2023. The advisory committees provided its advice to the Minister on the decision regulatory impact statement on 10 August 2023.

The consultation draft of the *Resources Safety and Health Legislation Amendment Bill 2023* was released on 28 September 2023. The advisory committee held an out-of-session meeting to review the Bill. The advisory committee provided its advice on the Bill to the Minister on 10 November 2023.

Proposal for work health and safety permit holders to access mine sites

In April 2023, the Minister wrote to the Chair of the advisory committee requesting advice on the feasibility of a proposal from the Electrical Trades Union to amend the *Coal Mining Safety and Health Act 1999* and the *Mining and Quarrying Safety and Health Act 1999* to allow entry permit holders under the *Work Health and Safety Act 2011* the ability to access workshops, shutdowns and construction sites on mining leases.

In September 2023, the advisory committee provided its advice to the Minister.

Proposal for election of electrical site safety and health representatives

In April 2023, the Electrical Trades Union wrote to the Coal Mining Safety and Health Advisory Committee to consider a proposal to amend the legislation to include a provision for the election of electrical site safety and health representatives.

The advisory committee considered the proposal in relation to mineral mines and quarries and provided advice to the Minister that the proposal should not be accepted.

A competent workforce

The advisory committee has responsibility for establishing, recognising and publishing the competencies qualifying a person to perform the tasks prescribed by regulation and ensuring the Queensland mineral mining and quarrying workforce has the competencies needed to keep people safe and healthy.

The advisory committee's priority strategy for achieving this objective is to ensure the Queensland mineral mining and quarrying workforce is competent.

When developing or changing a competency, the advisory committee considers the following factors:

- Is there an identified risk?
- Is there evidence of need?
- Are there alternatives?
- Can registered training organisations deliver the quality of outcomes required?

In 2023–24, the advisory committee regularly reviewed the competencies required by statutory position holders to perform the tasks prescribed to them by regulation to ensure they remained relevant and current.

Australian Mining and Automotive Skills Alliance

The advisory committee engaged closely with the Australian Mining and Automotive Skills Alliance (AUSMASA) which is funded by the Australian Department of Employment and Workplace Relations.

AUSMASA is responsible for the nationally recognised training products for the mining and automotive sectors, which includes the RII—Resources and Infrastructure Industry (mining) training products.

The advisory committee will continue to engage with AUSMASA on competency requirements in the mineral mining and quarrying industry.

Resources industry skills attraction initiatives

The advisory committee considered current industry initiatives aimed at addressing the high rates of turnover of professional staff and reduced rates of talent attraction in the mining industry.

Members raised safety concerns due to the loss of knowledge and expertise in safety critical roles.

The advisory committee engaged with the Queensland Resources Council to examine the initiatives currently in place in the industry, including the Queensland Minerals and Energy Academy and the *Shape Your Future* campaign.

The advisory committee will continue to monitor initiatives and provide advice to industry.

An informed industry

The advisory committee believes that engaging and communicating with industry about emerging issues and promoting relevant

learnings from reviews of evidence-based data and research are essential parts of the roadmap towards its vision of *safe and healthy mines and quarries, now and in the future*.

It achieves this by:

- informing the Minister about the performance of Resources Safety and Health Queensland
- communicating emerging harms and risks to stakeholders.

Performance of Resources Safety and Health Queensland

In informing the Minister about the performance of Resources Safety and Health Queensland, the advisory committee aimed to provide timely, accurate and relevant information to the Minister on the regulator's performance.

In 2023–24, the advisory committee provided regular advice to the Minister about the performance of Resources Safety and Health Queensland against a number of specific characteristics that define effective regulators in high-hazard industries including:

- regulatory activity and enforcement are risk-based
- the regulator identifies and monitors trends and uses this data to direct compliance activities
- effectively communicates with duty holders, workers and other stakeholders.

Advice to the Minister was based on performance reports that were provided to the advisory committee by Resources Safety and Health Queensland.

Communicate emerging harms and risks to stakeholders

The advisory committee has continued to communicate and engage with stakeholders

through communication channels available to the Commissioner for Resources Safety and Health and by taking advantage of the networks of members.

In 2023–24, the advisory committee continued to communicate with stakeholders through a dedicated page on the Commissioner for Resources Safety and Health’s website and via the Commissioner’s LinkedIn channel.

In total, six news articles relevant to the advisory committee were published on the Commissioner’s website and 11 articles posted on the Commissioner’s LinkedIn channel.

Vehicle interaction forum

On 12 July 2023, the advisory committee held an industry forum in Brisbane to review current industry approaches to the management of vehicle interactions and to encourage mineral mining and quarrying industry operators to share their initiatives and learnings.

The purpose of the forum was to:

- openly collaborate and share learnings for developing, implementing, and maintaining practically effective controls to prevent vehicle interactions
- understand potential barriers and opportunities for localised implementation of controls
- launch its Risk Assessment Education Tool.

Seven safety experts from industry, universities and technology companies discussed solutions to reduce vehicle

interaction incidents in the mineral mining and quarrying industry.

The forum was attended by more than 100 industry stakeholders.

Highlights from the forum are available in Figure 3.

An effective advisory committee

To achieve its vision of *safe and healthy mines and quarries, now and in the future*, the advisory committee must function effectively with clear governance arrangements and members must work together on building tripartite collaboration.

The advisory committee acknowledged the importance of ensuring effective governance arrangements are in place to maintain the advisory committee’s strategic focus and engaging effectively with stakeholders in achieving its vision.

The advisory committee also acknowledged the importance of effectively employing the knowledge and expertise of members.

Engagement with stakeholders

The advisory committee has engaged with professional bodies and with external experts to ensure it is able to provide informed advice to the Minister.

This included:

- the Association of Mining and Exploration Companies
- Simtars
- The University of Queensland.

Vehicle Interaction Safety forum

Commissioner for Resources Safety & Health

Chris Wilson Hanson Glasshouse Mts Quarry

Holistically assess Site movements

- Traffic Management Plans when they need to be updated
- Use accessible icons for all users
- Identify hazard & exposure
- Establish solutions that have buy-in from all stakeholders (participation in solution-finding)
- Everyone knows what is expected

OWNERSHIP

- Respond to feedback → TRUST
- Collaboration
- Ownership
- ID zone & zone ownership
- Celebrating wins & milestones
- Clear expectations

IMPLEMENTATION & VERIFICATION

DRONE SURVEYS

jump ups..

Initiative for Cleaner, Safer Vehicles Tony Egan → EMESRT

You are not alone! There are many people working on this

- Decision making improvements at all levels
- Relevant aspects of all environments
- Technology needs to be INTEGRATED with existing controls

Define the problem Clearly

- loss of control
- fatigue
- Road surface

We need to think about the problem differently

Address the cause not just the symptoms

Use the failure modes to id. options

Control levels & interdependencies

What other controls need exploring?

Exposure to unwanted Vehicle Interactions is determined by the effectiveness of INTERRELATED CONTROLS

Vehicle interactions are consistently the top hazard

- Different contexts and scenarios e.g. above/under ground
- people
- light vehicle } environment
- heavy vehicle }
- plant

Safety Procedures on their own don't stop incidents

to be able to go home safely

CRITICAL CONTROLS

- that can be measured
- that are effective

Required Operating States?
Credible failure Mode
Business Inputs

FUNCTIONAL REQUIREMENT
PERFORMANCE REQUIREMENT

20

DYNAMIC
COMPLEX
INTERDEPENDENT

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RISK ASSESSMENT education resource

The risk of risk assessments becoming ineffective

- Tick the box & shove it
- Many hazards are similar across sites, but every site is unique

This Resource is a starting point

ESTABLISH THE CONTROL
RISK id.
analysis
evaluation
RISK TREATMENT

WRAC info is helpful to start the

- Major hazards & critical control
- Vehicle interactions examples
- Does the scope need modification?
- Careful id. of control?
- Are Controls present & effective?

Template for a good RISK REGISTER

Templates need to be customised

BOWTIES make us question more

X Don't COPY the Templates
X Don't simply adopt the work examples

CARMEL BOFINGER
TOOLBOX CONSULTING

HUMAN-CENTRED DESIGN/SYSTEMS

- Get users involved in design & evaluation
- iterative process
- whole user experience
- diverse user perspective

Fatal collisions

- Truck driving over light vehicle
- Colliding with stationary vehicle

Loss of awareness

- fatigue
- road surface

SITUATION AWARENESS

- Supplement direct perception
- Direct the driver's attention to critical information
- Prompt engagement with critical information → needs to be novel

BEEP BEEP BEEP } Gets in the way } A challenge!

- Vibrating seat
- suppress ratio + competing alarms
- Alarm followed by voice

Prof Robin Burgess-Limerick
University of Queensland

GLENCORE CAS SYSTEM

Collision Awareness System

Fundamental 1-6 controls developed and put in place

Before

Reaching for TECHNOLOGY

loop back to CONTROLS

Tech needs to:

- be consistent
- not overload the operator
- have a user-friendly interface

Research, understanding the problem and what is needed

- Important not to cause more 'nuisance alarms'

feedback and site engagement

Scenario Validation + verification

story boards morphed into animation for training

- System
- People
- Environment

Identify hot spots

- if it's a person, coach them

Neil Pollard & Marcia Friend

AI Vision in safety

- facial recognition?
- Edge-detection
- Convolution
- Object recognition

Training data

can now make rapid detections - much faster than humans

Nearly 200 deaths/year in industry in Australia

Vehicle interactions

Fixed systems rely on the internet.

Spotters can fail

We fix it to our Vehicles

Kieran Mackenzie
Founder - Presien

- Multi layered eco system
- Controls are dynamic
- Buy-in & participation

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Figure 3: Vehicle interaction safety forum highlights

Expenses incurred

Advisory committee members are not entitled to any remuneration other than the reimbursement of reasonable expenses and travel allowances to attend meetings.

The total expenditure incurred by the Commissioner for Resources Safety and Health in 2023–24 in relation to the advisory committee was \$9249.13 excluding GST.

Table 4: Expenses incurred by the Commissioner for Resources Safety and Health in relation to the Mining Safety and Health Advisory Committee

Expense	Amount (excluding GST)
Travel and accommodation	\$4774.79
Meetings and industry forums	\$4474.34
Total	\$9249.13



Commissioner for
**Resources Safety
& Health**

